В. К. Колобаев

АНГЛИЙСКИЙ ЯЗЫК ДЛЯ ВРАЧЕЙ

Учебное пособие

Санкт-Петербург
СпецЛит

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Учебник для медицинских вузов
и последипломной подготовки специалистов

Рекомендован Департаментом образовательных медицинских учреждений и кадровой политики Министерства здравоохранения Российской Федерации в качестве учебного пособия для системы послевузовской подготовки аспирантов и врачей

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Пособие содержит основные сведения по фонетике, грамматике и медицинской терминологии английского языка. Фонетическая часть адаптирована для условий максимально быстрого восстановления утраченных или приобретения произносительных навыков букв и буквосочетаний. Приводятся русские соответствия звуков, в наибольшей степени соответствующие звукам английского языка, указываются способы произношения.

Во второй части приводятся оригинальные тексты из англоязычных источников по различным отраслям медицины. В конце пособия помещен подробный словарь. Все входящие в него слова и термины снабжены транскрипцией.

В грамматическом справочнике нашли отражение основные разделы грамматики, необходимые для чтения, понимания и извлечения информации из англоязычных текстов. Приводимые в грамматической части примеры также построены на медицинской терминологии.

Пособие предназначено для врачей, аспирантов и соискателей, которые хотят усовершенствовать свои знания в области медицинского английского языка. Пособие также может быть с успехом использовано для работы со студентами старших курсов на факультативных и элективных занятиях.

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ПРЕДИСЛОВИЕ

Пособие предназначено для специалистов-медиков и студентов старших курсов, желающих усовершенствовать свои навыки профессионального общения на английском языке. Пособие состоит из трех частей.

Первая часть — фонетическая. В ней приводятся основные правила чтения и произношения английских букв и буквосочетаний. Данная часть снабжена небольшим, но достаточным для восстановления забытых или ранее недостаточно усвоенных фонетических правил.

Вторая часть — тексты по различным медицинским специальностям. Поскольку в аспирантских группах обучаются представители разных кафедр и направлений, автор посчитал целесообразным представить в пособии как можно больше различных направлений современной медицины. Цель данной части пособия — ввести учащихся в общую терминологию конкретной отрасли медицины, позволить им овладеть основным пластом терминологической лексики по своей специальности. Помимо терминологической лексики в пособии широко представлена общенаучная лексика.

Для полного усвоения основного лексического материала необходимо проработать все 36 текстов, поскольку все отрасли медицины связаны между собой, и термины из одной области используются и в других областях. Однако в связи с малым количеством часов, отводимых на аспирантский курс, не изучаемые на занятиях тексты можно рекомендовать для самостоятельной работы аспирантов.

Третья часть — краткий грамматический справочник. Это теоретическая часть, в которой приводятся основные грамматические правила и синтаксические структуры.

В конце учебника дан словарь, включающий как общемедицинскую, так и специальную медицинскую терминологию. Все представленные в словаре слова даются с транскрипцией.

Преподавателям, работающим с данным пособием, рекомендуется в пределах отведенных на обучение часов отобрать текстовый материал по основной и смежным специальностям, поскольку ни одна область медицины не замыкается на себе, а неизбежно соприкасается с несколькими/многими другими областями. Такой подход позволит в значительной степени расширить базовый уровень подготовки учащихся и их терминологический словарь.

Автор

PART I. PHONETICS

ENGLISH ALPHABET

Буквы алфавита и звуки:

Aa [ai]	**Nn [en]**
Bb [bi:]	**Oo [ɔu]**
Cc [si:]	**Pp [pi:]**
Dd [di:]	**Qq [kju:]**
Ee [i:]	**Rr [a:]**
Ff [ef]	**Ss [es]**
Gg [dʒi:]	**Tt [ti:]**
Hh [eitʃ]	**Uu [ju:]**
Ii [ai]	**Vv [vi:]**
Jj [dʒei]	**Ww [dʌblju:]**
Kk [kei]	**Xx [eks]**
Ll [el]	**Yy [wai]**
Mm [em]	**Zz [zed]**

Общие сведения о фонетике

Слова в устной речи состоят из звуков, а в письменной — из букв. Звуковой и буквенный состав слова не всегда совпадают. Имеющиеся в английском языке 44 звука передаются на письме 26 буквами. Поэтому одна и та же буква может обозначать несколько различных звуков.

Для обозначения произношения слова применяется фонетическая транскрипция, представляющая собой систему особых знаков, каждый из которых соответствует одному определенному звуку. Фонетическая транскрипция обычно приводится в квадратных скобках, ударение ставится не над ударной гласной (как в русском языке), а перед согласной, которая открывает ударный слог (в пособии ударная гласная выделяется жирным шрифтом). Две точки [:] после знака, передающего гласный звук, указывают на его долгое звучание, например: feeling [fi:liŋ].

В зависимости от количества слогов слова разделяются на односложные (bed, long), двусложные (very, city) и многосложные (difficult, territory, examination).

В двусложных словах ударение, как правило, падает на первый слог. В многосложных словах в большинстве случаев ударным яв-

ляется третий слог от конца слова. Многосложные слова могут иметь два ударения: главное и второстепенное, в обычной транскрипции обозначаемое черточкой внизу. Например: university [ˌju:niˈvə:siti]. Некоторые слова имеют два главных ударения. Это — числительные от 13 до 19, например: thirteen [ˈθ**i:**ˈt**i:**n], а также слова с приставками, придающими слову новое значение. Например: rewrite [ˈr**i**rˈ**ai**t].

Гласные звуки

В английском языке выделяют 12 монофтонгов и 8 дифтонгов.

Монофтонги: [i:], [i], [e], [æ], [a:], [ʌ], [ɔ:], [ɔ], [u:], [u], [ə:], [ə]. Монофтонги подразделяются на долгие: [i:], [a:], [ɔ:], [u:], [ə:] и краткие: [i], [e], [æ], [ɔ], [ʌ], [u], [ə]. Долгота гласных имеет смыслоразличительный характер. Например: Pete [pi:t] *Пит* (мужское имя) и pit [pit] *шахта*, port [pɔ:t] *порт* и pot [pɔt] *котелок*. В русском языке долгота не имеет смыслоразличительной функции.

Дифтонги: [ei], [ai], [au], [ɔi], [əu], [iə], [eə] и [uə]. Дифтонги — это звуки, при произнесении которых язык сначала занимает положение для одного гласного, а затем передвигается в направлении положения для другого гласного, причем это передвижение происходит в пределах одного слога. Более сильный, напряженный слогообразующий элемент дифтонга называется ядром, а слабый, ненапряженный элемент — скольжением. В русском языке сочетания типа *ай, ой, эй* являются сочетаниями гласного с согласным.

Все гласные звуки (монофтонги и дифтонги) различаются по длительности в зависимости от положения в слове и звуков, следующих за ними:

1) в ударном слоге гласный звук более долгий, чем в неударном; длительнее всего гласные звуки произносятся в односложных словах, если за ними не следуют согласные, например: me [mi:], my [mai], car [ka:];

2) гласные звуки в ударном слоге произносятся более длительно перед сонантами и звонкими согласными, чем перед глухими согласными. Например: si:d — si:n — si:t, meid — mein — meit.

Ниже предлагается краткая сравнительная характеристика английских и русских гласных звуков:

[i:] — произносится примерно как протяжный русский звук [и] в слове *иволга*;

[i] — произносится примерно как краткий звук [и] в словах *шить*, *жить*;

[e] — произносится примерно как [э] в словах *цель*, *жесть*;

[æ] — подобного звука в русском языке нет. Это звук средний между русскими звуками [а] и [э]. Из русских звуков ближе всего

к [æ] мягкий [а] в словах *пять, дятел.* При произнесении [æ] язык продвинут вперед, кончик его упирается в нижние зубы, нижняя челюсть опущена, губы слегка растянуты;

[ʌ] — похож на русский предударный звук [а] в словах *какой, камыш, басы, сады*;

[а:] — напоминает русский звук [а] в словах *бал, вал, мало,* если эти слова произносятся протяжно и низким тоном: ба-ал. При произнесении [а:] рот открыт почти как для русского [а], но звук более задний и глубокий;

[ɔ] — произносится примерно как краткий звук [о] в слове *мост.* По сравнению с русским [о] английский [ɔ] произносится почти без участия губ и поэтому слегка тяготеет к звуку [а];

[ɔ:] — произносится без призвука [у], характерного для русского [о]. Звук похож на протяжное [о] в слове *пол*;

[ə:] — подобного звука в русском языке нет. При произнесении [ə:] тело языка приподнято, вся спинка языка лежит максимально плоско, губы напряжены и слегка растянуты, чуть обнажая зубы, раствор рта незначительный. Звук [ə:] напоминает звук [ё] в слове *Гёте*;

[ə] — передает нейтральный гласный звук, напоминающий последний звук в слове *этажерка.* Этот звук никогда не бывает под ударением, и с его помощью передается чтение практически всех гласных букв, находящихся в *безударном* положении;

[u] — произносится примерно как [у] в слове *тут*;

[u:] — примерно соответствует русскому звуку [у], произнесенному протяжно: *у-умный;*

[ai] — близок русскому [ай] в слове *дай*;

[ei] — близок русскому [ей] в слове *шейка*;

[ɔi] — близок русскому [ой] в слове *бой*;

[au] — близок русскому [ау] в слове *пауза*;

[ɔu] — близок русскому [оу] в слове *клоун*;

[iə] — сочетание [i] и [ə] с ударением на [i]. Приблизительно [иэ];

[uə] — сочетание [u] и [ə] с ударением на [u]. Приблизительно [уэ];

[eə] — сочетание [e] и [ə]. Приблизительно [эа].

Английские согласные

В английском языке 24 согласных звука. Как и в русском языке, они делятся на глухие и звонкие, многие имеют соответствующие пары.

Звонкие согласные: [b], [d], [g], [v], [ð], [z], [ʒ], [dʒ], [m], [n], [ŋ], [1], [r], [j], [w].

Глухие согласные: [p], [t], [k], [f], [θ], [s], [ʃ], [tʃ], [h].

В русском языке большинство согласных имеют два произношения: *мягкое* и *твердое.* Такое различие в произношении согласных несет словоразличительный характер. Сравните: мел — мель, кон — конь, вес — весь. В английском языке согласные *не смягчаются,* они *всегда* произносятся твердо.

Английские глухие согласные [p], [t], [k], [f], [s] произносятся более энергично, с бóльшим мускульным напряжением речевых органов и с бóльшей силой выдоха, чем сходные русские звуки. У смычных согласных [p], [t], [k] возникает благодаря этому *придыхание,* особенно сильное в ударных слогах перед гласными.

Звонкие согласные в английском языке в конце слова ослабляются, но не оглушаются полностью, как в русском языке. Оглушение может повлечь за собой изменение смысла. Сравните:

bad [bæd] — плохой, но: bat [bæt] — летучая мышь,

had [hæd] — имел, но: hæt [hæt] — шляпа.

В отличие от русского языка, глухие согласные в позиции перед звонкими не озвончаются, а звонкие в позиции перед глухими не оглушаются, например: [ðis], [ʻdei], [hiz], [ʻtɔiz].

Ниже предлагается примерная сравнительная характеристика английских и русских согласных.

[t, d, l, n, s, z] — соответствуют русским [т, д, л, н, с, з], но при произнесении английских [t, d, l, n, s, z] кончик языка следует держать на альвеолах (бугорках над верхними зубами). Соответствующие русские согласные являются дентальными.

Английские [t] и [d] произносятся значительно энергичнее, чем русские, и [t] — с придыханием. Между кончиком языка и альвеолами происходит смыкание с последующим быстрым «взрывом».

Английское [l] произносится мягче, чем в слове *лук*, но тверже, чем в слове люк, и не смягчается до [ль], как в слове *мель*;

[p, b, f, v, k, g, m] соответствуют русским [п, б, ф, в, к, г, м], но произносятся более энергично, что достигается некоторым напряжением губ для [b], [m], [f], [v] и языка для [k] и [g]. Английские [p] и [k] произносятся с придыханием;

[w] — аналогичного звука в русском языке нет. Этот губно-губной звук образуется работой обеих губ при вибрации голосовых связок. Напряженные губы ставятся в положение как при свисте, затем уголки рта быстро и энергично раздвигаются примерно так, как делается при произнесении русского [у] в сочетании *уа*;

[ŋ] — носовой звук. При произнесении [ŋ] задняя часть языка плотно смыкается с мягким нёбом, кончик языка опущен, и воздух выходит через носовую полость. Подобного звука в русском языке нет;

[ʃ,ʒ] — примерно соответствуют русским [ш, ж], но произносятся более мягко;

[tʃ] — соответствует русскому [ч], но произносится тверже;

[dʒ] — соответствует русскому [дж] в слове *джигит;*

[θ,ð] являются межзубными щелевыми согласными. Звук [θ] — глухой, [ð] — звонкий. При их произнесении язык распластан и не напряжен, кончик языка находится между верхними и нижними зубами или прижат к внутренней поверхности верхних резцов. Подобных звуков в русском языке нет;

[r] — звонкий согласный. Кончик языка поднят к заднему скату альвеол, где и образуется щель, более широкая, чем для шумных. При прохождении воздушной струи кончик языка не вибрирует, как при русском [р], он совершенно неподвижен. Произнося [r], нужно следить за тем, чтобы кончик языка не загибался назад, а губы не выдвигались вперед;

[h] — легкий, почти беззвучный выдох. Звук [h] собственной артикуляции не имеет. При произнесении звука [h] органы речи находятся в положении для последующего гласного. Подобного звука в русском языке нет;

[j] — звонкий согласный. Он напоминает русский [й], например, в слове *ясный.* Однако в английском [j] меньше шума, так как язык поднят к твердому нёбу не так высоко, как при русском [и]. Звук [j] встречается только перед гласным, представляя собой переход к нему.

Английская интонация

Интонация — это сложное единство нескольких компонентов, главными из которых являются мелодика и фразовое ударение.

Мелодика — это изменение высоты тона голоса при произнесении слов в предложении или его частях. Это изменение, выражающееся в понижении или повышении тона, указывает на цель высказывания (сообщение, просьба, вопрос).

В английском языке имеются две основные речевые мелодии, два тона: нисходящий и восходящий.

Нисходящий тон выражает относительную законченность высказывания, придавая ему категоричность и определенность. Он оформляет повествовательные, побудительные, а также вопросительные предложения, начинающиеся с вопросительного слова. Первый ударный слог произносится самым высоким тоном, далее происходит плавное понижение тона, и последний ударный слог произносится с резким падением голоса. В отличие от русского нисходящего тона, английский нисходящий тон характеризуется более энергичным и глубоким падением. Причем падение голоса происходит с более высокого уровня, чем в русском языке.

При интонационной разметке текста нисходящий тон принято обозначать значком [` ], обращенным вниз. Например: The 'flat is `cosy.

Восходящий тон выражает незаконченность высказывания, отсутствие категоричности. Он употребляется при перечислении, в общих вопросах, требующих ответа «да» или «нет», в первой части альтернативных вопросов, а также в конце смысловых групп, на которые делятся для облегчения произношения длинные предложения. Кроме того, восходящий тон употребляется при вежливом обращении в приветствиях, выражениях благодарности и т. п.

При интонационной разметке текста восходящий тон обозначается значком [´], направленным вверх и стоящим перед ударным слогом. Например: 'Is your flat ´cosy?

При восходящей мелодике наблюдается плавное понижение тона от первого ударного слога, но последний ударный слог произносится с повышением тона.

Фразовым ударением называется выделение тех или иных слов в предложении. В английском предложении фразовое ударение имеют так называемые знаменательные слова: существительные, прилагательные, смысловые глаголы, наречия, числительные, некоторые местоимения. К числу безударных слов относятся служебные слова: артикли, союзы, предлоги, частицы, личные и притяжательные местоимения, вспомогательные глаголы. При интонационной разметке текста фразовое ударение обозначается вертикальной черточкой [']. Например: His 'name is `Steve.

Для ритма английской речи характерно то, что ударные слоги в предложении произносятся через более или менее равные промежутки времени. Поэтому скорость произнесения неударных слогов зависит от того, сколько неударных слогов находится между двумя ударными: чем больше неударных слогов, тем быстрее они будут произноситься.

Особенностью произнесения односложных безударных служебных слов является ослабление гласного в них, или *редукция.* Долгие гласные в безударных служебных словах теряют частично или полностью свою долготу.

Краткие гласные в служебных безударных словах заменяются нейтральным звуком.

Редукция глагола is приводит к полному выпадению гласного. В позиции после глухого согласного сокращенная форма is произносится как [s], после звонкого согласного и гласного звука — [z]. Например: It's 'Nell [its`nel]. 'Nell's 'ten ['nelz`ten].

Звуковые явления

Сочетание смычных согласных

Если в слове или на стыке слов два смычных звука следуют друг за другом, то наблюдается явление, называемое «потерей взрыва». Это означает, что первый из звуков произносится без размыкания органов речи и без взрыва; размыкание и взрыв происходит при произнесении второго согласного звука (например, act [ækt], a 'black 'desk [ə'blæk`d**e**sk]).

Ассимиляция в сочетаниях альвеолярных согласных с [θ], [ð]

Перед межзубными [θ], [ð] внутри слова или на стыке слов альвеолярные согласные [t], [d], [n], [l], [s], [z] становятся зубными, например: [eitθ], [helθ], [izðis].

Ассимиляция в сочетаниях согласных со звуком [w]

При произнесении звукосочетаний типа «согласный + губно-губной сонант» — [tw], [kw], [sw], [dw], [gw] происходит ассимиляция. Предшествующий сонанту согласный огубляется, а после глухих согласных [t], [k], [s] сонант [w] оглушается. Оба звука произносятся одним усилием.

Ассимиляция в сочетаниях согласных с сонантом [r]

Сонант [r] частично оглушается, если ему предшествует глухой шумный согласный, например: [trai, prais, kraud].

В сочетаниях [tr], [dr] под влиянием заальвеолярного [r] альвеолярные [t, d] становятся заальвеолярными.

В сочетании [r] с предшествующим согласным оба звука произносятся почти одновременно.

Связующее [r]

Конечная буква *r* и буквосочетание *re* на конце слова обычно не читаются, а лишь влияют на чтение предшествующей гласной. Однако, если после слова, оканчивающегося на букву r или буквосочетание *re*, следует слово, начинающееся с гласной, и между ними нет паузы, то буква *r* и буквосочетание *re* читаются как звук [r], причем оба слова произносятся слитно, например:

The 'teacher is good. [ðət**i:**tʃərizg**u**d]

'What 'colour is the 'pen? [w**ɔ**tkʌlərizðə`p**e**n]

Звук [r] в этом случае называется связующим.

Слог и слогоделение

Ниже изложены сведения по слогоделению, что необходимо для обучения чтению английских гласных.

1. В слове столько слогов, сколько в нем гласных. Например: me, sea (сочетания гласных образуют один слог), fa|mi|ly.

2. Слог может составить одна гласная. Например: a|gent, o|ver.

3. Слогообразующими могут быть сонанты [m], [n], [l], когда они следуют за согласным звуком (любым, кроме сонанта).

Например: слово table состоит из двух слогов ta|ble ['tei|bl], так как сонант *l* образует слог.

4. Если на границе слогораздела имеется одна согласная буква, то она отходит ко второму слогу — va|lid, если две или более, то первая относится к первому слогу, а остальные — ко второму. Например: dif|fe|rent, les|son.

Чтение гласных в ударном слоге

Чтение гласной в ударном слоге зависит от типа слога. Существует четыре типа ударного слога. В каждом из них одна и та же гласная читается по-разному.

Первый тип слога — *открытый слог,* т. е. слог, оканчивающийся на гласную. Ударная гласная читается здесь так, как она называется в алфавите. Обычно это долгий гласный или дифтонг. Первый тип слога имеет две разновидности:

1) *абсолютно открытый слог* — слог, графический образ которого совпадает с фонетическим, т. е. с его звучанием. Например: me [mi:], no [nəu]; stu|dent ['stju:|dənt], pi|lot ['pai|lət], a|gent ['ei|dʒənt], o|ver ['əu|və];

2) *условно открытый слог* — слог только графически открытый, а фонетически закрытый. Такие слова, как note [nəut], Pete [pi:t], исторически восходят к двусложным словам, в которых первый слог был открытым. В современном английском языке это односложные слова, так как конечная буква *e* в словах этого типа — немая. Она является только условным показателем того, что слог здесь открытый, и гласная этого слога должна читаться так же, как и в абсолютно открытом слоге.

Второй тип слога — *закрытый.* В этом типе слога за ударной гласной буквой следует одна или несколько согласных (любых, кроме буквы *r*). Гласная буква в закрытом слоге передает краткий гласный звук. Например: pen [pen], dog [dɔg].

Третьим типом слога принято считать слог, в котором за ударной гласной следует буква *r*. Буква *r* не читается. Она только указывает, что предшествующая ей гласная имеет долгое чтение. Например: car [ka:], fur [fə:], port [pɔ:t], girl [gə:l]. Все следующие за буквой *r* в этом типе слога согласные (если это не буква *r*) не меняют чтения гласной. Например: parks, forks, но marry ['mæri], sorry ['sɔri].

Четвертый тип слога графически напоминает первый условно открытый слог. Разница между ними в том, что в четвертом типе слога между ударной гласной и немым *e* стоит не любая согласная, а буква *r*. Например: fare [feə], here [hiə], pure [pjuə], more [mɔ:].

ПРАВИЛА ЧТЕНИЯ

1. Чтение гласных в открытом или условно открытом слоге

ПРАВИЛО ПЕРВОЕ

В открытом или условно открытом слоге ударные гласные читаются так, как они называются в алфавите.

Тренировочное упражнение

[ei]	[i:]	[ai]	[ou]	[ju]	[ai]
take	me	like	no	tube	my
make	he	five	so	use	by
late	be	nine	home	fuse	style
date	Pete	time	stone	tune	fly
state	eve	size	smoke	fume	type

Исключение: live [liv].

2. Чтение согласных *Cc, Gg, Jj*

ПРАВИЛО ВТОРОЕ

Буква *Cc* обычно читается [k]; **перед** e, i, y **она читается** [s], например: came, close, face, cite, ice. **Буква *Gg* обычно читается** [g]; **перед** e, i, y **она читается** [dʒ], например: go, gate, page, huge.

Исключения: give, get [giv, get].

Буква *Jj* всегда читается [dʒ], например: **joint, joke**.

ПРАВИЛО ТРЕТЬЕ

После согласных *r, l, j* буква *u* читается [u:], например: rule, true, blue, clue, June, jute.

ПРАВИЛО ЧЕТВЕРТОЕ

Ударная гласная имеет алфавитное чтение также в том случае, когда она отделена от «немого» *e* сочетанием «согласная + *l*» или сочетанием *ng*, например: table, able, noble, cable, idle, cycle, rifle, range, strange.

Сводное упражнение в чтении согласных *Cc, Gg, Jj*

Go, cube, page, joke, place, June, cry, nice, age, rice, came, stage, scale, gate, close, ice, huge, game, cite, face, Jane, cycle, space, range, jute, strange.

Сводное упражнение в алфавитном чтении ударных гласных

Note, take, fine, be, smoke, table, came, like, face, rule, tube, me, late, range, cable, nine, name, life, fuse, joke, cry, state, cite, time, home, size, use, style, date, live, stone, made, noble, go, huge, make, spoke, game, mile, by, code, Jane, scale, rifle, hole, drive, page, cube, plane, idle, June, type, he, cycle, tune, my, ice, pole, place, globe, close, mine, me, able, age, zone.

3. Чтение гласных в закрытом слоге

Закрытый слог оканчивается одной или несколькими согласными. **Закрытым** считается также слог, в котором ударная гласная отделена от «немого» *e* двумя или более согласными (кроме случаев, указанных в п. 2, правило четвертое).

ПРАВИЛО ПЯТОЕ

В закрытом слоге ударные гласные читаются: a [æ], e [e], u [ʌ], i [i], o [ɔ], y [i].

Тренировочное упражнение

1.

a [æ]	e [e]	i [i]	o [ɔ]	u [ʌ]
am	pen	fit	stop	up
land	desk	sit	top	must
man	led	is	hot	cup
plan	send	it	lot	but
has	let	in	not	sun
had	less	if	on	run
hand	red	tin	lost	cut
fact	bed	him	rod	dust
can	kept	did	cost	rusty

2.

pen — pan	send — sand
leg — lag	lend — land
ten — tan	bed — bad
set — sat	met — mat
	men — man

3. a) plan — plane, man — make, can — came, mad — made, hat — hate
   b) fin — fine, sit — side, lift — life, tin — time, fill — file, pin — pine
   c) tub — tube, cub — cube, cut — cute, us — use
   d) not — note, hop — hope, rod — rode, dot — dote, rob — robe

can	go	jet
cell	gentle	jam
cap		jump
cent		just

4. Чтение буквосочетаний *sh, ch, tch, ck, dg*

ПРАВИЛО ШЕСТОЕ

Буквосочетание *sh* читается [ʃ].
Буквосочетания *ch, tch* читаются [tʃ].
Буквосочетание *ck* читается [k].
Буквосочетание *dg* перед *e* читается [dʒ].

Тренировочное упражнение

sh [ʃ]	ch, tch [tʃ]	ck [k]	dg [dʒ]
ship	chess	shock	edge
shape	chest	check	bridge
shut	such	pick	judge
brush	change	Jack	ridge
shine	chose	back	badge
shift	match	luck	

5. Чтение согласной *Xx*

ПРАВИЛО СЕДЬМОЕ

Согласная *Xx* во всех случаях читается [ks], например: next, text, mix, box.

Исключение: xerox [**zi**:rəks], xenobiotics [zinɔbai**ɔ**tiks].

6. Чтение буквы *Ww*

Тренировочное упражнение

Will, we, went, wise, twins, twice, well, wipe, swim, wish, win, wet, west, wife, swept.

Сводное упражнение в чтении слов с согласными *c, g, j, x, w* и буквосочетаниями *sh, ch, tch, ck, dge*

Ship, gentle, give, catch, shut, back, cycle, fix, strange, jump, next, June, went, stage, twice, chose, cent, mix, match, cell, age, shape, well, lack, face, shelf, swept, change, pick, bridge, box, joke, wet, judge, page, we, shake, dock, fish, space, text, huge, swim, range, ice, she, place, get, will, nice, just, edge, chess, shift, wise, check, sketch, shade, stick.

Сводное упражнение в чтении ударных гласных в закрытом, открытом и условно открытом слогах

Be, date, just, use, life, line, trade, wave, much, give, gave, hand, face, edge, make, made, home, cut, judge, take, such, land, late, ship, change, like, not, gentle, has, had, true, catch, note, map, is, am, June, shut, add, name, back, base, place, by, fix, range, test, shape, chose,

rate, lack, plane, he, him, his, we, me, my, set, space, rule, bridge, table, next, fit, time, get, got, tip, fine, wish, go, went, but, blue, man, came, cell, can, chose, flat, pen, stop, fine, six, nine, red, able, led, must, mile, well, kept, scale, did, bad, spoke, ice, tell, will, age.

7. Чтение гласных перед буквой *Rr*

ПРАВИЛО ВОСЬМОЕ

В сочетаниях «*ar* + согласная», «*or* + согласная» буквы *a, o* читаются соответственно [a:], [ɔ:], буква *r* не читается, например: far, car, for, port.

ПРАВИЛО ДЕВЯТОЕ

В сочетаниях «*or, er, ir* + согласная» буквы *u, e, i* читаются [ə:], буква r не читается, например: fur, term, firm.

ПРАВИЛО ДЕСЯТОЕ

Буквосочетание *or* после *w* читается [ə:], например: work, worse.

Тренировочные упражнения

star	nor	fur	work
farm	for	fir	world
car	force	her	word
card	form	turn	worm
start	short	term	worse
sharp	sport	firm	
large	storm	serve	

a) am — arm — name
can — car — came
chap — charge — change
fat — farm — fame

b) spot — sport — stroke
not — nor — note
shot — short — choke
top — torn — tone
fox — force — foe

c) tub — turn — tune
us — hurt — use
cup — curve — cube
hunt — hurt — huge

d) did — dirt — dine
film — firm — fine
shift — shirt — shine
big — bird — bite

e) ten — term — Pete
pen — her — he
well — serve — we
net — nerve — me

8. Чтение буквосочетания *th*

ПРАВИЛО ОДИННАДЦАТОЕ

Буквосочетание *th* читается либо как звонкий звук [ð], либо как глухой [θ].

Тренировочное упражнение

then	them	worth	thick
this	thus	third	think
these	with	north	tenth
that	bathe	thin	smith
those	whether	thing	month

9. Чтение сочетаний двух гласных *ee, ea, oo, oa, ow, ou, ai, ay*

ПРАВИЛО ДВЕНАДЦАТОЕ

Буквосочетания *ee, ea* читаются [i:].

Буквосочетание *oo* читается [u] перед *k*, перед всеми остальными согласными (кроме *r*) читается [u:].

Тренировочное упражнение

see	speed	sea	clean
tree	seem	tea	leave
week	seen	cheap	reach
free	speech	meat	each
meet	three	heap	please
street	seek	seat	deal
teeth	deed	mean	peace
too	shoot	food	took
tool	cool	noon	cook
soon	moon	book	good
spoon	tooth	look	foot

Исключение: great [greit].

ПРАВИЛО ТРИНАДЦАТОЕ

Буквосочетания *oa, ow* читаются [ou].

Тренировочное упражнение

boat	load	low	show	flow
road	goal	slow	shown	throw
coat	float	snow	grow	know
coal	toast	own	grown	known

ПРАВИЛО ЧЕТЫРНАДЦАТОЕ

Буквосочетание *ou* читается [au], буквосочетание *ow* в следующих пяти словах также читается [au], например: how, now, down, town, brown.

Тренировочное упражнение

1. Out, count, loud, sound, house, round, ground, south, mouth, mouse.
2. Cool — coal — count, boot — bound, foot — float — found, too — toast — town, book — boast — brown, soot — sound, look — load — loud.
3. Now — know, how — low, down — grown, brown — shown, town — known.

ПРАВИЛО ПЯТНАДЦАТОЕ

Буквосочетания *ai, ay* читаются [ei].

Тренировочные упражнения

main	mail	may	clay
rain	pain	say	day
train	strain	way	lay
raise	plain	stay	gay
wait	maid	play	pay

plain — plane main — mane sail — sale
maid — made pail — pale

Сводное упражнение в чтении слов с сочетаниями гласных *ee, ea, oo, ow, au, ai, ay* и согласных *th*

Boat, out, teeth, that, weak, look, work, slow, south, down, know, train, goal, north, reach, soon, speed, speak, show, see, main, too, thing, leave, play, road, thus, mouth, way, round, now, street, house, clean, thick, world, three, raise, sea, food, worth, thin, load, count, may, flow, town, third, ground, coal, those, own, took, word, mean, rain, foot, speech, tool, say, please, great, grow, sound, peace, seem, how, deal, day.

10. Чтение буквосочетаний *ind, ild, gh, ew, al(l), as(s), qu*

ПРАВИЛО ШЕСТНАДЦАТОЕ

Буквосочетания *ind, ild* читаются соответственно [aind], [aild], например: kind, mind, mild, blind.

ПРАВИЛО СЕМНАДЦАТОЕ

Буквосочетание *gh* в конце и в середине слова не читается. Если ему предшествует одна гласная (обычно *i*), то она имеет алфавитное чтение, например: might, sight, light, high**.**

Тренировочное упражнение

Fight, right, sigh, high, might, slight, bright.

ПРАВИЛО ВОСЕМНАДЦАТОЕ

Буквосочетание *ew* читается [ju:], после *l, r* оно читается [u:], например: few, new, flew, grew.

ПРАВИЛО ДЕВЯТНАДЦАТОЕ

Буквосочетания *al* (l), *as* (s) читаются соответственно [ɔ:l], [a:s], например: call, salt, false, class, fast, glass, ask.

ПРАВИЛО ДВАДЦАТОЕ

Буквосочетание qu читается [kw], например: quick, quite, quote.

Тренировочное упражнение

Quite, quick, quest, quote, quit, quake, quaint, queen, quench.

Сводные упражнения

1.

find	child	new	drew
mind	mild	crew	threw
bind	wild	flew	
grind	few	grew	

2.

all	ball	class	past
fall	call	cast	glass
tall	salt	grass	ask
small	false	fast	task
wall	hall	last	vast

a)
fall — form
call — corn
tall — torn
ball — born
salt — sort

b)
fall — fast
call — cast
tall — task
all — ask
ball — bass

c)
dew — due
grew — rule
drew — rude
threw — true
blew — blue

d)
fall — farm — fame — fan
call — cart — came — can
hall — harm — hate — hat
ball — barn — base — back
tall — tart — tame — tan

e)
mine — mind — might — mill
fine — find — fight — fill
mine — kind — night — kill
line — bind — light — bill
wine — wild — right — will

Чтение двусложных слов

ПРАВИЛО ДВАДЦАТЬ ПЕРВОЕ

Конечные буквосочетания *-er, -or, -ar* с безударной гласной читаются [ə].

Тренировочное упражнение

Teacher, worker, grammar, better, number, finer, factor, matter, paper, docker, under, chapter, member, dinner, miner, summer, winter, Peter, over, supper, sailor, winner, motor, smoker, speaker, former, fighter, farmer, dollar, center.

ПРАВИЛО ДВАДЦАТЬ ВТОРОЕ

В конечных буквосочетаниях *-en, -on, -an, -el, -ol, -al* безударные гласные *e, o, a* читаются [ə] либо не читаются.

Тренировочное упражнение

Lesson, sudden, spoken, taken, broken, open, human, frighten, cotton, common, signal, label, symbol, final, token, crystal, local, formal, slogan, season, person, central.

ПРАВИЛО ДВАДЦАТЬ ТРЕТЬЕ

Безударная гласная *y* в конце слова читается [i].

Тренировочное упражнение

Army, duty, twenty, hardly, slowly, thirty, empty, happy, party, forty, fifty, easy, dirty, thickly, angry, daily, sixty, simply, hungry, kindly, lazy, mercy, likely, mighty.

12. Чтение некоторых суффиксов

ПРАВИЛО ДВАДЦАТЬ ЧЕТВЕРТОЕ

Суффиксы имен существительных *-tion, -ssion* читаются [ʃn].

Тренировочное упражнение

Nation, notion, station, action, mission, session, motion, portion, ration, fraction, friction, mention, section.

ПРАВИЛО ДВАДЦАТЬ ПЯТОЕ

Суффикс имен существительных *-ture* читается [tʃə].

Тренировочное упражнение

Lecture, picture, culture, feature, nature, century, structure, torture, mixture.

Сводная таблица чтения гласных в четырех типах слога

Гласные звуки	I		II	III	IV
	Открытый слог	Условно открытый слог	Закрытый слог	Слог, заканчивающийся буквой *r* в конце слова и перед согласной	Слог, заканчивающийся на букву *r*, после которой следует «немая» *e* или любая произносимая гласная
a	[ei]		[æ]	[a:]	[eə]
	fable	fate	fat	far hard	fare daring
o	[ou]		[ɔ]	[ɔ:]	
	no	note	not	nor	more
i	[ai]		[i]	[ə:]	[aiə]
	hi	dine	fit	fir firm	fire firing
y	[ai]		[i]	[ə:]	[aiə]
	by	type	gym	byrd	tyre tyrant
e	[i:]		[e]	[ə:]	[iə]
	me	mete	met	her term	here zero
u	[ju:, u:]		[ʌ]	[ə:]	[juə]
	student	rule [ru:l] tube [tju:b]	cut	fur turn	cure during

Сводная таблица чтения гласных

[i:]	ee — see, heel, deep ea — sea, mean, deal ie — niece, brief, believe ei — receive, deceive, seize
[a:]	a+ss, st, sk, sp — grass, last, task, rasp a+lm — calm, palm, calf, half a+ft — craft, after a+th — bath, father a+nce (nch, nt, nd) — chance, branch, plant, demand
[ɔ:]	a+ll, lk — ball, hall, talk, walk au — auto, author, pause aw — saw, raw, draw augh — daughter, taught ough — thought, brought our, oar — your, four, board w+ar — war, want, what
[u]	oo+k — book, hook, look oo+d — good, wood **но:** [ʌ] — blood, flood u+sh, ll — push, bush, pull, full
[u:]	o — do, two, who oo (в большинстве слов) — moon, spoon, pool ou — group, through ue — (после r, l) — true, blue
[ju:]	ue, ew — due, cue, new, dew
[ə:]	ea+r — learn, earn, year w+or — work, word, world
[ʌ]	o+n, m, v, th — son, some, love, mother ou — country, couple, young ou+gh — enough, rough, tough
[ei]	ai — rain, plain, main ay — ray, say, day ey — they, grey, obey eigh — eight, weight **но:** [ai] height
[ai]	i+ld, nd — child, mild, kind, mind igh — night, flight, light i+gn — sign, design ie, ye — die, tie, dye, rye

Продолжение

[ɔi]	oi — oil, boil, coin oy — toy, boy, joy
[au]	ou — out, found, south ow — down, town, how
[ɔu]	oa — boat, coat, float ow — low, blow, know o+ll, ld — toll, roll, cold, hold
[iə]	ear — clear, dear, near, tear eer — deer, sheer, engineer ere — here, mere, sere
[eə]	air — chair, pair, hair ere — there, where ear — pear, bear, tear
[uə]	oo+r — poor, moor our — tour, tourist

Чтение согласных, имеющих два произношения

c	Перед *e, i, y* читается как [s]: cent, nice, city, icy		В остальных случаях читается как [k]: come, cup
g	Перед *e, i, y* читается как [dʒ]: large, engine, gymnasium Исключения: get, give, begin, gift, girl		В остальных случаях читается как [g]: good, grass
s	В начале слова, перед глухими согласными и в конце слова после глухих согласных читается как [s]: sit, student, lists		Между гласными, в конце слов после гласных и звонких согласных читается как [z]: please, ties, pens
x	Перед согласными и в конце слов читается как [ks]: text, six	Перед ударной гласной читается как [gz]: exam	В начале слова читается как [z]: xerox [zi:rəks], xanthine [zʌnθain]

Таблица чтения согласных

Буква и буквосочетание	Звук	Примечание	Примеры
bt	[t]	В конце слова	debt [det], doubt [daut]
ch tch	[tʃ]	В любой позиции В конце слова	chin [tʃin], bench [bentʃ] match [mætʃ], fetch [fetʃ]
ch	[k]	В словах греческого происхождения	architect [a:kitekt], chemist [kemist], scheme [ski:m]
	[ʃ]	В словах французского произношения	machine [mæʃi:n] machinery [mæʃi:nəri]
ck	[k]	В любой позиции	clock [klɔk], pick [pik]
dg	[dʒ]	В конце слова перед *e*	bridge [bridʒ], fridge [fridʒ], badge [bædʒ]
gh	—	В середине слова	light [lait], eight [eit], fought [fɔ:t]
	[g]	В начале слова	ghost [gɔust], ghetto [getɔu]
	[f]	В нескольких словах после *ou, au*	rough [rʌf], tough [tʌf], enough [inʌf], laugh [la:f]
gn	[n]	В начале и в конце слова	gnat [næt], gnome [nɔum], foreign [fɔrin]
kn	[n]	В начале слова	know [nɔu], knee [ni:]
mb	[m]	В конце слова	comb [kɔum], lamb [læm]
mn	[m]	В конце слова	hymn [him], autumn [ɔ:təm]
ng	[ŋ]	В конце слова	long [lɔŋ], thing [θiŋ]
	[ŋg]	В середине слова, но не перед *ing* — singing [siŋiŋ]	finger [fiŋgə], single [siŋgl], English [iŋgliʃ]
nk	[ŋk]	Всегда	tank [tæŋk], think [θiŋk]
ph	[f]	В словах греческого происхождения	photo [fɔutɔu], phone [fɔun], phase [feiz], philosophy [filɔsəfi]

Продолжение

Буква и буквосочетание	Звук	Примечание	Примеры
sh	[ʃ]	Всегда	shelf [ʃelf], fish [fiʃ]
th	[θ]	В начале знаменательных слов и в конце слова	thin [θin], tenth [tenθ], mouth [mauθ]
	[ð]	В служебных словах и между гласными	they [ðei], this [ðis], with [wið], gather [gæðə], leather [leðə]
wh	[w]	В начале слова перед гласной, кроме *o*	when [wen], why [wai]
wh+o	[h]	Перед *o* в начале слова	who [hu:], whom [hu:m]
wr	[r]	В начале слова перед гласным	write [rait], wrong [rɔŋ]
ci	[ʃ]	В конце слова перед гласным *a*	social [sɔuʃəl] special [speʃəl]
ften	[fn]	В середине слова	often [ɔfn], soften [sɔfn]
gu	[g]	В любом месте в слове	guest [gest], guide [gaid]
qw	[kw]	В любом месте в слове	qween [kwi:n], quite [kwait], question [kwestʃn]
	[k]	В конце слов французского произношения	clique [kli:k], unique [ju:ni:k], technique [tekni:k]
tion sion ssion	[ʃn]	В конце слова	action [ækʃn], tension [tenʃn], session [seʃn]
sion	[ʒn]	В конце слова после гласных	vision [viʒn], decision [disiʒn]
sure	[ʒə]	В конце слова	pleasure [pleʒə], measure [meʒə]
sten	[sn]	В конце слова	fasten [fa:sn], listen [lisn]
stle	[sl]	В конце слова	whistle [wisl], wrestling [resliŋ]
ture	[tʃ]	В конце слова	picture [piktʃə]

PART II. ESSENTIALS OF MEDICINE

LESSON 1

THE HUMAN BODY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[l**i**m], [f**ɔ**rid], [ai], [t**ʌ**n], [d**ai**əfræm], [trək**i**ə], [is**ɔ**fəgəs], [br**e**st], [k**ɔ**ləm], [f**ɔ:**ra:m], [θ**ʌ**m], [k**a:**f], [sain**ɔu**viə], [f**i:**mə], [tʃi:k], [**i**ə].

2. Write the following words in transcription

Vertebra, pharynx, abdomen, thorax, breastbone, gallbladder, bowel, buttocks, thigh, knee, muscle, cartilage, diaphysis, marrow.

3. Read the following anatomical terms

Larynx, sternum, shoulder, clavicle, girdle, patella, dorsum, periosteum, extremity, cranial, osseous, medullary, fibrous, voluntary, striated, hollow.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

The main parts of the human body are: the head, the neck, the trunk and the limbs (extremities).

The **head** is the seat of the brain, several sense organs and inlets for air and food. It has the cranial and facial parts. The face consists of the forehead, the eyes with upper and lower eyelids, the cheeks, the nose, the mouth with the tongue and teeth, the chin and the ears.

The **neck** contains the cervical vertebrae, the pharynx, the larynx and important vessels and nerves.

The diaphragm divides the **trunk** into the thoracic cavity and the abdominal cavity with the pelvis at its lower end. The principal parts of the **thorax** (chest) are the lungs, the heart, the great blood vessels, the trachea (windpipe) and oesophagus (gullet), the dorsal spine, the ribs and the sternum (breastbone). On the chest there are the two nipples and, in women, the breasts.

The vertebrae are bony rings which together form the spinal column (spine, backbone, vertebral column). This is an elastic pillar which supports the trunk and the skull. Through the column runs a canal which contains the spinal cord. Inside the abdominal cavity we find the stomach, the liver, the gallbladder, the pancreas, the spleen, the kidneys,

the urinary bladder, the small and large intestines (bowels), and the internal reproductive organs. On the abdomen we see the navel and, at the lower aspect, there are the external reproductive organs (genitals) or private parts. The part of the body between the ribs and hips is the waist (loins). At the back view we see the shoulders and shoulder blades, the back, the loins and, at the lower end, the backside or the buttocks (posterior).

The **upper extremity** is divided into the shoulder [this, together with the collar bone (clavicle) and shoulder-blade, belongs to the shoulder girdle], the upper arm, the elbow, the forearm, the wrist and the hand. Each hand has four fingers and one thumb. The parts of the hand include: the back and the palm of the hand and the ball of the thumb, the fingertips and finger-nails with their whitish half-moons.

The **lower extremity** is attached to the pelvic girdle. It consists of the hip, the thigh, the knee (to which the patella gives protection), the lower leg or shank with the shin in front and the calf at the back, the ankle and the foot. The foot itself consists of the toes, the sole, the ball of the foot, the dorsum, the arches and the heel with the strong Achilles tendon.

The following are the **principal systems** of the human body:

skeletal	excretory
muscular	reproductive
locomotor	cardiovascular
respiratory	lymphatic
digestive	nervous

The **skeleton** of an adult consists of more than 200 bones of various shapes and sizes. It gives firm but flexible support to the soft tissues, muscles and organs. Bones are made up of hard osseous tissue and are described as long, short, flat or irregular. A typical long bone (such as the femur or thigh-bone) has two ends covered by articular cartilage, a membrane — periosteum — around the shaft of diaphysis and a medullary or marrow cavity inside. The point where two bones meet is a joint or articulation. Ligaments are strong, fibrous bands which hold the bones together. Movement is made possible by the contraction of muscles.

The inside of a joint contains an oily substance called synovia which allows the ends of bones to glide smoothly over one another.

We distinguish between **voluntary** and **involuntary muscles.** Most of the voluntary muscles are found in the extremities, the trunk and the head. They have striated fibres striped transversely. Voluntary muscles are capable of rapid and complicated movement. Involuntary or smooth muscles only provide slow and mechanical movement in the walls of the digestive and urinary tracts and other hollow organs and of the blood

vessels. They are controlled unconsciously through the autonomous (sympathetic and parasympathetic) nervous system.

Cardiac muscle is a separate, extremely well-developed involuntary muscle like that in the wall of a blood vessel. Its fibres are striated but they are short and thick and contract rhythmically without any nervous impulse. The nerves can only modify the rate of contraction.

5. Answer the following text-based questions

1. What are the main parts of the human body? 2. What does the neck contain? 3. What is the function of the diaphragm? 4. What organs are there in the abdominal cavity? 5. What is the lower extremity attached to? 6. How many bones are there in the skeleton of an adult man? 7. What are the principal systems of the human body? 8. What is the structure of a typical long bone? 9. How is movementmade possible? 10. What is the function of synovia? 11. What is the difference between voluntary and involuntary muscles? 12. How is the autonomous nervous system divided? 13. What are the specific qualities of the cardiac muscle? 14. What is there on the abdomen? 15. What important organs can be found inside the thorax?

6. Ask questions to produce the following answers

Example: The leg is attached to the pelvic girdle. What is the leg attached to? or — What is attached to the pelvic girdle?

1. The head consists of the cranial and facial parts. 2. The part of the body between the ribs and the hip is the waist. 3. Each hand has four fingers. 4. The abdominal cavity includes the small and large intestines. 5. The bone is covered with periosteum. 6. The heart is situated inside the thoracic cavity. 7. Striated fibres are striped transversely. 8. Voluntary muscles are capable of complicated movement. 9. Involuntary muscles are controlled unconsciously. 10. The fibres of cardiac muscle contract rhythmically.

7. Give short answers

Example: Is the upper extremity attached to the shoulder girdle?
Yes, it is.

1. Are the lungs situated inside the chest? 2. Does the spinal cord run through the vertebral column? 3. Is the wrist part of the foot? 4. Has each hand four fingers and one thumb? 5. Are bones made up of hard osseous tissue? 6. Does synovia allow the ends of bones to glide smoothly over one another? 7. Have involuntary muscles striated fibres striped transversely? 8. Do smooth muscles provide slow and mechanical movement? 9. Does the cardiac muscle contract regularly? 10. Do we find the liver and gall-bladder inside the thoracic cavity?

III. Word study

8. Make up adjectives to the following nouns

Face, vertebra, abdomen, thorax, vessel, oesophagus, stomach, liver, kidney, bone, mouth, skeleton, neck, clavicle, muscle, medulla, fibre, cranium, diaphragm, heart, spine.

9. Make up nouns to the following adjectives

Osseous, pelvic, gastric, hepatic, muscular, splenic, skeletal, digestive, lymphatic, sternal, facial, medullary.

10. Make up the plural form to the following nouns

Vertebra — , foot — , tooth — , cervix — , medulla — .

11. Find synonyms to the following terms

Thorax, sternum, oesophagus, spine, intestines, patella, umbilicus, genitals, trachea, buttocks, clavicle, femur.

Collarbone, windpipe, thighbone, kneecap, breastbone, bowels, reproductive organs, chest, gullet, posterior, navel, backbone.

12. Make up English-Russian pairs of words

Consist, contain, divide, include, attach, meet, distinguish, provide, contract, cover, support.

Покрывать, включать, соединять, различать, состоять, делить, поддерживать, содержать, сокращать, присоединять, обеспечивать.

13. Fill in the blanks with the proper prepositions

1. ... man there are more than 200 bones ... the skeleton. 2. The shin is ... front and the calf ... the back of the lower leg. 3. The navel is ... the abdomen. 4. Voluntary muscles are found ... the extremities. 5. There are certain differences ... the body structure ... men and women. 6. ... the head there are inlets ... air and food. 7. A canal containing spinal cord runs ... the column. 8. Waist is ... the ribs and hips. 9. Voluntary muscles are controlled unconsciously ... the autonomous nervous system.

IV. Learn to speak professional medical English

14. Read the text and speak about the human skeleton

The human skeleton consists of both fused and individual bones supported and supplemented by ligaments, tendons, muscles and cartilage. It serves as a scaffold which supports organs, anchors muscles, and protects organs such as the brain, lungs and heart. The biggest bone in the body is the femur in the thigh, and the smallest is the stapes bone in the middle ear. In an adult, the skeleton comprises around 30—40 % of the total body weight, and half of this weight is water.

Fused bones include those of the pelvis and the cranium. Not all bones are interconnected directly: there are three bones in each middle ear called the ossicles that articulate only with each other. The hyoid bone, which is located in the neck and serves as the point of attachment for the tongue, does not articulate with any other bones in the body, being supported by muscles and ligaments.

V. Learn to translate English medical texts

15. Translate the text

The axial skeleton (80 bones) is formed by the vertebral column (26), the thoracic cage (12 pairs of ribs and the sternum), and the skull (22 bones and 7 associated bones). The axial skeleton transmits the weight from the head, the trunk, and the upper extremities down to the lower extremities at the hip joints, and is therefore responsible for the upright position of the human body. Most of the body weight is located in back of the spinal column which therefore has the erector spinal muscles and a large amount of ligaments attached to it resulting in the curved shape of the spine. There are 366 skeletal muscles acting on the axial skeleton position of the spine, allowing for big movements in the thoracic cage for breathing, and the head. Conclusive research cited by the American Society for Bone Mineral Research (ASBMR) demonstrates that weight-bearing exercise stimulates bone growth. Only the parts of the skeleton that are directly affected by the exercise will benefit. Non weight-bearing activity, including swimming and cycling, has no effect on bone growth.

LESSON 2

THE CELL

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[mætə], [sj**u**təbl], [inv**ai**ərənmənt], [n**ei**bəriŋ], [mainj**u:**t], [s**ai**təplæzm], [p**ɔ:**miəbl], [m**ai**tɔuk**ɔ**ndriə], [nj**u:**kli**ɔu**ləs], [kw**ɔ**liti], [kr**ɔu**məsɔum], [maitətik]. [mait**ɔu**sis], [kr**ɔu**mətid], [mai**ɔu**sis], [d**ɔ:**tə].

2. Write the following words in transcription

Anaphase, chloroplast, deoxyribonucleic acid, endoplasm, lysosome, nucleoprotein, organelle, prophase, ribosome, nucleus.

3. Read the following terms

a) Erythrocyte, gene, granule, kernel, metaphase, nutrient, telophase, membrane, granule, protein, semipermeable.

b) Golgi apparatus, ribonucleic acid, endoplasmic reticulum, nucleic acid, electron microscope, reduction division.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

The cell is the smallest unit of living matter capable of independent life. Its main function is to preserve a suitable environment for itself and for neighbouring cells. It is a minute, mainly microscopic, mass of cytoplasm bounded by a semipermeable container, the cell membrane.

There are non-nucleated cells, such as the erythrocytes, but most cells have one or more nuclei. These are dense kernels which direct the activity of the rest of the cell.

Under a high-power microscope, the cell reveals a complex structure with a number of specialized parts called organelles. They are so tiny that we need an electron microscope to observe them.

The most important organelles include mitochondria — in which combustion of nutrients provides energy to keep the cell alive, ribosomes — which have the vital function of synthetizing proteins, Golgi apparatus — responsible for the elaboration and secretion of cell products, lysosomes, endoplasmic reticulum, chloroplasts etc.

The nucleus itself is a complex structure separated from the cytoplasm by an enclosing membrane, the nuclear envelope. There are one or more nucleoli and a number of granules. The nucleus as a whole is composed mainly of nucleoprotein. The chemical composition of nucleoprotein is important because it determines what proteins the cell can produce. This is the major factor in determining the biological properties of the cell as a whole.

The granules contain a quantity of nucleic acid, i.e. the DNA and RNA. The body contains thousands of different kinds of proteins each of which is determined by its own unit of DNA called a gene. Each of the genes governs the synthesis of one protein.

The outstanding quality of DNA is that it can make an exact copy of itself by splitting into two halves. Before a cell divides, its DNA is organized into paired structures called chromosomes. A chromosome is a collection of hundreds of genes.

The mitotic division of a cell takes place in four phases:

prophase — this is the initial part of mitosis, in which chromosomes are condensed from the resting form of a multitude of genes and split into paired chromatids. The spindle and aster are formed, and this is followed by the alignment of the double chromosomes across the centre of the spindle;

metaphase— is marked by the complete separation of each of the 23 pairs of chromosomes;

anaphase — the mitotic process reaches the point when chromosome halves move towards the pole of the spindle;

telophase — is the final stage of cell division. It is marked by the appearance of two daughter cells.

There is no splitting of the chromosomes when the germ cells (the ovum and the sperm) are formed. This process is called meiosis or reduction division. Instead, only one member of a pair of chromosomes goes to a germ cell so that there are 23 single chromosomes. When the ovum is fertilized, new pairs are made with one member form either parent.

5. Answer the following questions

1. What is a cell? 2. What does a cell look like? 3. What are the main parts of the cell? 4. What will a high-power microscope reveal? 5. What kind of process takes place inside mitochondria? 6. In which part of the cell are proteins synthetized? 7. What is the Golgi apparatus responsible for? 8. What is the nucleus mainly composed of? 9. Which are the principal nucleic acids? 10. What is the characteristic feature of DNA? 11. What is the difference between a chromosome and a gene? 12. Which are the four phases of mitotic division? 13. What kind of activity is characteristic of the prophase? 14. What goes on during meiosis? 15. What will have happened by the time metaphase can begin?

6. Refute and correct the following false statements

Example: The cell is the largest unit of living matter.
The cell isn't the largest unit of living matter, it's the smallest unit of living matter.

1. The main function of the cell is to reproduce itself. 2. Organelles can be seen with the naked eye. 3. Mitotic division takes place in two stages. 4. The body contains scores of different types of protein. 5. The spindle and aster are formed during telophase. 6. Each gene governs the synthesis of hundreds of proteins. 7. Nucleic acids are rather unimportant substances. 8. In the course of mitosis metaphase comes after telophase.

III. Word study

7. Write the plural form of the following nouns

meiosis —	nucleolus —
mitosis —	ovum —
synthesis —	reticulum —

8. Form the adjectives, using one of the suffixes: -al, -tic, -ar, -ic

environment —	mitosis —
gene —	reticulum —
granule —	acid —
microscope —	synthesis —

9. Form the nouns, using one of the suffixes: -ation, -ance, -ment

align —	depend —
appear —	observe —
envelop —	preserve —
govern —	separate —

10. Make up English-Russian pairs of words

Living matter, independent life, suitable environment, neighbouring cell, semipermeable container, complex structure, vital function, chemical composition, outstanding quality, paired structure.

Подходящая среда, химический состав, выдающееся свойство, живая материя, полупроницаемая оболочка, сложное строение, соседняя клетка, жизненно важная функция, парная структура, самостоятельная жизнь.

11. Fill in the blanks with the proper prepositions

a) 1. Cytoplasm is bounded ___ the cell membrane. 2. Voluntary muscles are responsible ___ the extension and bending of the extremities. 3. Diaphragm separates thoracic cavity ___ the abdominal cavity. 4. Bones are composed ___ hard osseous tissue. 5. Slow and mechanical movements in the walls of the digestive tract are determined ___ involuntary muscles. 6. DNA is organized ___ paired structures. 7. Chromosomes are split ___ paired chromatids. 8. Prophase is followed ___ metaphase. 9. Cardiac muscle is marked ___ rhythmic contractions. 10. One member of a pair of chromosomes goes ___ a germ cell.

b) 1. The cell is capable ___ independent life. 2. The cell reveals its structure ___ a high-power microscope. 3. ___ mitochondria combustion of nutrients the body provides energy to keep the cell alive. 4. Proteins are the major factor ___ determining the biological properties of the cell. 5. DNA produces its exact copy ___ splitting ___ two halves.

12. Translate the italicized words and group of words

a) 1. Golgi apparatus is responsible for the *elaboration* and secretion of the cell *products*. 2. In anaphase the mitotic process reaches the *point* when chromosome halves move towards the pole of the spindle. 3. The cell is a *minute* mass of cytoplasm. 4. The nucleus is separated from the cytoplasm by the nuclear *envelope*. 5. The chemical composi-

tion of nucleoprotein determines what proteins the cell can *produce*. 6. The cell is a *complex* structure. 7. Nucleus is a dense *kernel* which directs the activity of the cell.

b) 1. The *initial part* of mitosis is prophase. 2. *Each of the genes* governs the synthesis of one protein. 3. Biological properties of the cell *as a whole* are determined by the proteins the cell produces. 4. Combustion of nutrients *takes place* in mitochondria. 5. The *final stage* of cell division is telophase.

IV. Learn to speak professional medical English

13. Complete the definitions below

1. The cell is ….
2. The most important organelles include ….
3. The nucleus is ….
4. The granules contain ….
5. The prophase is ….
6. The metaphase is ….
7. The anaphase is ….
8. The telophase is ….

14. Read the text below and speak about the cell composition

Клетки организма человека состоят из разнообразных химических соединений неорганической и органической природы. К неорганическим веществам клетки относятся вода и соли. Вода составляет до 80 % массы клетки. Она растворяет вещества, участвующие в химических реакциях: переносит питательные вещества, выводит из клетки отработанные и вредные соединения. Минеральные соли — хлорид натрия, хлорид калия и др. — играют важную роль в распределении воды между клетками и межклеточным веществом. Отдельные химические элементы, такие как кислород, водород, азот, сера, железо, магний, цинк, йод, фосфор, участвуют в создании жизненно важных органических соединений.

Органические соединения образуют до 20—30 % массы каждой клетки. Среди органических соединений наибольшее значение имеют углеводы, жиры, белки и нуклеиновые кислоты.

V. Learn to translate professional English medical texts

15. Translate the text below into Russian

The cell is the functional basic unit of life. It was discovered by Robert Hooke and is the functional unit of all known living organisms. It is the smallest unit of life that is classified as a living thing, and is often called the building block of life. Some organisms, such as most bacteria, are unicellular (consist of a single cell). Other organisms, such as humans, are multicellular. Humans have about 100 trillion cells;

a typical cell size is 10 μm and a typical cell mass is 1 nanogram. The largest cells are about 135 μm in the anterior horn in the spinal cord while granule cells in the cerebellum, the smallest, can be some 4 μm and the longest cell can reach from the toe to the lower brain stem (Pseudounipolar cells).

In 1835, before the final cell theory was developed, Jan Evangelista Purkinje observed small «granules» while looking at the plant tissue through a microscope. The cell theory, first developed in 1839 by Matthias Jakob Schleiden and Theodor Schwann, states that all organisms are composed of one or more cells, that all cells come from preexisting cells, that vital functions of an organism occur within cells, and that all cells contain the hereditary information necessary for regulating cell functions and for transmitting information to the next generation of cells.

The word cell comes from the Latin cellula, meaning a small room. The descriptive term for the smallest living biological structure was coined by Robert Hooke in a book he published in 1665 when he compared the cork cells he saw through his microscope to the small rooms monks lived in.

LESSON 3

THE TISSUES

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[kənsi:vəbl], [əpiə], [sə:fis], [kju:teiniəs], [mju:kəs], [siərəs], [epiθiliəm], [kɔləm], [epidə:mis], [pəreŋkimə], [ka:tilidʒ], [faibə], [kəmpəunənt], [njuərən], [əmi:bɔid], [sə:kjuleitəri], [kwait], [plæzmə], [respirətri], [endɔukrain].

2. Write in transcription

Anatomy, neuroglia, medium, lobule, cover, appearance, outer, matrix, adult, akin, separate, medium, fluid.

3. Read correctly the following terms

Adipose tissue, amoeboid tissue, glandular tissue, epithelial tissue, muscle tissue, nerve tissue, supporting tissue.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Of the several conceivable classifications of tissues, the following appears to cover the major aspects:

1. **Epithelial tissue** — is the surface layer of cells covering cutaneous, mucous and serous surfaces. According to the shape and arrangement of the cells epithelium may have the appearance of simple pavement, or a block of columns or cubes, it may also be seen as stratified or transitional. Epithelial tissues include not only true epithelium such as the outer layer of the skin (epidermis) but also the lining membranes of various hollow organs (e.g. the whole of the alimentary tract).

2. **Glandular tissue** — may well be seen as a specialized form of the lining tissue capable of secreting substances necessary for the proper functioning of the body. It constitutes the bulk of the parenchyma of glands such as the liver, the pancreas, the thyroid gland etc.

3. **Connective and adipose tissue** — is more important for the ground substance or intercellular matrix than for the cells which produce it. It provides a sort of skeleton for many organs such as tendons, ligaments, etc. Connective tissue cells specialized for storing fat, which is usually arranged in lobules, give rise to adipose tissue.

4. **Supporting tissue** — is a specialized form of connective tissue (bone, cartilage) with a particularly large proportion of the ground substance. In an adult bone, fine fibres of highly specialized connective tissue are embedded in a calcified matrix.

5. **Muscle tissue** — is the most abundant tissue in the body. The specialized component is the muscle fibre, a long slender cell or group of cells endowed with contractility, i.e. capability of becoming shorter and thicker in response to stimulation. They are supported and bound together by ordinary connective tissue, and are richly supplied with blood vessels and nerves.

6. **Nerve tissue** — is composed of a number of interconnected nerve cells, neurons, often lodged in supporting tissue made up of neuroglia. Nerve tissue is akin to that of the outer skin, epithelium, but its function in the body is so different from any other tissue that it calls for quite separate classification.

7. **Amoeboid tissue** — the medium surrounding the cells need not necessarily be solid. In the case of two principal body fluids — blood and lymph — the respective amoeboid tissue cells are suspended in a fluid matrix, plasma, which makes their independent movement possible.

Another classification of tissues is based on the assumed existence of merely four primitive types of cells: epithelial, mechanical, amoeboid and nerve cells.

Just as cells combine to form distinct tissues, so a differentiated structural unit, made up of various cells and tissues and adapted for the performance of some specific function, is organized to form an organ (kidney, heart, brain etc.). A group of related body organs, interdependent and co-operating with each other to perform one of the fundamental

vital functions, is, in turn, referred to as a system (circulatory, respiratory, locomotor, endocrine, nervous etc.).

Strictly speaking, the study of tissues is the prerogative of histology. But as tissues, organs and systems in a living body depend, to a large extent, on each other to function properly, there is a great deal of overlapping among the different branches of medicine. Anatomy is the primary discipline of scientific medicine. It is essentially a descriptive science, dealing with the form and arrangement of the parts of the body. Surgery could be described as an applied anatomy, while general medicine is the practical application of physiology. The latter is concerned with normal, healthy function of tissues, organs and systems, but the dividing line between normality and abnormality — the concern of pathology — is not quite as distinct as might be thought. Similarly, physiological function is so closely related to anatomical structure that physiology and anatomy are not quite as apart from each other as might meet the eye. From that point of view, general medicine is as much an extension of anatomy as the practical exploitation of physiology, the science of how the tissues, organs and systems of the body work.

5. Answer the following questions on the text

1. What is the principal function of epithelial tissue? 2. How is epithelium classified according to its general appearance? 3. Which type of tissue constitutes most of the parenchyma of the liver, the pancreas, the thyroid gland etc.? 4. What kind of tissue is important for its ground substance? 5. What is the difference between connective and adipose tissues? 6. Which parts of the body are noted for the presence of supporting tissue? 7. What is a calcified matrix? 8. Which is the most abundant tissue in the body? 9. What are the characteristic properties of muscle tissue? 10. In what way is nerve tissue organized? 11. Why is nerve tissue classified separately from epithelium? 12. What are the two main types of amoeboid tissue? 13. What is the characteristic feature of the amoeboid tissue matrix? 14. What is the difference between tissue and an organ of the body? 15. What is the difference between an organ and a system? 16. Which branch of natural science is concerned with the study of tissues? 17. How is anatomy defined as opposed to physiology? 18. What is the relationship between anatomy and physiology on the one hand and surgery and general medicine on the other hand? 19. What is the main concern of pathology?

III. Word study

6. Make up adjectives to the following nouns

Anatomy, cartilage, epithelium, physiology, system, cell, nerve.

7. Make up English-Russian pairs words

Surface layer, serous surface, true epithelium, outer layer, hollow organ, lining tissue, ground substance, abundant tissue, supporting tissue, outer skin, vital function, descriptive science.

Внешний слой кожи, полый орган, основное вещество, поверхностный слой, обильная ткань, серозная поверхность, описательная наука, выстилающая ткань, жизненно важная функция, поддерживающая ткань, истинный эпителий, внешний слой.

8. Translate the italicized groups of words

1. *Of the several types* of tissues only muscle tissue has the property of contractility. 2. There are *not only* nerve tissue in the body *but also* many other types of tissues. 3. *According to* the shape and arrangement of cells epithelium may have different appearance. 4. There are many different types of tissues in the body *such as* muscle tissue, epithelial tissue, connective tissue etc. 5. Connective tissue is *more* common in tendons and ligaments *than* in other parts of the body. 6. *Just as* the stimulus reaches muscle tissue, *so* the tissue begins to contract. 7. Nerve tissue is, *in turn*, a number of neurons often found in the supporting tissue, made up of neuroglia. 8. Long muscles *to a large extent* are found in extremities. 9. Anatomy is the science *dealing with* the form and structure of different organs. 10. *Strictly speaking* general medicine is the practical application of physiology. 11. There are two branches of physiology: normal physiology and pathologic physiology. *The former* deals with body function in health and *the latter* – in disease. 12. Physiology and anatomy are not quite *as apart* from each other *as* might *meet the eye*.

9. Fill in the blanks with the proper words from the list below

1. Glandular tissue is _____ the bulk of the parenchyma of glands. 2. Nervous cells often are _____ in the supporting tissue. 3. Anatomy deals with the form and _____ of different parts of the body. 4. One of the classifications of tissues _____ all the major aspects. 5. Fine fibres of highly specialized connective tissue are _____ in a calcified matrix. 6. Epithelial tissue _____ many body surfaces. 7. There is a great deal of _____ among the different branches of medicine. 8. Connective tissue _____ a sort of skeleton for many organs. 9. Tissue classification may base on the _____ existence of four primitive types of cells. 10. Epithelium may have the appearance of a simple _____. 11. Muscle fibre is _____ with the capacity of contractility.

Pavement, lodged, covers, assumed, constitutes, endowed, overlapping, provides, arrangement, embedded.

IV. Learn to speak professional medical English

10. Make short definitions

1. Nervous tissue is ….
2. Glandular tissue is ….
3. Epithelial tissue is ….
4. Ameboid tissue is ….
5. Connective tissue is ….
6. Muscle tissue is ….
7. Supporting tissue is ….

11. Read the text below and speak about the tissues of the human body

Ткани человеческого тела

В организме человека различают четыре группы тканей — эпителиальную, соединительную, нервную и мышечную.

Эпителиальная ткань — слой клеток, выстилающий поверхность и полости тела, формирующий большинство желёз организма, внутренний слой желудочно-кишечного тракта, дыхательной системы, мочеполовых путей, кровеносных сосудов и т. д. Различают однослойный и многослойный эпителий (имеющие несколько морфологических типов), а также переходный эпителий.

Соединительная ткань выполняет опорную, защитную и трофическую функции. Состоит из внеклеточного матрикса и клеток соединительной ткани. Различают костную и хрящевую ткани, кровь и лимфу, собственно соединительную ткань, жировую ткань.

Нервная ткань представляет собой систему специализированных структур, образующих основу нервной системы и создающих условия для реализации её функций. Нервная ткань осуществляет связь организма с окружающей средой, восприятие и преобразование раздражителей в нервный импульс и передачу его к эффектору. Нервная ткань состоит из нейронов, выполняющих основную функцию, и нейроглии, обеспечивающей специфическое микроокружение для нейронов.

Мышечная ткань — ткань, обладающая свойствами возбудимости, проводимости и сократимости, способствуя изменению положения в пространстве частей тела, а также формы и объёма органов. Различают скелетную, сердечную (поперечнополосатую) и гладкую мышечную ткань.

V. Learn to translate scientific medical texts

12. Translate the text into Russian

Tissue

Tissue is a cellular organizational level intermediate between cells and a complete organism. Hence, a tissue is an ensemble of cells, not

necessarily identical, but from the same origin, that together carry out a specific function. Organs are then formed by the functional grouping together of multiple tissues. Tissue helps to protect our joints.

The study of tissue is known as histology or, in connection with disease, histopathology. The classical tools for studying tissues are the paraffin block in which tissue is embedded and then sectioned, the histological stain, and the optical microscope. In the last couple of decades, developments in electron microscopy, immunofluorescence, and the use of frozen tissue sections have enhanced the details that can be observed in tissues. With these tools, the classical appearances of tissues can be examined in health and disease, enabling considerable refinement of clinical diagnosis and prognosis.

LESSON 4

CHEMISTRY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[sʌbstəns], [pj**u**ə], [kənst**i**tjuənt], [kr**i**stəlain], [kʌlə], [pət**i**kjulə], [rʌfli], [streit], [**i**ntidʒə], [**i:**kwəl], [h**e**tərəs**ai**klik], [ælis**ai**klic], [**æ**lifætic], [**ai**ən], [**e**stə], [k**i:**tɔun], [**i:**θə], [s**ɔu**diəm], [klɔ**:**raid], [sʌlfeit], [n**ai**treit], [m**æ**liəbl].

2. Write the following words in transcription

Aldehyde, carbohydrate, component, compound, ductile, ethylene, hydrocarbon, hydrogen, naphthalene, nucleotide, nitrogen, oxidation, oxygen, protein, quinine, suboxide, valency.

3. Read

Mixture, solution, saturate, aggregation, organic, biochemistry, molecule, volatility, solubility, peptide, enzyme, polymerization, phenol, hydroxide, lipid.

4. Read the name of the following acids, write them in transcription and memorise their Russian equivalents

acetic acid
amino acid
ascorbic acid
butyric acid
carbonic acid
carboxylic acid
folic acid
formic acid
hydrochloric acid
lactic acid
malic acid
nitric acid
nitrous acid
orthophosphoric acid
oxalic acid
pyruvic acid
succinic acid
tartaric acid

II. Text study

5. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Chemistry is defined as the science of substances. It is concerned with their structure, their properties and the reactions that change them into other substances.

In terms of chemistry, substances may be pure or impure. Very impure substances are called materials. A distinction has to be made between elementary substances (elements), compounds (composed of two or more elements or constituents) and mixtures (made up of components). Solutions are mixtures with uniform chemical composition and physical properties; they may be saturated or unsaturated, depending on the degree of concentration.

The physical properties of substances (materials) include: the physical state or state of aggregation (i.e. solid, liquid, gaseous), density, crystalline form, hardness, melting point, boiling point, colour, odour, taste, volatility, solubility etc. Metals are malleable, ductile and conductive.

All matter is made up of molecules. A molecule consists of one or more atoms. The nucleus of an atom (subdivided into protons, neutrons, positrons etc.) has a positive charge which is equal to or an integral multiple of the negatively charged electron. The integer which expresses this relation is called the atomic number.

Chemistry as such may be subdivided according to different aspects into a number of branches. Those relevant to medicine are in particular:

inorganic chemistry dealing with elements other than carbon, and their compounds;

organic chemistry concerned with the compounds of carbon;

biochemistry the chemistry of substances constituting living matter.

The names of compounds in English are formed generally regardless of the valencies of elements and — at the same time — with a view to whether a particular element forms only one or more compounds.

Oxides: a) if only one exists, then the term oxide simply follows the name of the determining element, e.g. aluminum oxide;

b) if more of the same element are possible, prefixes **mon(o)-** [mənɔu], **di-** [d**ai**], **tri-** [trai], **tetr(a)-** [t**e**trə], **pent(a)-** [p**e**ntə] etc. are used, e.g. nitrogen dioxide, nitrogen trioxide;

c) where the valency has to be distinguished (in oxides of the R_2O or RO types), the ending **-ous** is added to indicate the lower type, the ending **-ic** to indicate the higher type, e.g. N_2O — nitrous oxide, NO — nitric oxide;

d) the names of suboxides or peroxides are formed correspondingly, e.g. Pb_2O — lead suboxide, H_2O_2 — hydrogen peroxide.

Acids: the names of **acids** and their **salts** are derived from those of oxides. On roughly the same pattern:

a) with the following endings —

acid:	**salt:**
-ic — for oxygen-free acids: HCl — hydrochloric acid; where only one acid is possible: H_2CO_3 — carbonic acid; **-ous** — indicates an acid of lower valency where two are possible: HNO_2 — nitrous acid; HNO_3 — nitric acid;	**-ide** — NaCl — sodium chloride; **-ite** — sulphite; **-ate** — nitrate

b) by means of prefixes —

meta- [m**e**tə], **ortho-** [**ɔ:**θɔu], **pyro-** (p**ai**rɔu), **thio-** (θ**ai**ɔu), **hypo-** (h**ai**pɔu); the prefixes are used similarly as in Russian, e.g. H_3PO_4 — orthophosphoric acid.

Bases: the term hydroxide is combined with the name of the basic constituent element similarly as in oxides:

NaOH — sodium hydroxide;

$Fe(OH)_2$ — ferrous hydroxide.

The principal organic compounds and their derivatives (e.g. alcohols, phenols, ethers, aldehydes, ketones, carboxylic acids, esters etc.) include hydrocarbons, carbohydrates, amino acids, peptides, proteins, enzymes, lipids, nucleotides and similar substances, a number of which come under the heading of bio chemistry.

The mechanism by which atoms or ions are held together in the molecule or crystal of an organic compound is called a bond; it may be single, double, triple etc. The structure of an organic molecule may be aliphatic or open-chain (with the chain either straight or branched), alicyclic, aromatic or heterocyclic. The atoms of most of the alicyclic molecules are arranged in five- or six-membered rings.

Other important aspects of organic chemistry include the degree of saturation, oxidation-reduction, substitution, polymerization etc.

6. Answer the following questions as close to the text as possible

1. How is chemistry defined? 2. How are solutions divided in terms of saturation? 3. What are the main physical properties of substances? 4. What is all matter made up of? 5. How are the names of compounds

formed in English? 6. Which are the four main types of chemical compounds? 7. What are the three characteristic physical properties of metals? 8. What is organic chemistry concerned with? 9. How are the terms of English organic chemistry formed? 10. Which are the principal organic compounds? 11. What is a chemical bond? 12. How are the atoms of most alicyclic molecules arranged? 13. What other aspects of organic chemistry is a chemist interested in? 14. What are the main structures of an organic molecule?

7. Give full answers according to the following pattern

Example: Is this man a doctor or a patient?
This man is not a doctor, he is a patient.

1. Are very impure substances called materials or solutions? 2. Are salts compounds or elementary substances? 3. Does the atomic number indicate the positive charge of the nucleus or the state of aggregation? 4. Do carbohydrates come under the heading of organic or inorganic chemistry? 5. Are the names of acids and their salts derived from those of oxides or from the valencies of their constituent elements?

8. Ask questions to produce the following statements

Example: He has two patients with pneumonia and one patient with bronchitis.
How many patients has he?

1. There are over a hundred elements in the periodic table. 2. I have no experience in biochemistry. 3. We need more money and more workers to complete the experiment. 4. There is one nucleus in an atom. 5. I know very little about the malleability of metals. 6. Few people helped me in my work. 7. Usually I did not take any tablets with me. 8. There is no index in this mathematical formula. 9. They have to do a great deal of work today. 10. We need a lot of blood for this operation.

III. Word study

9. Make up English-Russian pairs of words

Aromatic, conductive, derivative, ferrous, gaseous, impure, insoluble, multiple, particular, relevant.

Газовый, определенный, нерастворимый, ароматический, проводящий, уместный, нечистый, железистый, производный, множественный.

10. Make up new adjectives with negative meaning, using prefixes: in-, un-, im-, ir-

pure	soluble
saturated	relevant
organic	like

11. Make up new nouns, using suffixes: -ity, -(i)tion, -(a)tion

acid	determine
conductive	indicate
dense	origin
volatile	polymerize
define	saturate

12. Fill in the blanks with the proper prepositions

1. The nucleus of an atom is subdivided ___ protons, neutrons, positrons etc. 2. Some organic compounds come ___ the headings of biochemistry. 3. Chemistry is connected ___ the construction of substances. 4. The names of compounds ___ English are formed regardless of the valencies of elements. 5. According ___ different aspects chemistry is subdivided into inorganic chemistry, organic chemistry, biochemistry etc. 6. Solutions are mixtures ___ uniform chemical composition. 7. Depending ___ the degree of saturation solutions are divided into saturated and unsaturated.

IV. Learn to speak professional medical English

13. Finish the sentences

1. Some important aspects of organic chemistry include ….
2. Carboxylic acids are ….
3. The physical properties of substances include ….
4. The principal organic compounds and their derivatives are ….
5. The physical state may be ….
6. The nucleus of an atom includes ….
7. The structure of an organic molecule may be ….

14. Read the text below and make up a short account of its content in English

Hydrochloric Acid in the Body

Chloride and Hydrogen ions are kept separately in the stomach fundus region. The two ions, specifically, are held by parietal cells found in the gastric mucosa. When someone eats food, these ions are released together and combine to form the incredibly strong acid. The pH of the stomach contents can be between 1 and 2 which is highly acidic. HCl not only kills microorganisms that are trying to do harm, but it also plays a key part in the digestion of food.

People often ask why doesn't the stomach get damaged from the HCl? Another question is why doesn't the intestine get damaged after the food leaves the stomach?

The stomach is protected because it constantly secretes a thick mucus layer. As the acid eats away the layer, more mucus is released and therefore, it never does any damage to the stomach. However, heart burn is the feeling of some of this acid going up the esophagus.

The reason the acid doesn't hurt the intestines when the food leaves is because the chyme (the food when leaving the stomach) is neutralized in the duodenum by sodium bicarbonate. Sodium bicarbonate is a strong base and therefore, neutralizes the hydrochloric acid and allows the chyme to move into the intestines to be processed. The equation of hydrochloric acid being neutralized by sodium bicarbonate looks like this:

$$HCl + NaHCO_3 \rightarrow NaCl + H_2O + CO_2.$$

V. Learn to translate scientific texts

15. Translate the text, using dictionary

Химия — одна из важнейших и обширных областей естествознания, наука о веществах, их свойствах, строении и превращениях, происходящих в результате химических реакций, а также о фундаментальных законах, которым эти превращения подчиняются. Поскольку все вещества состоят из атомов, которые благодаря химическим связям способны формировать молекулы, то химия занимается в основном изучением взаимодействий между атомами и молекулами, полученными в результате таких взаимодействий.

Предмет химии — химические элементы и их соединения, а также закономерности, которым подчиняются различные химические реакции.

LESSON 5

BIOCHEMISTRY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[b**ai**ək**e**mistri], [ək**ɔ:**], [kətæbəlizm], [ənæbəlizm], [əm**i:**n], [rædikəl], [kl**ɔ:**rəmi:n], [r**e**zidju], [haidr**ə**lisis], [s**i:**kwəns], [prik**ɔ:**sə], [kɔu**e**nzaim], [səl**ai**və], [kælər**i**fik], [j**i:**ld], [kælərı], [səl**i**difai], [ist**e**rif**ai**], [pel**a:**grə], [mitæbəlism], [gl**i**sərɔl].

2. Write transcription to the following words

Ammonia, bacitracin, carbohydrate, disaccharide, glycogen, halogen, leucine, phenylalanine, prolactin, sulphonamide, triglyceride, valine, enzyme, nitrogen, dioxiribose, lysine, glycine, globulin, insulin, hormone, protease, amylase, phosphatide, serebroside.

3. Read the following words

Atheroma, calorigenic, catalyst, cholesterol, globulin, protamine, tocopherol, hydroxyl, ribose, maltose, serine albumin, saccharide, sugar,

monosaccharide, pentose, hexose, sucrose, histone, prolactin, toxin, polymixin, lipase, esterase, lactate, glucose, fructose, galactose, cellulose, maltose, lipoid, lecithin.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

The aim of biochemistry is to study the chemical processes occurring in living organisms particularly those involved in metabolism (i.e. the breaking down of large molecules into manageable components — catabolism, and the rebuilding of biochemical substances that the body can cope with — anabolism).

Biological catalysts such as enzymes — are nearly always needed to trigger off a biochemical reaction, where the following substances are most often involved:

Amines. are basic organic compounds derived from ammonia (NHg), in which hydrogen has been replaced by hydrocarbon radicals or other nonacidic radicals and which may contain one or more halogen atoms attached to nitrogen (e.g. chloramine).

Amides are also derived from ammonia or an amine by substituting the hydroxyl group in the acidic carboxyl group for the amino group (e.g. sulphonamide).

Peptides are a specific class of amides. They are obtained from two or more amino acids by combining the amino group of one acid with the carboxyl group of another. The chemical bond between carbon and nitrogen in the CO—NH group that holds together the amino acid residues in a peptide is called peptide linkage or peptide bond.

Amino acids are weak organic acids in which one or more hydrogen atoms are replaced by the amino group, TH_2. Their molecules are linked by means of peptide bonds to form proteins or, vice versa, in terms of catabolism, they can be seen as the end products of protein hydrolysis. Human proteins consist of over twenty different amino acids. Ten of them (e.g. leucine, phenylalanine, lysine, tryptophane and valine) are essential in the diet as they cannot be synthesized in the body; the rest (e.g. glycine, serine, etc.) are non-essential.

Proteins chemically speaking, are polypeptides of a number of amino acid molecules arranged in a peptide chain. The biological properties of a protein depend on the exact sequence of different amino acids in the chain (primary structure), their orientation in space (secondary structure) and the shape of the chain as a whole (tertiary structure). The exact structure of a protein is determined by the particular nucleic acid, in the cell nucleus, responsible for its synthesis. Proteins are essential components of all living matter and constitute about 12 per cent of the human body. They can be divided into albumins,

globulins, histones, protamines etc. Some hormones (insulin, prolactin), toxins (botulotoxin, toxins produced by the bacilli of diphtheria, tetanus, scarlet fever etc.) and even some of the antibiotics (bacitracin, polymyxin) are by their chemical nature proteins. In the body, proteins are built up by a process known as protein synthesis, or again broken down under the influence of specific enzymes known as proteases.

Enzymes. All known enzymes are proteins and most of them have the dual function of catalysts of both catabolic and anabolic reactions. They are highly specific; some enzymes will catalyze only one kind of biochemical reaction and no other. For a great many chemical reactions it is possible to assign enzymes or groups of related enzymes. The names of groups of enzymes that have a particular type of substrate are formed by combining the root of the substrate with the suffix -ase (e.g. amylase, lipase, esterase, lactate dehydrogenase). Some enzymes remain inactive until they are activated by other chemical processes; these precursors are called pre-enzymes. A coenzyme is a non-protein substance needed for the activity of some enzymes. Nearly all of the vitamins help to form coenzymes.

Carbohydrates (saccharides, sugars) form a large group of organic compounds of carbon, hydrogen (saccharides, and oxygen that occur in nature as a result of photosynthesis of sugars) in plants. They are found in all living cells and classified in 3 groups: **monosaccharides** — of which the most important are pentoses and hexoses. Of the former, deoxyribose and ribose occupy a special place as essential components of nucleic acids (DNA — deoxyribonucleic, and RNA — ribonucleic acids), the chemical basis of all living matter. Hexoses include some of the commonest sugars (glucose, fructose, galactose); **disaccharides** — are compounds of two monosaccharides. Three of them essential for the human diet are maltose, sucrose or cane sugar and lactose or milk sugar; **polysaccharides** — include cellulose (useless as human food because man has no enzyme to convert it into disaccharides or monosaccharides), glycogen (also called animal starch and stored up in the liver and muscles), and starch which is converted into maltose by enzymes in saliva and pancreatic juice.

Carbohydrates provide most of the energy of a diet by being calorific, i.e. heat producing. One gram of carbohydrates yields 4.1 calories.

Fats are also calorigenic, even more so, because, weight for weight, they produce twice as much energy as proteins or carbohydrates; however, they are not quite as essential to diet as the former two, as they can be largely synthesized in the body from carbohydrates. There is no difference between fats and oils except in consistency; the latter can easily be solidified, e.g. by lowering the temperature. Both are mixtures of triglycerides, i.e. compounds of fatty acids esterified by glycerol. In the course of metabolism fatty acids can be converted into

acetic acid or synthesized from it. Glycerol and acetic acid are degraded in the body by the same process as sugar to provide energy.

Lipoids (lipids) resemble fats and are generally classified as such. They, too, are insoluble in water, but soluble in organic solvents and their metabolism in the body follows much the same lines as that of fat. Phosphatides, cerebrosides, lecithins, steroid hormones as well as vitamin A are all lipoids and so are the sterols, including cholesterol, the accumulation of which causes damage to arteries (atherosclerosis).

Vitamins were originally thought to be chemically amines; later, when it was found that they were not, the «-e» at the end was dropped from spelling. They are now recognized as being a whole range of different chemical compounds (alcohols, organic acids, amides, tocopherols etc.). Like enzymes, they act in minute quantities to touch off major chemical reactions of the metabolic process. Some of them cannot be synthesized in the body, while others can. Their absence in the diet results in specific vitamin deficiency diseases (scurvy, rickets, beri-beri, pellagra, night blindness etc.).

5. Answer the following questions

1. What is the aim of biochemistry? 2. What are the two principal phases of metabolism in terms of chemical reactions? 3. What is the role of catalysts in general and biological catalysts in particular? 4. What is the chemical relationship between amines and amides? 5. What is a peptide linkage? 6. What are the essential amino acids? 7. In which essential metabolic process are amino acids seen as the end product of protein hydrolysis? 8. What is the chemical basis of proteins, i.e. which simpler biochemical compounds are proteins derived from? 9. Which are the principal types of proteins? 10. What is the aim of photosynthesis? 11. What is the nature of enzymes? 12. Why do we refer to enzymes as being highly selective? 13. How are the names of enzymes derived? 14. What is the difference between enzymes and co-enzymes? 15. What is the chemical nature of carbohydrates? 16. Which group of carbohydrates do some of the common sugars such as glucose or fructose belong to? 17. Which are the best known compounds of hexoses? 18. Why is cellulose useless as human food? 19. What happens with glycogen in the body? 20. What basic chemical processes is starch exposed to in the body? 21. Why are fats described as calorific? 22. What is the difference between fats and oils? 23. What is the difference between fats and lipoids? 24. What is the role played by one type of lipid in the aetiology of cardiovascular disease? 25. How are lipids disposed in the body? 26. What was the original classification of vitamins? 27. What have vitamins in common with enzymes? 28. Do all vitamins have to be supplied from outside? 29. What is the common denominator for scurvy, rickets and pellagra?

III. Word study

6. Make up English-Russian pairs of words

Such as, nearly always, most often, by means of, a number of, as a whole, most of, nearly, even more so, as such, as well as.

Почти всегда, в целом, как таковой, с помощью, так же как и, более того, такой как, чаще всего, почти, большинство, ряд.

7. Translate the italicized words

1. Lack of vitamin C *resulted in* the development of beri-beri. 2. The enzyme activation *resulted from* a certain chemical process. 3. Carbohydrates occur in nature *as a result of* photosynthesis in plants. 4. Peptides are the *result of* combination of amino group of one acid with the carboxyl group of another. 5. The cell nucleus is *responsible for* the synthesis of nucleic acid. 6. Energy is obtained *in response to* fat consumption. 7. Vitamins *act in* minute quantities. 8. Proteins *act as* building material for tissues. 9. Enzymes *act on* the body as triggers of biochemical reactions.

8. Fill in the blanks with prepositions

a) 1. Many different chemical processes occur ___ the body. 2. Proteins are polypeptides made ___ a number of amino acids. 3. Some hormones are similar ___ their chemical natural proteins. 4. Proteins are broken down ___ the influence of proteases. 5. Disaccharides are essential ___ the human diet. 6. Starch is converted into maltose ___ enzymes in saliva and pancreatic juice. 7. Fats are not so essential ___ the diet as proteins or carbohydrates. 8. ___ metabolism fatty acids are converted into acetic acid. 9. Accumulation of cholesterol can cause damage ___ arteries.

b) 1. Chemical processes are involved ___ metabolism. 2. In amines hydrogen is replaced ___ hydrocarbon radicals. 3. Amines contain halogen atom attached ___ nitrogen. 4. Peptides are obtained ___ amino acids. 5. Human proteins consist ___ more than twenty amino acids. 6. The exact structure of a protein is determined ___ the nucleic acid responsible for its synthesis. 7. Certain enzymes are activated ___ some chemical processes. 8. Most cells are capable ___ producing one or more molecules, which act as signaling molecules to other cells. 9. Nonribosomal peptides are assembled ___enzymes that are specific to each peptide. 10. Peptones are derived ___ animal milk.

IV. Learn to speak professional English

9. Finish the following definitions

1. Amines are ….
2. Amides are ….
3. Amino acids are ….

4. Proteins are ….
5. Enzymes are….
6. Carbohydrates are ….
7. Fats are ….
8. Lipoids are ….
9. Vitamins are ….

10. Read the text below and speak about biochemistry

Biochemistry, sometimes abbreviated as BioChem, is the study of chemical processes in living organisms. Biochemistry governs all living organisms and living processes.

Much of biochemistry deals with the structures and functions of cellular components such as proteins, carbohydrates, lipids, nucleic acids and other biomolecules.

Over the last 40 years biochemistry has become so successful at explaining living processes that now almost all areas of the life sciences from botany to medicine are engaged in biochemical research. Today the main focus of biochemistry is in understanding how biological molecules give rise to the processes that occur within living cells which in turn relates greatly to the study and understanding of whole organisms.

Biochemistry studies the chemical properties of important biological molecules, like proteins, and in particular the chemistry of enzyme-catalyzed reactions.

V. Learn to translate professional medical texts

11. Translate the text into Russian

Пептиды — это очень короткие белки. Они имеют размер всего 1 нм. Как известно, белки состоят из аминокислот и бывают разной длины: длинные — в них десятки аминокислот и короткие — имеющие лишь 2—3 звена. Вот это и есть пептиды. В организме пептиды переносят информацию от одной клетки к другой.

Все пептиды имеют свою собственную узкую специализацию. Для каждой ткани подходит только свой пептид: для легких — легочный, для печени — печеночный, для мозга — мозговой.

Пептиды можно включать не только в лекарства, но и в другие продукты. Например, выпускается нанокосметика, которая заставляет нашу кожу производить коллаген. Пептиды добавляют в зубную пасту, в бальзамы для полоскания рта. В гель для лечения пародонтита добавлены пептиды костной ткани, хрящевой, сосудистой вилочковой железы. Так что пародонтит лечится нанесением геля на десны. В общем, пептиды — это такие полезные вещества, которые активизируют резервные возможности организма.

IN THE LABORATORY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[sj**u:**t], [l**ai**tiŋ], [s**i**lində], [p**a**uə], [stə**:**rə], [d**i:**haidr**ei**ʃən], [ətʃ**i:**v], [ʌvən], [v**ei**pə], [θə**:**məstæt], [w**ai**ə], [gɔ**:**z], [kwɔntəti], [l**i**kwid], [ælkəlain], [ru:t**i:**n], [əs**e**ndiŋ], [skr**u:**], [ədʒ**ei**sənt], [kɔ**:**s], [**ai**əris], [kl**i**ə], [z**ai**ləl], [fɔ**:**məlin], [fl**u:**id], [**i**əsin], [**ai**ədi:n], [mə:kj**u**əriəl].

2. Write the following words in transcription

Various, variety, glassware, crucible, porcelain, suitable, desiccator, centrifuge, require, weighing, quantitative, graduated, screw, distinguish, focusing, adjustment, procedure, paraffin, dehydrate, subsequently, alkaline, haematoxylin, iron, convert, gelatin, eventually, balsam.

3. Read the following terms

Beaker, funnel, pipette, acid-proof, alkali-proof, balance, pestle, reflux, microscope, objective, substage, diaphragm, series, fixative, dye, bind, starch, counterstain, specimen, coverslip, burette.

4. Read the following compound terms

Watch-glass, ventilation hood, water-bath, sand-bath, filter pump, Bunsen burner, eye-piece, body-tube, nose-piece, Zenker's solution, Bouin's fluid, mercurial fixative, Prussian blue, Canada balsam.

II. Text study

***5.* Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text**

A great deal of research and general medical and related work is done in the laboratory. To suit the various types of work, a laboratory is equipped with a variety of apparatuses, devices and other means. There is usually a working table or bench there with a sink and running water, gas and electricity mains. Electricity serves for lighting and as a driving power, gas for producing flames of different intensity.

The necessary assortment of laboratory glassware includes test-tubes, beakers, flasks of different shapes and sizes, bottles, jars, cylinders, funnels, pipettes, burettes, watch-glasses. Dishes, basins, crucibles, grinding mortars with pestles and stirrers are usually made of porcelain. Plastic materials find good use in laboratories, too, as many of them are chemically resistant, acid- or alkali-proof and unbreakable and, therefore, suitable for storing stock solutions.

The more sophisticated equipment includes desiccators, ovens, furnaces or kilns for generating high temperatures (often with a

ventilation hood to enable the escape of harmful vapours or undesirable odours), centrifuges, thermostats, balances (simple or analytical), reflux condensers, water-baths, oil- or sand- baths, distilling flasks, a filter pump, optical or even electron microscopes etc.

The various parts of an apparatus are fitted together by means of glass tubing, using corks or rubber or glass stoppers; rubber or plastic tubing is used where flexible connection is called for. A Bunsen burner, with or without a wire gauze, will often do to obtain the temperature required for the reaction. A balance for weighing out solids in quantitative work consists of two balance-pans, one for the material to be placed on, the other for the weights. Liquids are measured out in measuring cylinders, burettes or graduated flasks.

By far the most important stock equipment of any histological laboratory is the light microscope. It consists of the eye-piece (ocular), the body-tube and a set of usually three objectives screwed into a revolving nose-piece. The lens of an objective has a specific resolving power, i.e. a capacity to distinguish between two adjacent points. Accurate focusing is achieved by special screws for coarse and fine adjustment. The material — section of a tissue — to be observed is put on a slide which is held in position on the stage by clips, unless the microscope has a built-in mechanical stage. The substage consists of a condenser, iris diaphragm and mirror.

The standard light microscope has a magnifying power of 1,000 diameters. Low-power objectives give a fairly large field and make scanning easier, high-power objectives bring more detail into view.

Yet little detail can be seen on the face of a block of untreated tissue. We can only examine a thin slice of it with a light shining through it. A laboratory worker has to follow certain fairly standard procedures. Fresh tissue, selected for microscopy, has to be fixed, embedded in paraffin, sliced on a microtome, stained, dehydrated, cleared in xylol and mounted for observation.

There are different types of fixative: formalin, Zenker's solution, Bouin's fluid, mercurial fixatives etc., according to which stains will subsequently be used.

For routine work a blue alkaline dye, haematoxylin, is used with a pink acidic dye, eosin. The cell nuclei bind haematoxylin and are stained blue, while most of the other structures are stained pink. Special stains are used to detect certain chemical components: starch gives a blue compound with iodine; iron can be converted to Prussian blue etc. Poorly treated sections may have to be counterstained. Dehydration and clearing is achieved by taking the specimens up or down through ascending or descending series of alcohols.

For mounting, the section is floated on the slide on a large drop of 0.1 per cent gelatin in water. The water is then drained away, the section

flattened onto the slide by a stroking pressure through clean absorbent paper. The slides are eventually stood in a container, usually under a coverslip in Canada balsam, and ready for microscopy.

6. Answer the following questions, using as many expressions and phrases from the text as possible

1. Why is the laboratory important for medical work? 2. What is a typical laboratory equipped with? 3. What are the advantages of plastic materials? 4. What is a stock solution? 5. How are various parts of an apparatus fitted together? 6. What is a Bunsen burner? 7. How are liquids measured out? 8. What are the main parts of the light microscope? 9. In what way is a section of a tissue observed under the microscope? 10. How is the specific resolving power of a microscope defined? 11. What has to be done with fresh tissue selected for microscopy? 12. What is a stain in terms of histology? (— in general terms?) 13. How is dehydration achieved in histology? 14. What can be done with poorly treated sections? 15. How much detail can be seen on a block of untreated tissue?

III. Word study

7. Give relevant nouns to the following verbs and verbal forms

magnifying	condense	serve
dehydrate	selected	require
detect	examine	achieve
distilling	draining	measuring

8. Make up English-Russian pairs of words equivalent in meaning

1) Adjustment; 2) routine; 3) achieve; 4) intensity; 5) stain; 6) power; 7) variety; 8) flexible; 9) sofisticated; 10) suit; 11) resistant; 12) bind; 13) glassware.

1) Соответствовать, подходить, удовлетворять требованиям; 2) многообразие, разнообразие, множество; 3) сила, способность, возможность; 4) мощность, интенсивность, сила; 5) склянка, посуда; 6) устойчивый, стойкий, прочный; 7) сложный, современный, утонченный; 8) гибкий, мягкий, эластичный; 9) достигать, добиваться, успешно выполнять; 10) регулировка, корректировка, поправка, настройка, юстировка; 11) обычный, стандартный, регулярный; 12) вязать, связывать, завязывать; 13) красить, окрашивать.

9. Substitute the proper English words from the list below for the Russian words in brackets

1. (Большая) research work is done now to find the actual causes of new variants of infectious diseases. 2. A great deal of the (связанной работы) was done in our laboratory to elucidate the problem. 3. In the

laboratory (электросеть) is used both for lightning and as a driving power for (различных приборов). 4. (Необходимый набор) of agents was mentioned in the instruction for this kind of analysis. 5. Different new materials (находят широкое применение) in modern laboratories. 6. The material used for manufacturing this vessel was (кислотоустойчивый). 7. This (исходный раствор) can be stored for about two months in a refrigerator. 8. The (новое современное оборудование) required special training for its practical use. 9. This amount of the solution is (обычно достаточно) to carry out this test. 10. This device was (очевидно, самым необходимым) for observing the chemical process in the test system. 11. (Точная настройка) was necessary to get the clear picture of the process. 12. Often the laboratory is overwhelmed with (обычной работой).

Fine adjustment; electricity mains; necessary assortment; related work; find good use; stock solution; various devices; sophisticated equipment; great deal; usually do; acid-proof; by far the most important; routine work.

10. Give English equivalents of the italicized part of the sentences

1. *Основное оборудование* включало длинный перечень реагентов и различных устройств. 2. При проведении исследования использовали *довольно стандартные* процедуры. 3. В настоящее время *большая научно-исследовательская работа* проводится в нашей лаборатории. 4. Результат анализов был *недостаточно понятен*. 5. Лаборатория снабжена *самым современным оборудованием*. 6. Большой интерес вызвало обсуждение вопроса, *связанного с улучшением работы лаборатории*. 7. Микроскопическое исследование не выявило никаких изменений *на поверхности ткани*. 8. Часто лаборатория бывает перегружена *обычной работой*. 9. Необходимо было внести изменения в программу, чтобы *удовлетворить требованиям* эксперимента. 10. *Безусловно, самым важным* элементом обследования было проведение биохимического анализа крови. 11. Лаборант подготовил *необходимый набор* реактивов для проведения очередного исследования. 12. Используя световой микроскоп, можно было рассмотреть лишь *незначительные подробности* строения ткани. 13. *Много разных методов* применяется в современной лаборатории для проведения разного вида исследований.

IV. Learn to speak professional medical English

11. Give short answers

1. Are there many different types of fixative?
2. Will you be preparing the sections for mounting?
3. Will they have to be sliced, stained and dehydrated?

4. Does the equipemnt include funnels, pipettes and flasks?
5. Will a Burnsen burner do to obtain the temperature?
6. Was there anybody to work with the new type of microscope?
7. Did you recognize that piece of glassware?
8. Does the ventilation hood work properly?
9. Was the matter being discussed when you arrived?
10. Are there any more questions to be answered?

12. Ask different questions to elicit the following answers

1. Liquids are measured out in measuring cylinders.
2. Three objectives are screwed into the revolving nose-piece.
3. A laboratory worker must follow fairly standard procedures.
4. The water is then drained away.
5. The section is ready for microscopy.

13. Complete the sentences

1. The necessary laboratory equipment includes ….
2. The more sofisticated equipment includes ….
3. The following things are made of porcelain ….
4. Liquids are measured out in ….
5. The light microscope consists of ….
6. The substage consists of ….
7. Fresh tissue has to be ….
8. There are many types of fixatives such as ….
9. To detect certain chemical components special stains are used such as ….

LESSON 7

MEDICAL EXAMINATION AT THE G.P.'s SURGERY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[d**ai**əgn**ɔu**sis], [s**i**mptəm], [tʃi:f], [f**i:**və], [sw**e**tiŋ], [eik], [n**ɔ:**siə], [d**ai**ər**i**ə], [sɔ:], [kɔf], [sain], [spj**u:**təm], [j**u**ərin], [æsitɔun], [b**i**lir**u:**bin], [krənik], [æsət**ei**n], [tʌŋ]. [rel**ai**], [b**au**əl], [n**ɔ:**iŋ], [b**ɔ:**riŋ], [sist**ɔ**skəpi], [fə:d], [**ɔ:**skəlt**ei**ʃn].

2. Write in transcription

Surgery, complaint, headache, malaise, tremor, guide, reliable, frothy, faeces, loose, chloride, puncture, febrile, bronchoscopy, resonant, stethoscope, sphygmomanometer, lancinating, bacilli, percussion.

3. Read the following words

Treatment, subjective, temperature, thermometer, backache, breathlessness, giddiness, fluctuating, weakness, tumour, routine, cerebrospinal, differential, pus, mucoid, mucopurulent, parasite, proctoscopy, florid, tenderness, impaired, speculum, superficial, transitory, pneumococci.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Patients in need of medical treatment usually go to see their family doctor in his consulting room or surgery. As a rule, they have to wait in the waiting room until their turn comes.

In order to make the patient's diagnosis, the G.P. must first learn about the common symptoms, the subjective manifestations of the patient's chief complaint. He will want to know if the patient is running a temperature, and if so, he will take it or ask the patient to take it, using a thermometer.

Apart from attacks of fever, the most common symptoms include: sweating, general body ache, headache, backache, muscle or joint ache, malaise, nausea, diarrhoea, constipation and breathlessness. The patient may also complain of sore throat, cough, giddiness, weakness, tremor and pain.

On examination (O/E in clinical notes), the doctor may find rash, swelling, distension or tumour. These belong among objective findings called signs which also include the results of routine laboratory examinations of the blood, sputum, urine and stools and possibly the cerebrospinal fluid, too.

Thus, for instance, the blood sedimentation rate (B.S.R. or E.S.R. — erythrocyte sedimentation rate) and blood count, simple or differential, are important guides for the establishment of a reliable diagnosis. So is the examination of the sputum for bacilli of tuberculosis, pneumococci, staphylococci, pus or blood. It may be found frothy, mucoid or mucopurulent.

The urine is analyzed for the presence or exact proportion of albumin, sugar, acetone, blood, bilirubin as well as for colour, specific gravity and total quantity per 24 hours. The stools (faeces), which may be anything from loose to hard and painful to pass, have to be examined for consistency and colour and again for the presence of blood, parasites and fat (split, unsplit, and total fat). In examining the cerebrospinal fluid (taken by means of a lumbar puncture), the pressure and the proportion of chlorides, glucose and protein have to be established.

In order to obtain a clear clinical picture, the doctor may want to have the patient X-rayed, or to have him undergo an E.C.G. (electro-

cardiographic) or E.E.G. (electroencephalographic) investigation. He may want to have his gastric juices analyzed, bronchoscopy, proctoscopy, cystoscopy etc. performed. But these rather sophisticated investigations are better made on an outpatient or, if need be, on an inpatient basis in the nearest hospital.

In his surgery, the G.P. is much more likely to use, first of all, the four classical methods of:

inspection — to ascertain visible signs of the patient's condition; thus, for instance, the appearance of the patient's tongue (furred, florid or pale, moist or dry or glazed as in fever) is a valuable sign, «...»

palpation — to feel tumour, swelling, distention, the presence of tenderness etc., «...»

percussion — by tapping the chest or other parts of the body and listening to the quality of the note, whether resonant or dull, impaired, and so on, «...»

auscultation — to hear chest sounds, irregularity of heart beat, peristaltic sounds in the abdominal cavity etc.

In the course of the examination in his surgery, the doctor makes use of his stethoscope, speculum, magnifying glass, sphygmomanometer and other aids, to make the diagnosis as accurate as possible. To do this, he has to rely on what the patient himself can tell him about his condition; e.g. how often he has his bowels open, if he has any difficulty in passing his water etc. If the patient has pains, the doctor is interested to learn whether it is sharp, dull, constricting, gnawing, lancinating, boring, shooting, throbbing, deep or superficial, transitory or chronic, whether the patient complains of cramp or spasm. He has to find out if the fever is just subfebrile, slightly, moderately or highly febrile, whether it is continued, remittent, intermittent, fluctuating, or relapsing etc.

In examining the patient, the doctor proceeds, as a rule, from the top of the head down the neck, to the chest and abdomen, and finally to the extremities.

This — together with the patient's past history and family history — helps to establish a reliable diagnosis and to determine what kind of treatment is called for. Then, the G.P. is in a position to write out a prescription, to recommend bed rest or hospitalization, to invite the patient for another interview.

5. Answer the following questions

1. Where do people usually go if they need medical treatment? 2. What must the G.P. do first to establish a reliable diagnosis? 3. What do patients most commonly complain of? 4. What do the abbreviations B.S.R. and E.S.R. stand for? 5. What is usually the subject of routine laboratory investigation? 6. What is the urine (the faeces)

usually examined for? 7. What is a blood count and what are its two main types? 8. What is the point of examining the cerebrospinal fluid? 9. Which are the more sophisticated investigations? 10. What are the four classical methods of examining a patient? 11. What is the aim of palpation (percussion, auscultation)? 12. How are different types of pain described? 13. What are the two meanings of the word «fever»? 14. How does the physician usually proceed in examining his patient? 15. What kind of procedure does the G.P. choose after the examination?

III. Word study

6. Make up plural forms

diagnosis —
bacillus —
staphylococcus —

7. Recognize international words

Examination, treatment, picture, manifestation, glass, blood, consistency, position, course, inspection, prescription, attack, presence, count, condition, complaint, difficulty.

8. Make up English-Russian pairs of the words equivalent in meaning

Subjective, chief, general, objective, routine, proportion, pass, transitory, determine, recommend, interview, attack.

1) Определять (детерминизм, детерминанта); 2) основной (генерал, главный); 3) индивидуальный (субъективный, личный); 4) реальный (действительный, настоящий, объективный); 5) приступ (атака, наступление); 6) главный (руководитель, шеф); 7) обычный (повседневный, рутинный); 8) приходящий (временный, транзит); 9) часть (пропорция, доля); 10) советовать (предлагать, рекомендовать); 11) проходить (переходить, пасс); 12. собеседование (опрос, интервью).

9. Make up nouns, using appropriate suffixes

treat —	examine —	investigate —	hospitalize —
consult —	establish —	determine —	
manifest —	complain —	recommend —	

10. Make up English-Russian pairs of words

In need of; as a rule; in order to; if so; apart from; thus; as well as.

Для того чтобы; нуждаться; как правило; так же как и; помимо; если это так; таким образом.

11. Give English equivalents to the italicized words

1. Чтобы получить *четкую клиническую картину*, врач попросил больного сделать рентген грудной клетки. 2. Больной *нуждался* в срочной госпитализации. 3. Проведя все необходимые обследования, врач поставил *надежный диагноз*. 4. Этот препарат, *скорее всего,* сократит период послеоперационного восстановления. 5. Врач не мог поставить предварительный диагноз, основываясь на *субъективно описанных* больным *симптомах*. 6. *Важным показателем* к проведению операции было внутреннее кровотечение. 7. Больному сделали КТ, чтобы поставить *как можно более точный* диагноз. 8. При обследовании больного участковый врач *использовал* стетоскоп и сфигмоманометр. 9. К числу *наиболее частых симптомов* инфекционных заболеваний относятся головная боль, общее недомогание, тошнота, кашель, высокая температура. 10. *Объективные симптомы* — это симптомы, выявляемые с помощью анализов и инструментальных методов обследования.

12. Make up English-Russian pairs of medical terms

Malaise, nausea, breathlessness, giddiness, weakness, sputum, faeces, lumbar, tongue, swelling, tenderness, backache, tremor, distension, headache.

Одышка, недомогание, боль в спине, тошнота, язык, слабость, поясница, головокружение, отек, болезненность, головная боль, мокрота, дрожь, растяжение, кал.

13. Insert a preposition

1. Faeces were analyzed _____ parasites. 2. The doctor listened _____ the patient's heart before making final diagnosis. 3. The laboratory is _____ need of new equipment. 4. Symptoms suggesting serious respiratory disorder were found _____ physical examination of a patient. 5. To make a diagnosis the doctor must learn _____ the patient's main complaint. 6. The results of the analysis were reliable guides _____ the correct diagnosis. 7. The patient was examined _____ an inpatient basis. 8. He had certain difficulties _____ analyzing the laboratory data. 9. The patient complained _____ bad headache. 10. The doctor couldn't rely _____ the subjective complaints of the patient to make diagnosis.

IV. Learn to speak professional medical English

14. Express agreement with the following statements, using short responses of the «so do I», «neither do I» type

Example: This patient suffers hepatitis (his neighbor) — So does his neighbour.

The doctor did not hear the patient talk (the nurse) — Neither did the nurse.

1. Mr. N is running a temperature (his colleague) —
2. The G.P. must learn about the patient's symptoms (every specialist) —
3. This patient never complains of sore throat (his neighbor) —
4. The faeces have to be examined for colour (urine) —
5. Constipation belongs among the most common symptoms of diseases (breathlessness) —
6. I don't want to have you X-rayed (my colleague) —
7. We may not get results in time (the other department) —
8. She won't agree with your diagnosis (Dr. Martin) —
9. She should have his teeth examined (his wife) —
10. I never had to consult a dentist (my friend) —
11. We didn't think his condition was all that serious (Dr. Lee) —
12. Mr. Wilson has difficulty in passing his water (Mr. Dixon) —
13. She invited the patient for another interview (the nurse) —
14. We didn't refer him to any specialist (I) —
15. I always proceed from the top of the head down to extremities (that young doctor) —

15. Complete the sentences

1. To examine a patient the doctor makes use of ….
2. Pain may be ….
3. The most common symptoms of a disease include ….
4. The urine is analyzed for ….
5. The stools have to be examined for ….
6. The sputum is examined for ….
7. Fever may be ….
8. Inspection is used to ….
9. Palpation is used to ….
10. Percussion is performed by ….
11. Auscultation is used to ….

LESSON 8

HOSPITALIZATION

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[s**i**əriəs], [rif**ə:**], [streit], [wɔ:d], [kənsə**:**n], [st**ei**təs], [d**ai**əgn**ɔu**sis], [sə**:**dʒəri], [g**ai**nik**ɔ**lədʒi], [j**u**ər**ai**nəl], [sta:f], [ɔ:gz**i**liəri], [m**i:**niəl], [wu:nd], [r**e**zidənt], [əbst**e**triks].

2. Write in transcription

Admission, include, complete, general, filing, paediatrics, commode, spittoon, duty, proper, medicine, conduct, seniority, lavatory.

3. Read the following words

Practitioner, cope, recommendation, surname, occupation, discharge, equipment, washbasin, probationer, transfusion, consultant, registrar.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Patients whose state is too serious to be coped with by the general practitioner are referred to hospital. Emergencies are taken to hospital even without the family doctor's recommendation. List patients are normally admitted straight to the department or ward concerned.

On admission the patient's history is taken as part of the clinical case-taking. This includes complete physical examination and laboratory studies, the systematic classification of the common symptoms and signs as well as compilation of the patient's case record (clinical notes). Apart from the patient's personal data (name — both Christian and surname, address, age, social status, occupation etc.) the case record should contain the date of admission and discharge, the historian's name and diagnosis.

A general hospital is usually divided into two parts, an outpatient department and an inpatient department. The outpatient department has a number of surgeries and consulting rooms, waiting rooms, a filing cabinet where records are kept, and laboratories and X-ray units unless such services are provided by the inpatient department.

The basic component unit of the inpatient department is called the ward where patients are admitted for treatment. The number of wards will differ according to the size of the hospital, but in general there will be several groups of wards: medical, surgical, special surgical, obstetric and gynaecological, paediatric etc.

A ward unit consists of rooms for patients, a treatment room, sisters' room, bathrooms and lavatories; there may also be an admission room, a kitchenette, a small laboratory. In addition to beds and bedside lockers, the equipment of a ward usually includes washbasins, bedpans, urinals, commodes, spittoons, scales etc.

In charge of each ward is the ward sister. She is responsible to the head nurse (or matron in British hospitals) and to the medical staff, and is assisted by the rest of the nursing staff (staff nurses, probationer nurses, auxiliary nurses as well as night sisters).

The duties of the nursing staff include menial tasks and nursing proper, such as doing bedpan rounds, bed making, washing patients, dressing wounds, giving out medicines, taking the temperature,

managing transfusions, conducting certain investigations and, in general, carrying out medical orders.

The medical staff of a typical English teaching hospital consists — in order of seniority — of the consultant who acts as the head of a medical team known as a firm, the registrar, the resident medical or surgical officer (R.M.O. or R.S.O.), and the housemen — the house physician and house surgeon.

5. Answer the following questions on the text

1. What happens to sick people whose condition is too serious to be treated on an outpatient basis? 2. What is the position of the list patients? 3. What does clinical case-taking involve? 4. How is a general hospital in Britain usually organized? 5. What is the relation between the outpatient and inpatient department in a typical British hospital? 6. How is the outpatient department organized? 7. What is a ward? 8. Who is in charge of a ward in British hospitals? 9. Which groups of wards are there in a hospital? 10. In what way is a ward organized? 11. What categories of British workers belong among the nursing staff? 12. Which are the ranks of the medical staff in order of seniority in a British teaching hospital? 13. What does the term «doing the morning ward round» mean? 14. Which kinds of special units are likely to be incorporated in a large general hospital?

III. Word study

6. Write down the names of departments in a general hospital

7. Make up English-Russian pairs of words

X-ray room, physiotherapy room, filing cabinet, reception office, dressing room, admission office, sterilizing room, inquiry office, procedure room.

Картотека, стерилизационная, справочная, рентгенкабинет, перевязочная, процедурная, регистратура, приемная, кабинет физиотерапии.

8. Make up names of specialists working in the following fields of medicine

stomatology
otorhinolaryngology
gynecology
surgery
traumatology
hygiene
anatomy
neurology
therapy
physics
oncology
epidemiology
ophthalmology
pharmacy
pediatrics
gastroenterology
cardiology
obstetrics

9. Make up adjectives, using suffixes: -al, -ical, -ic

stomatology	otorhinolaryngology
gynecology	surgery
anatomy	traumatology
hygiene	neurology
therapy	physics
oncology	ophthalmology
pediatrics	epidemiology
cardiology	pharmacy
obstetrics	gastroenterology

10. Write down the names of hospitals

11. Fill in the blanks with the necessary English verbal groups

1. The general practitioner could not _____ the disease and recommended his patient hospitalization. 2. Since the symptoms were beyond GP's competence he _____ his patient _____ a specialist. 3. The victim of the traffic accident was _____ the casualty department. 4. The course of treatment was _____ two periods. 5. The new hospital was _____ the latest equipment. 6. Not long ago my close relative was _____ the specialized cardiovascular department of our hospital. 7. The course of treatment _____ intravenous injections and drug therapy. 8. The hospital was _____ the municipal authorities. 9. The laboratory assistant was _____ the chief of the department. 10. The virus was _____ the wide spread of the disease. 11. The GP was _____ a resident surgical officer in instrumental examination of a patient. 12. The task of a nurse is _____ medicines to patients. 13. All doctors' prescriptions are _____ by nurses.

IV. Learn to speak professional medical English

12. Read the text below and speak about hospitals

Hospital is an institution for diagnosing and treating the sick or injured, housing them during treatment, examining patients, and managing childbirth. Outpatients, who can leave after treatment, come in for emergency care or are referred for services not available in a private doctor's office. Hospitals may be public (government-owned) or private (profit-making or not-for-profit); in most nations except the U.S., most are public. They may also be general, accepting all types of medical or surgical cases, or special (e.g., children's hospitals, mental hospitals), limiting service to a single type of patient or illness. However, general hospitals usually also have specialized departments, and special hospitals tend to become affiliated with general hospitals.

INFECTION

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[inv**e**əriəbl], [s**u:**idʒ], [d**e**fəv**e**səns], [fæmin], [sl**a**u], [f**i**əsli], [f**ɔu**miti:z], [m**e**nis], [**e**fluənt], [k**ɔu**ələs], [ædʌlt], [f**i**əsli], [sə:v**ei**ləns], [səbdʒ**e**kt], [**ɔ**nsət], [meint**ei**n], [kæriə], [bæləns], [**ai**səl**ei**ʃən], [kwɔrənti:n], [kət**a:**], [v**i**ruləns].

2. Write the following words in transcription

Pyrexial, exanthem, diarrhoeal, haemorrhage, fatal, pustular, vaccine, cholera, catarrhal, saliva, bronchial, bilirubin, poliomyelitis, neuron, enteric, febrile, collapse, haemolytic, infantile.

3. Read the following English medical terms

Measles, chickenpox, mumps, whooping cough, typhoid, harbor, lymphoid, typhus, vaccinia, papular, vesicular, virulent, vibrio, jaundice, excrement, urine, vomiting, paralysis, polio, flaccidity, influenza.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Infection is defined as the invasion, establishment and growth of a specific pathogenic organism in the tissues of the host. Infectious (contagious or communicable) diseases are those caused by such micro-organisms and capable of being transmitted to another individual by direct or indirect contact. As they are invariably marked by a pyrexial or febrile condition, i.e. elevated temperature, they are often referred to as fevers, and fever departments in hospitals are those where cases of infectious disease are kept in isolation.

In terms of hygiene and epidemiology most of the infectious fevers are subject to notification. Many of them attack humans in childhood and consequently come under the heading of children diseases (particularly so: measles, German measles, chickenpox, mumps and whooping cough). An exanthem (skin eruption or rash) appears as a clinical manifestation of most of the infectious diseases. There are incubation and prodromal periods of varying duration.

Typhoid (or enteric) **fever** — a serious infectious febrile condition is spread mostly by food, milk or water contaminated by *Salmonella typhosa* present in sewage effluents, or indirectly by flies or by insufficient personal hygiene. The germ may also be spread by symptomless carriers who harbour it in their digestive tracts, excreting it in their

stools and thus contaminating sewage waters. The average incubation period is 10 to 14 days. A rose-coloured exanthem usually appears on the upper abdomen and back at the end of the first week. The onset of the disease, which develops as the germ invades lymphoid tissue, including that of the small intestine, is marked by progressive febrile illness (step-ladder temperature). Stools are profusely diarrhoeal and may culminate in intestinal haemorrhage and perforation as the sloughs separate during the third week, a stage of defervescence. Ultimate recovery usually begins at the end of the third week.

Typhus (or spotted) **fever** — an acute febrile infectious disease is normally associated with conditions of war, famine, concentration camps (jail fever) or natural disasters such as floods as it is usually spread by lice, ticks or fleas (tick-borne, flea-borne typhus fever). The invading micro-organism is *Rickettsia.* Characteristic symptoms of typhus include high fever, skin eruption coalescing to form blotches (hence: spotted fever), congested eyes and severe headache. Typhus fever is rather sporadic in developed countries nowadays though it continues to take its toll in the developing world, particularly at times of natural disaster.

Smallpox or **variola** — was a fiercely contagious disease caused by the same virus as that of vaccinia or cowpox which is transmissible to man but which confers immunity against true smallpox. The initial symptoms include extreme illness with severe headache and backache, vomiting and high fever. The patient then comes out in a widespread rash (except, usually, the axillae) which follows a regular pattern of dissemination, first appearing on the head and face. The rash is first papular, then vesicular and eventually pustular leaving disfiguring scars or pock-marks on the skin if and when the patient survives. The mortality rate among untreated cases is very high. Strict precautions are called for, including immediate isolation of the patient in a special fever hospital, destruction or disinfection of his fomites, the tracing of all contacts and keeping them under surveillance or in quarantine. Vaccination by a cowpox vaccine is the main prophylactic measure.

Cholera — is an acute epidemic condition with an extremely high mortality rate. It is caused not only by the classical bacillus of the *Vibrio cholerae* strain but also by the newer and far more virulent strain of the *El Tor* group of vibrios. It is spread mainly by contaminated water under conditions of overcrowding and general lack of sanitation. A recovered *El Tor* victim may remain a menace by continuing to excrete bacilli for as long as six months, unlike a mere three weeks after classical cholera. The principal symptoms are: most severe diarrhoea (the evacuation of quantities of so called rice-water stools) with an often fatal loss of up to 15 litres of fluid a day in an adult, little or no fever or even subnormal temperature, agonising cramp and severe collapse. According to the latest theories, the diarrhoea results from a distur-

bance of what is known as the «sodium pump». Normally, sodium salts and other electrolytes pass in both directions, from the inside of the bowel into the blood plasma, and vice versa, and the movement is greater from the gut to the plasma. In cholera, the proportions are reversed. Hence, the aim of any successful treatment is to maintain the patient's balance of fluids. Vaccination consists of injections of killed bacilli, but complete prevention of cholera can only be achieved by cleaning up or isolating contaminated water supplies.

Infective hepatitis or catarrhal jaundice is inflammation of the liver caused by virus infection. *Virus A* or *IH* has an incubation period of two to six weeks and is spread by the diseased person's saliva, mucus, excrement or urine. In contrast, *virus B* or *SH* is spread only by direct contact or inoculation with human blood products and is the cause of serum hepatitis with a much longer incubation period ranging from six weeks to six months. Early symptoms are raised temperature, weakness, sleepiness and irritability, loss of appetite, sickness or even vomiting and in some cases catarrh of the bronchial tubes. These are followed by pain in the area of the liver and jaundice — a typical yellow colouration of the skin and the whites of the eyes due to sudden increase in the level of bilirubin in the plasma. **Hepatocellular jaundice is** a disease of the cells which excrete bilirubin, while **haemolytic jaundice** is caused by increased break-down of erythrocytes.

Poliomyelitis or **infantile paralysis** — is an epidemic infection by *poliovirus* which invades the motor neurons of the anterior horns in the brain stem and spinal cord. An attack of polio may have a crippling effect in that it may lead to paralysis of the lower extremities with loss of muscular power and flaccidity. The first major breakthrough in eradicating the disease came with the Jonas E. Salk killed-virus vaccine which gave 70—80 % protection against paralytic polio. Better results have been achieved since the introduction of the Sabin live-virus vaccine despite initial fears that the live, though weakened, virus might mutate and regain its virulence to cause paralysis.

Live-virus vaccines are also used to combat **influenza (flu),** an acute viral infection of the nasopharynx and respiratory tract, which, however, still continues to occur in epidemic form. Vaccination against the «flu» confers only temporary immunity and prophylactic efforts are seriously hampered by a variety of strains of the influenza-causing virus.

5. Answer the following questions

1. How is infection defined? 2. Why are infectious diseases often referred to as fevers? 3. Which of the fevers are commonly associated with childhood? 4. What is the typical clinical manifestation of many contagious diseases? 5. Is exposure to an infectious pathogenic agent

immediately followed by specific clinical manifestations? If not — why? 6. How is typhoid fever spread? 7. What is the clinical picture of enteric fever as the disease progresses? 8. What is meant by the term step-ladder temperature? 9. What is the difference between typhoid fever and typhus fever? 10. What kind of pathogenic microorganism is spotted fever caused by? 11. Why does variola continue to be a serious health hazard? 12. What is a clinical picture of smallpox? 13. What are the established prophylactic measures if a case of smallpox — even a suspected one — is detected? 14. What are the symptoms and the actual cause of death in cholera? 15. What is the difference between *Vibrio cholerae* and the *El Tor* strains? 16. What is the principle of the «sodium pump» theory as regards the treatment of cholera? 17. Which is the more effective way of combatting cholera: vaccination or high standard of hygiene and sanitation? 18. What is the difference between virus A and virus B types of infective hepatitis? 19. What are the signs and symptoms of catarrhal jaundice? 20. What explains the yellow coloration of the skin in infective hepatitis? 21. What is the difference between hepatocellular and haemolytic types of jaundice? 22. Why is poliomyelitis also referred to as infantile paralysis? 23. What are the particular dangers of polio? 24. What is the difference between the Salk and Sabin anti-polio vaccines? 25. What is the clinical picture of influenza? 26. Is there any difference between influenza and common cold? 27. Is vaccination against flu possible and if so what kind of immunity does it confer? 28. What other infectious diseases can you name?

III. Word study

6. From the list below find synonyms to the given words

a) **Adjectives:**

Infectious, serious, insufficient, average, ultimate, sporadic, fatal, common.

Final, lethal, inadequate, usual, communicable, severe, mean, occasional.

b) **Nouns:**

Condition, onset, disaster, dissemination, surveillance, strain, menace, inoculation, breakthrough, effort, illness.

Spread, danger, disease, state, beginning, kind, observation, attempt, vaccination, advance, catastrophe.

c) **Verb:**

Refer, spread, contaminate, mark, coalesce, cause, confer, achieve, raise, combat, occur, associate.

Appear, characterize, designate, give, transmit, pollute, induce, produce, reach, fight, connect, unite.

d) **Adverb:**

Invariably, consequently, generally, normally, especially, eventually, initially, fiercely, extremely.

Severely, finally, always, very, usually, mainly, primary, particularly, accordingly.

7. Make up English-Russian pairs

Inflammation, manifestation, blotch, invasion, disturbance, coloration, recovery, sleepiness, fever, precaution, irritability, destruction, power, establishment, cause, sickness, evacuation, case, eruption, pattern.

Больной, пятно, нарушение, проявление, закрепление, раздражимость, высыпание, предосторожность, вторжение, лихорадка, образец, окрашивание, уничтожение, сонливость, тошнота, воспаление, выздоровление, сила, опорожнение, причина.

8. Make up adjective, using suffixes: -ic, -al, -ous, -istic, -etic, -atic

Person, haemorrhage, symptom, pathogen, catarrh, condition, nature, proportion, infection, hygiene, character.

9. Make up nouns, using suffixes: -ion, -ment, -ance

Prevent, refer, manifest, contaminate, establish, protect, include, occur, invade, inoculate, transmit, achieve, move, associate, elevate, concentrate, isolate, excrete, develop, appear, disturb, vaccinate, disseminate, maintain.

10. From the list below choose the proper English synonym of the italicized words

1. Some of the diseases are *especially* characteristic for children. 2. In some cases vaccination confers only *short-term* immunity. 3. Many people are *affected* by infectious diseases in their childhood. 4. Spread of infectious diseases is *connected* with poor hygienic conditions. 5. Classical form of cholera lasts *only* for about three weeks. 6. Cholera is a very *severe* infectious disease with high mortality rate. 7. Infection is the *invasion* of pathogenic organisms into the body. 8. Vaccination is a general *preventive* measure against most infectious diseases. 9. Some communicable diseases can be *spread* from one individual to another through the respiratory tract. 10. In measles rash *occurs* as a characteristic clinical manifestation of the disease. 11. Communicable diseases are caused by *disease-producing* organisms. 12. Virus A hepatitis is *disseminated* by the diseased person excretions. 13. Most highly contagious diseases are rather *rare* in the developed countries. 14. The *beginning* of many infectious diseases is acute and sudden.

Sporadic, particularly, onset, spread, associated, transmitted, contagious, serious, prophylactic, penetration, attacked, merely, appears, temporary.

11. From the list below choose the proper Russian equivalents of the italicized English words

1. Having completed the long-term course of treatment the patient *ultimately* recovered. 2. *According to* the latest data prevalence of TB has significantly decreased in the developed countries. 3. *Despite* the positive response to treatment the patient's condition remained unstable. 4. A patient's state was characterized by febrile condition, *that is* elevated temperature. 5. It was necessary to do *not only* laboratory analyses *but* also instrumental tests. 6. The treatment was successful, *however*, complete recovery was impossible. 7. A child was acutely ill with measles, *consequently* he had to be hospitalized not to infect other children. 8. The symptoms of the disease were *rather* unusual. 9. *In contrast to* other children my patient recovered in four days. 10. *In terms of* epidemiology epidemic is an unusually high rate of a particular disease in a particular locality. 11. The source of infection was *still* unclear. 12. Measles is rather dangerous *in that* it may be followed by severe complications. 13. The doctor could not make diagnosis, *thus* the patient had to undergo some analyses. 14. *Hence* the drug had some side effects it was substituted for another one.

То есть; на языке; следовательно; поэтому; в конце концов; довольно; не только, но и; в отличие от; поскольку; согласно; потому что; несмотря на; все еще; однако.

12. From the list below choose symptoms characteristic for a) cholera; b) typhoid fever; c) smallpox; d) typhus fever; e) infectious hepatitis; f) poliomyelitis

Flaccidity, high fever, rash, loss of fluid, vomiting, exanthem, intestinal haemorrhage, eruption, step-ladder temperature, severe dairrhoea, sickness, loss of muscular power, irritability, little/no fever, congested eyes, diarrhoeal stool, severe headache, agonizing cramps, weakness, backache, perforation, sleepiness, jaundice, severe collapse, vomiting, loss of appetite.

IV. Learn to speak professional medical English

13. Complete definitions

1. Typhoid fever is ….
2. Typhus fever is ….
3. Smallpox is ….
4. Cholera is ….
5. Infective hepatitis is ….
6. Poliomyelitis is ….
7. Influenza is ….

14. Read the text and speak about infection

Infection is the detrimental colonization of a host organism by a foreign species. Infection is, in effect, a war in which the infecting organism tries to utilize the host's resources in order to multiply at the expense of the host. The infecting organism, or pathogen, interferes with the normal functioning and perhaps the survival of the host. In general a pathogen is usually considered to be a microscopic organism though the definition is broader, including bacteria, parasites, fungi, viruses. The branch of medicine that focuses on infections and pathogens is **Infectious Disease**.

All multicellular organisms are colonized to some degree by extrinsic organisms, and the vast majority of these exist in either a symbiotic or commensal relationship with the host. An example of the former would be the anaerobic bacteria species which colonize the mammalian colon, an example of the latter would be the various species of staphylococcus which exist on human skin. Neither of these colonizations would be considered infections. The difference between an infection and a colonization is often only a matter of circumstance. Organisms which are normally non-pathogenic can become pathogenic under certain conditions, and even the most virulent organism requires certain circumstances to cause an infection.

The variables involved in the outcome of a host becoming inoculated by a pathogen and the ultimate outcome include:

- the route of entry of the pathogen and the access to host regions that it gains;
- the intrinsic virulence of the particular organism;
- the quantity or load of the initial inoculant;
- the immune status of the host being colonized.

As an example, the staphylococcus species present on the skin remain harmless on the skin, but, when present in a normally sterile space, such as in the capsule of a joint or the peritoneum, they will multiply without resistance and create a burden on the host.

15. Speak about one of the infectious diseases not mentioned in the text

V. Learn to translate medical articles

16. Read the text and write down a short abstract in Russian

Infection is the colonization of a host organism by parasite species. Infecting parasites seek to use the host's resources to reproduce, often resulting in disease. Colloquially, infections are usually considered to be caused by microscopic organisms or microparasites like viruses, prions, bacteria, and viroids, though larger organisms like macroparasites and fungi can also infect.

Hosts normally fight infections themselves via their immune system. Mammalian hosts react to infections with an innate response, often involving inflammation, followed by an adaptive response. Pharmaceuticals can also help fight infections.

The branch of medicine that focuses on infections and pathogens is infectious disease medicine.

Diagnosis of infections can be difficult as specific signs and symptoms are rare. If an infection is suspected, blood, urine and sputum cultures are usually the first step. Chest x-rays and stool analysis may also aid diagnosis. Spinal fluid can be tested to ensure that there is no brain infection.

In children the presence of cyanosis, rapid breathing, poor peripheral perfusion, or a petechial rash increases the risk of a serious infection by greater than 5 fold. Other important indicators include parental concern, clinical instinct, and temperature greater than 40°C.

The most common symptoms include:

- Extreme fatigue which may be ongoing for more than 2—3 months.
- Continued weight loss.
- Low grade or spiking fever.
- Night sweats and chills.
- Vague body aches and pain.

LESSON 10

THE RESPIRATORY TRACT

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

a) [s**ai**ənɔtik], [**ɔu**peik], [əf**e**kt], [**i**ndʒəri], [k**ɔ:**s], [**ei**peks], [kw**ɔu**ʃənt], [impe**ə**], [l**i**kwifai], [w**i:**z], [p**ə:**miəbl], [əkʌmpənimənt], [f**ei**ljə], [p**i**rəmid], [h**ai**ləm], [**ai**sɔn**ai**əzid], [r**e**znəns], [æmf**ɔ**rik].

b) [haipɔksiə], [brɔŋkɔskəpi], [spj**u:**təm], [n**ei**zɔufærinks], [brɔnkiɔul], [dispn**iə**], [nj**u:**mɔuθ**ɔu**rɔks], [str**ai**də], [æsθmə], [eksh**ei**l], [æbsis], [ju:pn**i:**ə], [kər**i:**nə], [trəki**ə**], [pl**u:**risi], [empai**i:**mə], [pəlipn**iə**], [k**æ**vənəs], [rəŋkəs].

2. Write the following words in transcription

a) Segment, lubricate, residual, opacity, biopsy, miliary, effect, antibiotic, constrain, bronchus, alveolus, parietal, thorax.

b) Bifurcation, rales, diaphragm, hyperpnoea, allergy, pneumonia, bronchitis, fissure, emphysema, pleura, pleurodynia, respiration, skodaic, cyanotic, coarse, streptomycin.

3. Read the following words

Anoxia, cilia, bronchoscope, otolaryngologist, exudate, phthisis, asphyxia, bronchial, amphoteric, thoracic, suffocation, breathlessness.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Although such parts of the upper air passages as the nose, nasopharynx, pharynx, glottis, vocal cords and larynx are all definitely components of the whole respiratory tract, they are of special concern to otolaryngologists and treated separately. Chest diseases in the proper sense of the word are those that affect the trachea (windpipe), its bifurcation (carina tracheae), the bronchi, small (segmental) bronchi, bronchioles, terminal bronchioles and respiratory bronchioles which open into air-sacs, each with several alveoli, i.e. the pulmonary tissue proper.

Deep fissures divide the right lung into three lobes, the left into two. A segment of the lung resembles a pyramid with its apex to the hilum. Each lung is ensheathed in two layers of the pleura, the parietal — lining the inside of the thorax — and the visceral pleura — coating the outside of the lung. In health, there is practically no cavity between the two layers: whatever space there is, it is lubricated by tissue fluid.

Respiration is effected, i.e. air is inhaled when the diaphragm and/or intercostal muscles enlarge the cavity of the chest and atmospheric pressure forces air into the lungs. When breathing is distressed the muscles of the neck and shoulders reinforce the usual respiratory muscles. Expiration is the passive phase of breathing — with the pull of the respiratory muscles being relaxed and the recoil expelling the air.

Exchange of gases (i.e. mainly carbon dioxide for oxygen and vice versa) is the aim of breathing (external respiration). To a certain extent it can be controlled by voluntary muscles, but in essence breathing is a reflex action coordinated by the respiratory centre in the reticular formation of medulla oblongata. The stimulus is provided by the acidity of the blood. Distinction has to be made between hypoxia and anoxia (lack of oxygen in the tissues) and asphyxia or suffocation when anoxia may lead to death (heart block).

Basic spirometric values include: vital capacity, timed vital capacity, residual volume, respiratory output (i.e. the volume of inhaled and exhaled air per minute) and respiratory quotient (r. ratio), i.e. the relation of the volume of carbon dioxide given off in respiration to that of the oxygen consumed. In deep and rapid breathing (hyperpnoea,

polypnoea) a healthy man may take in about 15 times as much air as in eupnoea, while during exertion the oxygen uptake can be increased up to 30 times. Polypnoea or increased respiratory rate is also referred to as fast breathing, the patient is described as panting. In dyspnoea the patient complains of breathlessness; he says he cannot get his breath or is short of wind.

Dyspnoea often accompanies pain in the chest and cough as a symptom of chest disease. Cough may be dry, i.e. unproductive, without expectoration, or loose, with the sputum classified as mucoid, muco-purulent, frothy or rusty. On examination the patient is often found cyanotic, the veins of his neck engorged, the fingers characteristically clubbed. On inspection, his chest may be found rachitic, barrel-shaped, with or without Harrison's sulcus, his breathing thoracic (intercostal) or abdominal (mainly in males).

Percussion often reveals pathological signs such as consolidation in the lungs, effusion, emphysema or pneumothorax according to the dullness or resonance of the area examined. The percussion note may be either impaired, dull or absolutely dull (stony dull, flat) or there may be tympany or skodaic resonance.

Valuable information about the state of the thoracic cavity can be obtained by listening to the breath sounds, using stethoscope. The modern binaural (with two air-pieces) stethoscope has interchangeable chest-pieces. The breath sounds produced by diseased lungs may be enhanced or restricted, diminished, distant or absent. Similarly, breathing is found bronchial, amphoric or cavernous. Apart from the soft rustling sounds of normal respiration, the stethoscope helps to detect added (adventitious) sounds — continuous, such as stridor, sibilus (whistle), rhonchus (wheeze) or pleural friction, and interrupted: these are râles or crepitations classified as coarse or fine and signifying the presence of fluid in the air passages.

In nearly all diseases of the lungs air is displaced by liquid or solid matter which is less permeable to X-rays, thus making radiological examination a most valuable method of looking for opacities and changes in lung markings.

Direct observation of a part of the lungs is possible by bronchoscopy, in which a lighted tube is passed down the trachea into the bronchus. The bronchoscope is also used for removing foreign bodies, for biopsy etc.

Commonest Chest Diseases

Bronchitis — may be primary or secondary, acute or chronic. Most cases are due to spread of a virus infection from the nasopharynx (patients often speak of a «cold settling on the chest»). A dry, uncomfortable cough develops making the patient feel feverish and ill. Rapid secretion of mucus from the lining of the bronchi is characteristic of the

acute form. The chronic form involves regular cough with sputum and damage to the cilia. Complications of the chronic form may easily result in right-sided heart failure, particularly in association with severe emphysema.

Pulmonary emphysema — a gaseous distension of the alveoli with loss of the thin dividing walls between spaces where exchange of oxygen and CO_2 should take place. It may be localized (obstructive or compensatory emphysema) or generalized — often just an advanced stage of chronic chest disease, mostly bronchitis.

Pneumonia — inflammation of the lung characterized by the production of alveolar exudate in the affected part. The onset is either sudden or after a short minor illness with fever, pain in the chest (caused by inflamed pleura) and a cough with blood-tinged sputum. Since the introduction of antibiotics, the older, rather anatomical classification into lobar pneumonia and broncho-pneumonia has given way to one based on the type of microbe involved as it determines the choice of drug in what are known as primary specific pneumonias. Hypostatic pneumonia is seen as complication of other diseases when an already debilitated patient lies still in bed for a long time. In unresolved pneumonia, the alveolar exudate fails to liquefy and consolidation persists.

Bronchial asthma — is characterized by paroxysmal attacks of dyspnoea caused by spasm of involuntary muscles around the bronchi. Characteristic signs include expiratory wheeze. The spasm makes it difficult to cough away mucus, the lining of the bronchi becomes congested and swells like that of the nasopharynx with a cold or hay fever. Although the fundamental defect in asthma has yet to be identified, the known causes include emotional stress, allergy, chest infection, breathing in smoky air or even cold, damp air. Severe attacks may result in status asthmaticus.

Pulmonary TB (phthisis) — the primary focus of infection, usually in the apical region, forms a small abscess which may later develop into a small scar, opaque to X-rays. Unless the process is stopped at this stage, pockets of infection may enlarge to form cavities, to spread through both lungs («galloping consumption»), to give rise to miliary TB or TB meningitis. The introduction of antibiotics (streptomycin in particular), para-aminosalicylic acid (PAS) and isoniazid and also prevention with regular screening have done much to constrain what used to be one of the most dreaded diseases.

Pleurisy — an inflammatory condition of the pleura; it is invariably due to infection by bacteria or viruses. The bacterial form is a common accompaniment of underlying pneumonia. Pleurisy may be fibrinous (dry), with an effusion (wet) or it may be complicated by empyema. Epidemic pleurisy (pleurodynia, Bornholm disease), characterized by

severe diaphragmatic pain, is a contagious disease due to virus infection and usually free from complications.

Spontaneous pneumothorax – results from the spontaneous entrance of air into the pleural cavity in pulmonary disease.

Traumatic pneumothorax occurs as a complication of penetrating injuries of the chest. Air in the pleural cavity prevents normal expansion of the lung and so grossly impairs respiration. The idea of artificial pneumothorax is to put the diseased lung (in pulmonary tb) at rest and allow it to heal. Tension pneumothorax, marked by progressively increasing intrathoracic pressure, constitutes an acute medical emergency.

5. Answer the following questions, using as many new expressions as possible

1. What parts of the respiratory tract come under the heading of chest diseases proper? 2. Which branch of medicine is concerned with the upper air passages? 3. What is the anatomical structure of the lungs? 4. How is respiration effected? 5. What is the difference between anoxia and asphyxia? 6. How is breathing controlled? 7. What are the basic spirometric values? 8. What does the term «vital capacity» imply? 9. What is the difference between hyperpnoea and polypnoea? 10. How does the patient complain of dyspnoea? 11. What are the symptoms of respiratory disease? 12. When is a patient described as panting? 13. What are the classical methods of examining the chest? 14. What pathological signs can be revealed by percussion? 15. What information about the patient's respiratory system is obtained by auscultation? 16. What are the common deformities of the chest? 17. What is meant by abnormal breath sounds? 18. What is the aim of X-ray examination of the chest? 19. What terms are used to describe the sputum? 20. In what way is bronchoscopy performed and why? 21. What are the commonest chest diseases? 22. What are the clinical features of bronchitis? 23. What are the dangerous complications of chronic bronchitis? 24. What are the diagnostic signs of bronchial asthma? 25. What are the usual stages of pulmonary tuberculosis? 26. What is the point of using artificial pneumothorax in the treatment of TB? 27. What is the usual way of detecting pulmonary TB? 28. What is the difference between dry and wet pleurisy? 29. Why does tension pneumothorax constitute an acute medical emergency?

III. Word study

6. Make up adjectives, using suffixes: -ial, -al, -ic, -ar, -atic, -ous

Pharynx, glottis, larynx, trachea, bronchus, bronchiole, alveolus, pleura, diaphragm, muscle, thorax, rhonchus, mucus, lobe.

7. Choose the necessary symptoms

Bronchitis is characterized by:

Headache, dry cough, diarrhoea, fever, sickness, loss of appetite.

Bronchial asthma is characterized by:

Dyspnoea, vomiting, eruption, expiratory wheeze, constipation.

Pulmonary TB is characterized by:

Stomach ache, cough, loss of appetite, dizziness, subfebrile temperature, loss of body weight, hypertension.

Pneumonia is characterized by:

Cough with blood-tinged sputum, gaseous distension, fever, abscess, damage to cilia, congested bronchi.

Pleurisy is characterized by:

Diaphragmatic pain, general body ache, fever, effusion, nausea, loss of appetite, cough.

8. From the list below choose the Russian equivalents of the italicized words

1. *Whatever* the true biological nature of the filterable viruses may be they behave like parasitic microbes and their effects are studied by methods similar to those applicable to bacterial diseases. 2. Not all bacteria are the cause of diseases *vice versa* they may be even beneficial for human body. 3. Spontaneous pneumothorax is a result of spontaneous entrance of air into the pleural cavity *while* traumatic pneumothorax occurs as a complication of penetrating injuries of the chest. 4. The data *just* obtained in our experiment confirmed the early results of the Swedish group. 5. Pulmonary tuberculosis is *mainly* spread in countries with inadequate sanitation. 6. Infectious diseases can be now controlled *to a certain extent* by sanitary measures. 7. In both experimental groups the results of treatment with povidon were evaluated *similarly* with those in the control group. 8. Outbreak of cholera was *in essence* the result not only of water contamination with sewage but also by poor sanitary conditions in the region.

Так же как и, в то время как, в определенной степени, какой бы ни, наоборот, по существу, главным образом, только что.

9. Fill in the blanks with the proper words from the list below

1. The blood parameters of the patient were _____ altered just as during his previous admission to the hospital. 2. The body can use its _____ powers to struggle with the infection. 3. The use of antibiotic – streptomycin _____ results in patients' state improvement. 4. Each of the 15 rats received two doses of the test compound _____. 5. It was _____ impossible to distinguish between these two diseases. 6. The treatment was _____ the same as two years ago. 7. There was

_____ no reason to worry about the outcome of the operation. 8. The skin of the patient was _____ yellow.

Proper, absolutely, definitely, practically, nearly, characteristically, separately, usually.

10. Fill in the blanks with prepositions

1. Hospitalization rates are the highest among children (< 2 years old) and are comparable ___ hospitalization rates among the elderly. 2. It is necessary to recognize the importance of research ___ drug delivery to the health of the nation. 3. Outbreak of infectious diseases is of special interest ___ epidemiologists. 4. Any decline in the proportion of persons with COPD is unlikely without substantial changes ___ risk factors, mainly reduction cigarette smoking. 5. The programs must be supported ___ fast, accurate diagnostic laboratory tests. 6. To improve human health in the UK, focused, fundamental research ___ the biological barriers of drug delivery is required. 7. The injection of the drug was divided ___ two equal parts. 8. In the US military training sites at high risk ___ influenza are monitored so that epidemics might be quickly detected. 9. Research outcomes ___ asthma are related directly ___ the actions of health care professionals and parents. 10. New pertussis vaccines are now approved only ___ use among infants and children. 11. Fine droplets from mouth and throat contain germs that can breed and multiply ___ the lungs to cause damage. 12. The recent loss of adenovirus vaccine production, change in the susceptibility ___ antimicrobial drugs, and emerging respiratory pathogens threaten to increase the military population's vulnerability ___ respiratory diseases.

IV. Learn to speak professional medical English

11. Finish the sentences

1. On examination of a dyspnoea patient his chest may be found ….
2. The main spirometric parameters are ….
3. Expiration is ….
4. The upper air passages are ….
5. In diseased lungs the breath sounds may be ….
6. Using the stethoscope it is possible to detect added sounds, such as ….
7. In dyspnoea percussion reveals ….
8. Breathing is ….
9. Chest diseases affect ….
10. It is necessary to distinguish between ….
11. Polypnoea is ….

12. Speak about one of the respiratory diseases not mentioned in the text (e.g. whooping cough, tracheitis)

13. Find in the Internet the site http://symptomchecker.about.com/od/Diagnoses/pleurisy-and-pleural-effusion.htm **and make a summary of the text**

V. Learn to translate medical texts

14. Translate the text into English

Чаще всего *заболевания дыхательных путей* провоцируются болезнетворными микроорганизмами. Мы постоянно вдыхаем воздух, а с ним и огромное число возбудителей инфекционных заболеваний. Наш иммунитет защищает от возбудителей всевозможных инфекций. Когда иммунитет ослабевает, учащаются случаи инфекционных заболеваний дыхательных путей. Поэтому лучшей защитой от респираторных инфекций является хороший иммунитет.

Острые респираторные заболевания могут спровоцировать деформацию легочной ткани и способствуют возникновению фиброзных процессов. Нередко разрастание соединительной ткани приводит к легочной недостаточности, а впоследствии и к инвалидности.

LESSON 11

THE DIGESTIVE SYSTEM – GASTROENTEROLOGY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

a) [tʌŋ], [fʌndəs], [**æ**ntrəm], [pail**ɔ:**rəs], [dj**u:**ɔud**i:**nəm], [dʒidʒ**u:**nəm], [**i**leəm], [spli:n], [pəp**i**lə], [v**i**sərə], [**æ**njuərizm], [p**e**ritɔun**i**əm], [əs**ai**ti:z], [ətr**i:**siə], [int**e**stine], [str**i**ktʃə], [v**æ**risi:z].

b) [daidʒ**e**stʃən], [k**ɔ**nvə:t], [k**ə:**vətʃə], [səpl**ai**], [s**ɔ:**fis], [mainj**u:**t], [p**ɔ:**], [ənæləgəs], [**ai**lət], [sj**u:**pəf**i**ʃəl], [**ji:**ld], [ru:t**i:**n], [k**ɔu**piəs].

c) [n**ɔ:**siə], [fl**æ**tjələns], [**æ**pitait], [k**ɔ**nstip**ei**ʃn], [d**ai**əriə].

2. Write in transcription

a) Stomach, oesophagus, pancreas, anus, caecum, peritoneum, mesentery, gall bladder, villus, flatus, ileus, ulcer, viscera.

b) Dilate, purpose, ascending, loose, superior, consume, cover, carbohydrate, ascertain, quality, lesion, volvulus, dehydration, secretion, glucose, emaciation.

3. Look for the transcription and read correctly the surgical operations on the alimentary tract

Duodenectomy, laparotomy, gastrectomy, cholelithotomy, colectomy, gastroenterostomy, cholecystectomy, appendectomy, colostomy.

4. Read the words

a) Salivary, buccal, parotid, sublingual, submaxillary, canal, peristaltic, pepsin, enzyme, coeliac, splenic, vermiform, neutralization, papilla, metabolism, hypertrophy.

b) Superficial, smooth, nodulated, movable, intermittent, axaggerated, scanty, copious.

II. Text study

***5.* Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text**

Digestion is defined as a process by which food is broken down and converted into absorbable forms. As such, the process definitely begins in the mouth with the teeth, the tongue, the buccal muscles, the pharynx and the salivary glands (parotid, sublingual, submaxillary and buccal) all taking part in it. In practice, however, a gastroenterologist is really mainly concerned with the physiology and pathology of the stomach, intestines, and related structures such as the oesophagus, liver, gallbladder, and pancreas.

Anatomy and physiology:

The stomach is a dilated, distensible, muscular part of the alimentary canal, composed of the fundus, the body with its greater and lesser curvatures, the antrum and the pylorus. Its upper cardiac orifice opens into the oesophagus, its pyloric orifice into the duodenum. If the stomach were only to push food along the digestive tube in waves of peristaltic movement, only half its purpose would be served. Apart from hydrochloric acid, pepsin and intrinsic factor, the lining mucous membrane of the stomach secretes a large amount of mucus acting as a preventive barrier. If it did not, the stomach would be digested by its own enzymes in the gastric juice. The stomach has a good supply of blood from branches of the coeliac artery. The blood is returned via the splenic vein to the portal vein and so to the liver.

The intestine, i. e. the part of the digestive tube extending from the pylorus to the anus, consists of the small intestine (duodenum, jejunum and ileum) and the large intestine (ascending colon, caecum with the vermiform appendix, transverse colon, descending colon, pelvic colon and the rectum). Except for the duodenum, the rest of the small intestine is hung in the mesentery, a loose fold of the peritoneum. The inner surface of the small intestine is thrown into folds. Lining the entire surface are minute finger-like villi, each of which is coated with microscopic microvilli. The main vessels supplying the intestine with blood are the superior and inferior mesenteric arteries. The intestine as a whole is stimulated by parasympathetic nerves (mainly the vagus) and inhibited by sympathetic nerves.

The intestine receives partly digested food and drink from the stomach together with gastric, hepatic, pancreatic and intestinal secretions. A very small amount of this fluid is passed in the stools. The rest is reabsorbed. If this reabsorption fails, the stores of salt and water can be quickly depleted. A baby with severe diarrhoea or an adult with cholera can die of dehydration within a day or two unless the fluid lost from the intestine is replaced.

The liver is by far the largest gland in the body. It is essential to life in several ways which include the secretion of bile, the synthesis of proteins, the storage of glucose, and the neutralization of poisons. One of the most urgent functions is keeping a steady concentration of glucose in the blood to replace what is consumed as fuel. Thus e.g. the brain would quickly die if supplies of glucose from the liver were to be cut off. The liver is covered by Glisson's capsule and, in the fasting state, secretes some 500—700 ml of bile in 24 hours. The many intrahepatic bile passages converge and anastomose. The cystic and hepatic ducts join each other to form the common bile duct which enters the duodenum at the papilla of Vater. The sphincter of Oddi permits the bile to be poured into the duodenum by relaxing. The bile leaving the liver enters the gall-bladder where it undergoes concentration mainly through loss of fluids by absorption by the gall-bladder mucosa.

The pancreas is a dual-purpose broad strip of glandular tissue with its head attached to the duodenum and its tail reaching to the spleen. It is composed of lobules that form lobes connected by strands of tissue with ducts which meet to join the pancreatic duct. Like the liver, the pancreas, too, is an offshoot of the intestine, functionally analogous to the salivary glands. The pancreatic juice plays an important role in the break-down of complex substances in the food. The internal secretion of insulin, produced by the islets of Langerhans, is vital in the regulation of carbohydrate metabolism and as such is the concern of endocrinology.

Examination:

Loss of appetite, nausea, flatulence, pain brought on by food or by hunger, constipation and diarrhoea are all common symptoms of abdominal disorder. In examining the abdomen by palpation, the doctor asks the patient to lie in horizontal position with his head slightly raised and thighs flexed, and to let himself go loose. Palpation may be performed with finger-tips, the whole hand, or both hands; the pressure may be slight or forcible, continuous or intermittent. Information is thus obtained as to the size and position of the viscera, the presence of possible tumours and swellings. These may be superficial or deep, hard or soft, smooth or nodulated, movable or fixed, solid or liquid. The aim is also to ascertain whether tenderness exists in any portion of the abdominal cavity and if pain is relieved or increased by firm pressure.

In **percussion,** the different tones of the stomach, colon and small intestine will be heard. Abdominal aneurysm gives dullness or flatness unless a distended intestine lies above it. Alterations in shape are detected by **inspection,** particularly enlargement — which may be general and symmetrical as in ascites, or partial and irregular from tumours, hypertrophy or distension — or retraction, as in extreme emaciation. Distension, if there is any, may be slight, moderate or gross. The causes of distension are said to be the five «fs»: flatus, foetus, fat, faeces or fluid. **Auscultation** yields useful information as to the quality of peristaltic sounds which may be absent in paralytic ileus or exaggerated in obstructive lesions.

Gastroscopy, laparoscopy, exploratory abdominal operations, sigmoidoscopy, the histamine test, chemical analysis and bacteriological examination of the stools, cholecystogram, straight or specific X-ray pictures of the abdomen (using such contrast media as barium meal) are all more or less routinely used methods of abdominal investigation. The faeces are described as scanty or copious, hard, soft, loose, semi-fluid or fluid, the colour of rice-water (as in cholera), black tar, clay or porridge.

Disorders:

Diseases of the digestive system are too many to be given a full list of. Some of them respond to conservative treatment (inflammations of various kind: gastritis, peritonitis, hepatic cirrhosis, pancreatitis etc.), but most of them require surgical operation (bleeding peptic ulcers, cancers of the stomach and/or colon, acute appendicitis, volvulus of the intestine, gall stones etc.).

Among the many surgical performances concerning the alimentary tract are gastrectomy, gastro-enterostomy, cholelithotomy, cholecystectomy, duodenectomy, colectomy, colostomy, laparotomy, appendectomy and so on.

Different organs of the alimentary tract may be treated for different disorders, for instance:

oesophagus — for stricture, atresia or oesophageal varices;

stomach — for pyloric stenosis, gastritis, gastric ulcer, cancer, achlorhydria, hyperchlorhydria; dyspepsia etc.;

intestines — for diarrhoea, sprue, constipation, malabsorption, coeliac disease, carbohydrate intolerance, ileus, ulcerative colitis (Crohn's disease), megacolon, intestinal obstruction, volvulus, hernia, intussusception, appendicitis, diverticulosis, perforation of the intestine, cancer etc.;

liver — for hepatitis usually heralded by jaundice, cirrhosis, impaired circulation, tumours (often metastatic), secondary effects of amoebic

dysentery, bilharzia, hydatid disease, Weil's disease, malaria, poisoning, cholecystitis, cholelithiasis (gall stones);

pancreas – for pancreatitis, diabetes mellitus, fibrocystic disease.

6. Give as detailed answers as possible

1. How would you define the process of digestion? 2. Which parts of the body constitute the alimentary canal? 3. What is gastroenterology really concerned with? 4. How is the stomach protected from being digested by its own enzymes? 5. What are the most frequent gastric disorders? 6. What is a clinical picture of pyloric stenosis and what is the treatment? 7. What is the anatomy and physiology of the intestine? 8. How is the intestine innervated? 9. What is the principle of fluid reabsorption in the intestine? 10. Explain the difference between colostomy and colectomy. 11. What is the difference between volvulus and ileus? 12. What happens in intussusception and what is the usual treatment? 13. What are the most vital functions of the liver? 14. How is bile collected in the liver? 15. What is hepatic cirrhosis? 16. How do you recognize and treat cholelithiasis? 17. How is enlargement of the liver described? 18. What terms are used to describe the size and consistency of a tumour? 19. How is the liver affected by malaria? 20. What are the two principal functions of the pancreas? 21. What are the clinical manifestations of diabetes mellitus? 22. What are the general symptoms of abdominal disorder? 23. How do you go about examining a dyspeptic patient? 24. What information can you get by palpation? 25. How do you ask a patient about his peristalsis? 26. What are the terms used to describe different types of faeces? 27. What kind of information do you get from barium meal and follow-through? 28. What can you learn about the patient's state by inspection? 29. What are the routine laboratory methods of abdominal investigation? 30. How is a patient asked to relax his abdomen? 31. What are the causes of distension? 32. What is a clinical picture of oesophageal varices? 33. What are the possible types of treatment for peptic ulcers? 34. What are the diagnostic signs of peritonitis and what is the treatment?

III. Word study

7. Write down the names of inflammatory diseases of

Oesophagus, appendix, stomach, liver, peritoneum, pancreas, colon, ileum, gall bladder.

8. Write down adjectives to the following nouns

Tongue, stomach, intestine, oesophagus, liver, pancreas, colon, pylorus, duodenum, spleen, ileum, caecum, appendix, pelvis, rectum, mesentery, peritoneum, gland.

9. Make up English-Russian pairs of words

Concern, join, serve, permit, relieve, convert, pass, converge, produce, consume, keep, obtain, consist, respond, include.

Осуществлять, получать, превращать, поглощать, позволять, касаться, соединять, состоять, вырабатывать, ослаблять, включать, реагировать, сходиться, поддерживать, выводить.

10. From the list below choose the English equivalents for the Russian words in brackets

1. Crohn's disease, also called ileitis or enteritis, is (как таковой) an illness that causes the digestive tract to become inflamed. 2. Crohn's disease (практически) cannot be cured, but lifelong treatment can help people with the condition to live active and productive lives. 3. (Кроме), diarrhea, vomiting, fever, and weight loss Crohn's disease can be associated with reddish tender skin nodules, and inflammation of the joints, spine, eyes, and liver. 4. (Помимо) the presence of blood stool test may also be used to detect the presence of H. pylori in the digestive tract. 5. 50% of cases of gastroenteritis are (в целом) due to foodborne illness caused by norovirus. 6. Each organism causes (частично) different symptoms but all result in diarrhea. 7. Gastric cancer (несомненно) is the most difficult disease to cure in Western countries, primarily because most patients present with advanced disease. 8. (Подобно) many other investigators we focused our attention on clinical management, which first requires a thorough understanding of gastric anatomy. 9. Environmental factors are (особенно) important in the development of gastric cancer. 10. The incidence of gastric cancer is (слишком) high in Japan, Chile, Colombia, and Central America.

Except for, too, like, by far, apart from, as such, in practice, in a whole, partly, particularly.

11. Fill in the blanks with the proper words from the list below

1. Biliary _____ remains the most common reason for liver transplantation in infants and children. 2. Bleeding from _____ is a medical emergency and treatment should be immediate. 3. A person with _____ can suffer from stomach pains caused by the digestion of food that is not properly broken down by gastric acid. 4. _____, or excess production of HCL, causes delayed or marked-delayed emptying time of the stomach contents for 6 to 24 hours, or much longer in many cases. 5. The characteristic symptoms of _____ are upper abdominal pain, bloating, fullness and tenderness on palpation. 6. Most of the time, _____ develops when pressure in the compartment of the residing organ is increased, and the boundary is weak or weakened. 7. _____ occurs when part of the bowel or intestine is wrapped around itself producing a masslike object on the right side of the abdomen during

palpation. 8. The presence of pouches on the colon is called _____. 9. Alcoholic _____ develops for between 10 % and 20 % of individuals who drink heavily for a decade or more. 10. Those patients who have _____ with no gallstones have about a 50 % chance of death if the gallbladder is not quickly removed. 11. In patients with severe attacks of biliary pain associated with _____, cholecystectomy is recommended to prevent such complications as cholecystitis, cholangitis, and pancreatitis.

Diverticulosis, cholelithiasis, atresia, dyspepsia, varices, cirrhosis, achlorhydria, hernia, hyperchlorhydria, intussusception, cholecystitis.

12. Provide the words in brackets with the appropriate negative suffix

1. Metabolic (orders) are often rather difficult to treat. 2. All (organic) substances have been found dissolved. 3. (Digestion) is also often referred to as (pepsia). 4. The doctor in charge must have (understood) the patient's reference to (nutrition). 5. The islets of Langerhans are quite (dependent) on the rest of the pancreas. 6. Some proteins are (essential), others are (dispensable). 7. Solutions capable of absorbing more soluble material are described as (saturated), those (capable) of doing so are saturated. 8. The woman, aged 62, was admitted with (chlorhydria) and abdominal (comfort). 9. That sort of (calculation) is quite (important) as far as the general results are concerned. 10. After that the periods of (digestion) repeated with the increasing frequency and severity.

IV. Learn to speak professional medical English

13. Finish the sentences:

1. Oesophagus is treated for ....
2. Stomach is treated for ....
3. Intestines are treated for ....
4. Liver is treated for ....
5. Pancreas is treated for ....

14. Speak about one of the gastrointestinal disorders

V. Learn to translate medical articles

15. Translate the following abstract into Russian

Back ground: Patients hospitalized for ulcerative colitis (UC) are at high risk for colectomy. Despite growing interest in research, there is no available tool in such research to stratify disease severity or identify patients at high risk for colectomy. Methods: Using the Nationwide Inpatient Sample (NIS) 2004, we identified patients hospitalized for UC attack. Our primary outcome of interest was undergoing total colectomy.

Multivariate logistic regression models were constructed to identify independent predictors of colectomy. From this, a cumulative risk score was developed. Hospitalizations were divided into 3 groups (low, intermediate, high) based on the data of colectomy. Results: There were a total of 15,142 hospitalizations with a discharge diagnosis of UC included in our study among whom 366 patients underwent total colectomy (2.4 %). Anemia (odds ratio [OR] 2.13), requirement for blood transfusion (OR 2.22), malnutrition (OR 4.53), and total parenteral nutrition (OR 4,30) were independent predictors of colectomy as were transfer in from another hospital (OR 2.06) and admission to a teaching hospital (OR 1.73). The cumulative colectomy risk score ranged from 0—8, with significantly higher risk of colectomy in the high-risk group (13.7 %) compared to the intermediate-risk (4.2 %, $P < 0.001$) and low-risk (1.3 %, $P < 0.001$) groups. Conclusions: We propose a simple and novel risk score to stratify the severity of UC hospitalizations and predict colectomy in this population.

LESSON 12

CARDIOVASCULAR DISEASES

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

a) [kɔntræk**tail**], [dj**u:**ti], [s**e**prət], [dif**e**kt], [idʒ**e**kt], [**ɔ**rifis], [**au**tlet], [ind**au**], [**i**ritəb**i**liti], [kɔntræk**ti**liti], [kəndʌkʃn], [væl**ju:**], [əbl**i:**k], [æθərɔ**u**mə].

b) [m**ai**ək**a:**diəm], [**a:**təri], [a:t**i**əriəul], [kəp**i**ləri], [**æ**triəm], [**ɔ:**rikl], [traikʌspid], [baikʌspid], [dai**æ**stəli], [s**i**stəli], [il**e**ktrəuk**a:**diɔgrəfi], [kəθ**i**təraiz**ei**ʃn], [dispn**iə**].

2. Write in transcription

Expel, smooth, pump, arise, raise, output, breakdown, pericardium, venule, myocardium, ventricle, pacemaker, valve, haemodynamic, echocardiography, catheter.

3. Read the terms

Vein, endocardium, venae cavae, portal vein, septum, sinoatrial node, angiography, arteriole, thrombosis, rupture.

4. Learn to pronounce the names of heart diseases and memorize their Russian equivalents

Congenital heart defect, heart failure, cardiac arrest, angina pectoris, acute myocardial infarction, coronary thrombosis, atheroma, arterial

hypertention, cardiac arrhythmia, ventricular fibrillation, heart block, cardiogenic shock, cardiac rapture, hypotension, pericarditis, endocarditis, myocarditis, ischemic heart disease.

II. Text study

5. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

This group of diseases — probably the commonest of all — involves the circulatory system, i.e. the heart with the blood vessels and — to a certain degree — the lymphatic system.

The **heart** is a hollow contractile muscle capable of expelling whatever volume of blood enters it. The cardiac muscle itself **(myocardium)** is enclosed in the **pericardium;** inside it is lined with a smooth membrane — the **endocardium.** The principal function of the heart is to pump blood from the veins into the arteries, arterioles and capillaries, and to receive it via the venules, veins and ultimately the superior and inferior venae cavae.

In order to perform this duty, the heart is divided into two separate pumps, the right side serving the lung pulmonary or lesser circulation — and the left side serving the rest of the body — systemic circulation. Part of the de-oxygenated blood returning from the abdominal organs is deflected to pass through the portal circulatory branch, i.e. via the portal vein to the liver and through the hepatic veins to the inferior vena cava. The cardiac muscle itself is kept supplied with oxygenated blood through the two coronary arteries which arise from the root of the aorta.

Each side of the heart consists of an **atrium** (auricle), which receives venous blood, and a **ventricle** which ejects it into the arterial system. There is a **septum** in between the two sides and an orifice in between the atrium and its corresponding ventricle. These orifices and also the outlets of the heart are served by the **tricuspid, bicuspid** (mitral), **pulmonary** and **aortic** valves. The natural pacemaker situated in a zone of extremely active muscle in the wall of the right atrium is known as the sinoatrial node (S-A node). The node is stimulated or more usually inhibited by impulses coming via the sympathetic or vagus nerves from the cardiac centre, a set of nerve cells in the medulla oblongata. This centre increases the heart rate in response to diminished blood pressure, lack of oxygen, raised body temperature and emotions such as fear or anger.

The two phases of the cardiac action are atrial and ventricular **diastole** and **systole.** The myocardium is endowed with specific properties: irritability, contractility, automatism and conduction.

The amount of blood ejected by the heart into the arteries in a systole per minute is called cardiac **output.** The volume of blood

pumped by either ventricle at **a beat** is referred to as the **stroke volume** and it may range from 70 c.c. to some 200 c.c. on exertion. Cardiac output depends more on the heart rate than on the stroke volume. The more the ventricles are filled in diastole, the more they contract in systole (Starling's law). On the other hand, distention of the atria increases the heart rate. A breakdown of this mechanism is described as **heart failure.**

Other important haemodynamic values include: cardiac index, stroke index, mean aortic pressure, mean pulmonary artery pressure, stroke work index, end-diastolic volume, end-systolic volume, arterial **blood pressure** (taken by means of a sphygmomanometer) etc.

Most of these values are recorded by means of electrocardiography (ECG — with leads attached to the chest and limbs), by means of cardiac catheterization (i.e. introducing a catheter or tubing via the cubital or femoral vein into the heart), by means of angiography (injection of contrast medium into the arterial system) or by means of radiology when the heart is first screened and then films are taken in the AP, PA, lateral and oblique positions. In addition, the position and motion of the heart walls and neighbouring tissue may be graphically recorded by **echocardiography** which uses beams of ultrasonic waves directed through the chest wall.

General symptoms and clinical manifestations of heart disease

Dyspnoea on effort or at rest is the most usual symptom, sometimes coming in paroxysms (cardiac asthma), and so are palpitations and precordial pain. Patients often complain of loss of appetite, nausea and vomiting and report nocturia, oliguria and albuminuria. On examination, the doctor is most likely to find pitting oedema called so because the swelling, first noticed on the ankles and feet, tends to pit on pressure. Other, more serious oedematous conditions include ascites (abdominal dropsy), pleural or even pericardial effusion. Other signs of cardiovascular disease include hypertension, cyanosis, hepatomegaly, venous engorgement, period breathing (Cheyne-Stokes' respiration), gallop rhythm, pulsus alternans and often atrial (auricular) fibrillation or flutter, etc.

Some of the main cardiovascular diseases

Congenital heart defects may be due to a number of causes such as undesirable intercommunication between the right and left sides of the heart (faultily developed septum or «hole in the heart»), obstruction to ventricular flow as a result of stenosis, pulmonary or aortic valvular, or subvalvular; valvular malformations such as mitral incompetence, etc. Some of the less severe malformations are compatible with

life, others, which might lead to disability or early death, can in increasing numbers now be treated surgically.

Heart failure, too, has many causes, although it really means no more than that the heart fails to pump all the blood it receives from the veins into the arteries. This may be due to low output (forward failure), affecting all tissues of the body, or due to congestion in the veins (backward failure).

Cardiac arrest is failure of the heart action to maintain adequate cerebral circulation in the absence of obvious disease.

Angina pectoris and acute myocardial infarction due to coronary thrombosis come under the heading of **ischaemic heart disease** (IHD).

In IHD the blood supply to the heart muscle is impaired due to **atheroma,** a degeneration of the lining of the coronary arteries with loss of elasticity. Patients with angina are predisposed to coronary thrombosis, their condition often being aggravated by associated disorders, such as arterial hypertension. Unless **acute myocardial infarction** leads to sudden death, there may be serious complications such as **cardiac arrhythmia** (e.g. ventricular fibrillation, cardiac arrest); **heart block** (i.e. partial or complete inhibition of the speed of conduction of the electrical impulse from the atrium to the ventricle), **cardiogenic shock, cardiac rupture,** etc.

Generally speaking, heart diseases are due to:

increased volume of blood to be coped with (e.g. when an incompetent valve allows blood that has already been ejected to leak back thus adding it to the new load arriving from the veins);

increased resistance to the blood flow (such as in the stenosis of a valve or sclerotic narrowing of the arteries or when particularly the left side of the heart is inefficient and allows blood to accumulate in the lungs instead of pumping it into the aorta);

decreased force – e.g. when the muscular strength of the heart is affected by any debilitating disease, including all sorts of pericarditis, endocarditis or disease of the myocardium itself.

Effort syndrome, a form of anxiety neurosis, is not really a heart disease in the proper sense of the word, though it is accompanied by characteristic symptoms. The heart is normal with no detectable pathological changes.

6. Answer the following text-based questions.

1. What comes under the heading of the circulatory system? 2. How would you define the heart in terms of its function? 3. What is the difference between the pericardium and the endocardium? 4. Which group of muscle fibres does the myocardium belong to? 5. What is the anatomical structure of the heart? 6. What is the difference between

systemic circulation and pulmonary circulation? 7. How is portal circulation effected and why? 8. In what way is the myocardium itself supplied with oxygenated blood? 9. What types of heart valves are there? 10. What is the physiological difference between an atrium and a ventricle? 11. What function does the S-A node perform? 12. What happens in diastole as opposed to a systole? 13. What are the specific properties of the heart muscle? 14. How would you explain the term «cardiac output»? 15. What is Starling's law? 16. When do clinicians speak of heart failure? 17. What is stroke volume? 18. What other haemodynamic values can you name? 19. How is arterial blood pressure taken? 20. What is the aim of electrocardiography? 21. How is cardiac catheterization performed? 22. What is the principle of angiography? 23. What is the usual procedure of a radiological examination of the heart muscle? 24. What do cardiac patients generally complain of? 25. How do you recognize pitting oedema? 26. Why is hypertension a sign of cardiovascular disorder? 27. What happens in atrial fibrillation and what term is used to describe it? 28. What kind of heart condition does the term «hole in the heart» imply? 29. What happens in mitral incompetence? 30. What is the difference between forward failure and backward failure? 31. When do we speak of cardiac arrest? 32. What does the term ischaemic heart disease imply? 33. Why are patients with angina pectoris predisposed to coronary thrombosis? 34. What is the difference between cardiac arrest and heart block? 35. What is wrong with the patient who suffers from cardiac arrhythmia? 36. What is atheroma? 37. How do such conditions as pericarditis or endocarditis affect the heart muscle? 38. Which are the general causes of heart disease? 39. Why is effort syndrome not considered to be a true heart disease? 40. What methods — other than those already mentioned — can be used to detect heart disease?

III. Word study

7. Make up English-Russian pairs of words

Deflect, expel, rate, lead, enter, endow, pump, effusion, line, arise, eject, fail, raise, cope, supply, leak, value, situate.

Повышать, происходить, выталкивать, ритм, истечение, поступать, обеспечивать, справляться, выстилать, располагаться, отвод, отклонять, качать, снабжать, извергать, параметр, быть неспособным, течь.

8. Give Russian equivalents of the words

Mitral valve, cardiac output, stroke volume, heart failure, cardiac arrest, angina pectoris, coronary thrombosis, heart block, cardiogenic shock, cardiac rapture, congenital heart defect, acute myocardial infarction, ischemic heart disease.

9. Make up pairs of antonyms

Stimulation, loss, hollow, anxiety, effort, obvious, partial, outlet, narrowing, aggravate, oblique, main, sudden, absence, inside, superior.

Secondary, direct, slow, outside, gain, inferior, solid, rest, inhibition, unapparent, inlet, distention, presence, complete, relief, calm.

10. Make up negative forms, using prefixes: im-, in-, un-, non-, de-

Capable, natural, specific, important, direct, desirable, compatible, competent, adequate, efficient, proper, oxygenated, active.

11. Make up adjectives

Heart, circulation, diastole, myocardium, valve, vessel, ventricle, lymph, artery, vein, atrium, aorta, auricle.

12. Fill in the blanks with the proper words from the list below

1. ___ is a delay in the conduction of electrical current as it passes through the atrioventricular node, bundle of His, or both bundle branches, all of which are located between the atria and the ventricles. 2. A ___ is a structural problem (or defect) in the heart that is present at birth. 3. ___ is defined by sustained hypotension with tissue hypoperfusion despite adequate left ventricular filling pressure. 4. The condition when blood supply in one artery stops due to clot formation is known as ___. 5. ___ is a laceration or tearing of the walls of the ventricles or atria of the heart or of one of the valves of the heart. 6. ___ is a term for any of a large and heterogeneous group of conditions in which there is abnormal electrical activity in the heart. 7. The term ___ refers to natural death from cardiac causes, caused by abrupt loss of consciousness within one hour of the onset of acute symptoms. 8. Central ___ is often due to a circulatory or ventilatory problem that leads to poor blood oxygenation in the lungs or greater oxygen extraction due to slowing down of blood circulation in the skin's blood vessels. 9. ___ is the cessation of normal circulation of the blood due to failure of the heart to contract effectively. 10. ___ is a syndrome manifesting as the inability of the heart to fill with or eject blood due to any structural or functional cardiac conditions. 11. ___ is the thickening of the arteries from the depositing of plaque on the artery walls. 12. ___ is the interruption of blood supply to part of the heart, causing some heart cells to die.

Myocardial infarction, cardiac arrhythmia, cyanosis, coronary thrombosis, cardiogenic shock, heart failure, cardiac rupture, sudden cardiac death, cardiac arrest, heart block, atheroma, congenital heart defect.

13. From the list below chose the proper Russian equivalent of the italicized words

1. The risk of cardiovascular diseases, *in addition*, increases with heavier cigarette use and the longer one has smoked. 2. High blood pressure is a powerful risk factor for cerebrovascular disease *as well as* for coronary heart disease. 3. *The more* obese patient *the more* likely he will develop coronary heart disease. 4. *A set of* risk factors predisposes to the development of cardiovascular diseases. 5. Cardiovascular disease *refers to* diseases of the heart and diseases of the entire blood vessel system (arteries, capillaries, and veins) within a person's body, such as the brain, arms, legs, and lungs. 6. *Either* of the risk factors can be included into two broad categories: unmodifiable factors (such as male gender, and family history of premature heart diseases) and potentially modifiable factors (such as cigarette smoking, high blood pressure, high blood-cholesterol level, physical inactivity, diabetes, and obesity). 7. Heart disease is the *commonest of all* causes of death in the United States and is a major cause of disability. 8. Although cardiovascular disease is *more usually* thought to primarily affect men and older people, it is a major killer of women and people in the prime of life. 9. *Whatever* the causes of cardiovascular disease they are the first and third leading causes of death in the United States, accounting for more than 40 % of all deaths. 10. Analyses, however, suggested that obesity is *no more than* an accompanying factor in developing of cardiovascular diseases. 11. When *most of* people talk about preventing cardiovascular disease, they are usually talking about preventing coronary artery disease and stroke. 12. Cigarette smoking has been established as a risk factor *in between* lung cancer, emphysema, and bronchitis *but also* for coronary, cerebral, and peripheral vascular disease.

Не только, но и, относиться, также как и, наиболее частый, какой бы ни, ряд, каждый, чаще всего, кроме того, не более чем, большинство, чем ... тем.

IV. Learn to speak professional medical English

14. From the list below choose the correct definitions for the following

1. The pericardium is ….
2. The endocardium is ….
3. The heart is ….
4. The myocardium is ….
5. The atrium is ….
6. The auricle is ….
7. The ventricle is ….
8. The septum is ….
9. Heart valves ….

10. Diastole is ….
11. Systole is ….
12. Stroke volume is ….
13. Heart failure is ….
14. Blood pressure is ….

1. … is a condition in which a problem with the structure or function of the heart impairs its ability to supply sufficient blood flow to meet the body's needs.

2. … a muscular organ found in all vertebrates that is responsible for pumping blood throughout the blood vessels by repeated, rhythmic contractions.

3. … the middle and thickest layer of the heart wall, composed of cardiac muscle.

4. … a small conical pouch projecting from the upper anterior part of each atrium of the heart.

5. … a double-walled sac that contains the heart and the roots of the great vessels.

6. … is the volume of blood pumped from one ventricle of the heart with each beat.

7. … a heart chamber which collects blood from an atrium (another heart chamber that is smaller than a ventricle) and pumps it out of the heart.

8. … the upper chamber of each half of the heart.

9. … maintain the unidirectional flow of blood in the heart by opening and closing depending on the difference in pressure on each side.

10. … the innermost layer of tissue that lines the chambers of the heart.

11. … the period of time when the heart fills with blood after contraction.

12. … a phase of the cardiac cycle where the myocardium is contracting in a coordinated manner in response to an endogenous electrical stimulus, and pressure is being generated within the chambers of the heart driving blood flow.

13. … the dividing wall between the right and left sides of the heart.

14. … is a force exerted by circulating blood on the walls of blood vessels, and is one of the principal vital signs.

15. Read the following text and speak about angina pectoris

Angina pectoris

Angina pectoris is the medical term for chest pain or discomfort due to coronary heart disease. Angina is a symptom of a condition called myocardial ischemia. It occurs when the heart muscle (myocardium) doesn't get as much blood (hence as much oxygen) as it needs. This

usually happens because one or more of the heart's arteries (coronary blood vessels that supply blood to the heart muscle) is narrowed or blocked. Insufficient blood supply is called ischemia.

Angina also can occur in people with valvular heart disease, hypertrophic cardiomyopathy (this is an enlarged heart due to disease) or uncontrolled high blood pressure. These cases are rare, though.

Typical angina is uncomfortable pressure, fullness, squeezing or pain in the center of the chest. The discomfort also may be felt in the neck, jaw, shoulder, back or arm.

Angina often occurs when the heart needs more blood. For example, running to catch a bus could trigger an attack of angina while walking might not. Angina may happen during exercise, strong emotions or extreme temperatures. Some people, such as those who experience coronary artery spasm, may have angina when they're resting.

V. Learn to translate medical articles

16. Translate the text, using dictionary

Hypertension

Hypertension is the term used to describe high blood pressure.

Blood pressure is a measurement of the force against the walls of your arteries as the heart pumps blood through the body.

Blood pressure readings are measured in millimeters of mercury (mm Hg) and usually given as two numbers – for example, 120 over 80 (written as 120/80 mm Hg). One or both of these numbers can be too high.

The top number is your systolic pressure.

- It is considered high if it is over 140 most of the time.
- It is considered normal if it is below 120 most of the time.

The bottom number is your diastolic pressure.

- It is considered high if it is over 90 most of the time.
- It is considered normal if it is below 80 most of the time.

Pre-hypertension may be considered when your:

- Top number (systolic blood pressure) is between 120 and 139 most of the time, or
- Bottom number (diastolic blood pressure) is between 80 and 89 most of the time.

If you have pre-hypertension, you are more likely to develop high blood pressure.

If you have heart or kidney problems, or if you had a stroke, your doctor may want your blood pressure to be even lower than that of people who do not have these conditions.

Most of the time, there are no symptoms. Symptoms that may occur include:

- Confusion.
- Ear noise or buzzing.
- Fatigue.
- Headache.
- Irregular heartbeat.
- Nosebleed.
- Vision changes.

If you have a severe headache or any of the symptoms above, see your doctor right away. These may be signs of a complication or dangerously high blood pressure called malignant hypertension.

LESSON 13

ENDOCRINOLOGY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

a) [**e**ndoukr**ai**n], [**e**ndɔukrain**ɔ**lədʒi], [pitj**u**itəri], [θ**ai**roid], [θ**ai**məs], [**æ**drinɔuhaip**ɔ**fisis], [**æ**krɔume**g**əli], [**i:**strɔudʒən], [nj**u**ərɔuhaip**ɔ**fisis], [θaiər**ɔ**ksin], [pærəθ**ɔ:**mɔun], [**æ**ldɔustər**ɔu**n].

b) [h**ai**pɔuglais**i:**miə], [gl**ai**kɔusj**u**əriə], [pɔlij**u**əriə], [pəlid**i**psiə], [pɔlif**ei**dʒiə], [dʒaig**æ**ntizm], [sætir**ai**əsis], [n**i**fɔum**ei**niə], [**e**pin**e**frin], [h**ai**drɔuk**ɔ:**təzɔun].

2. Write in transcription the names of the hormones

Adrenocorticotropic hormone, thyrotropic hormone, follicle-stimulating hormone, luteinizing hormone, luteotropic hormone, antidiuretic hormone, somatotropic hormone, thyroid-stimulating hormone, growth hormone, lactogenic hormone.

3. Read the terms

Exocrine, parathyroid, adrinohypophysis, vasopressin, oxytocin, myxedema, exophthalmic, tyrosine, iodine, cortisol, androgen, oestrogen, progesterone, insulin, glucagon, cortisol, aldosterone, adrenalin, norepinephrine.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Endocrine or ductless glands, as opposed to exocrine glands, discharge their products, hormones, directly into the blood or lymph

in a process called internal secretion. The pituitary, thyroid, parathyroid, and adrenal glands are purely endocrine, whereas the pancreas, the ovaries and testicles combine both functions. The thymus has not been shown to produce any hormone although it has the makings of an endocrine gland.

It need be stressed that none of the endocrine glands acts independently of others. The adequate level of various hormones in the blood is maintained by a system of feedback mechanism ultimately controlled by the CNS, with the nervous and chemical functions of the body being closely interrelated. Hormones themselves represent a highly specialized and most efficient type of humoral regulation as even their slightest concentration is enough to produce a profound effect on certain physiological processes, particularly the rate of metabolism. Conversely, endocrine dysfunction invariably results in grave pathological manifestations throughout the body.

Pituitary gland — often referred to as the master gland of the body, is formed by two anatomically quite distinct organs producing between them a variety of vital hormones:

1. **Anterior lobe** (adenohypophysis) is responsible for the production of:

— STH, somatotropic or growth hormone, lack of which in childhood causes **pituitary dwarfism** or arrested growth; an excess of STH, possibly due to pituitary tumour in childhood, leads to **gigantism,** whereas a similar hyperfunction in adult life produces acromegaly;

— ACTH, adrenocorticotropic hormone which stimulates the adrenal cortex to secrete cortisol;

— TTH, thyrotropic hormone, also known as thyroid-stimulating hormone TSH, which regulates the functional activity of the thyroid gland;

— FSH, follicle-stimulating hormone, which governs the development of ovarian follicles and spermatogenesis in the testes;

— LH, luteinizing hormone, also called interstitial cells stimulating hormone;

— ICSH, which in conjunction with FSH induces the secretion of oestrogens, ovulation and corpus luteum production in females, and that of testosterone in males;

— LTH, luteotropic hormone or prolactin which, among other things, induces the secretion of milk in a fully developed mammary gland — hence the name lactogenic hormone.

Complete functional break-down of the anterior pituitary is the cause of **Simmond's disease,** the simultaneous failure of the thyroid, adrenal and sex glands resembling the state of senility.

2. **Posterior lobe** (neurohypophysis) is known to secrete two hormones:

— ADH, antidiuretic hormone, which causes water to be retained by the kidneys and restored to the blood, thus preventing excessive loss of water in the urine. It has the additional property of causing the blood pressure to rise, hence the alternative name of vasopressin. A deficiency of ADH is the specific cause of **diabetes insipidus,** a rare disorder characterized by polyuria and polydipsia. The defect is remedied by giving ADH by injection or in snuff, nasal drops or spray;

— **oxytocin** — which acts on the smooth muscle of the uterus at the end of pregnancy, initiates labour and promotes lactation. The two hormones are really built up in the hypothalamus; in the neurohypophysis they are merely stored and secreted into the blood stream.

Thyroid gland — consists of two lobes in the anterior portion of the neck, one at either side of Adam's apple, joined at their lower ends by a bridge of glandular tissue. The thyroid produces thyroxine, a hormone derived from iodinated amino acid tyrosine, influencing the basal metabolic rate and acting indirectly on growth and nutrition. There is a feedback between thyroxine and TSH. Disorders include:

Cretinism, a congenital disorder resulting from failure of the thyroid gland to develop. The new-born cretin is usually a normal baby, presumably because he has been able to use thyroxine from his mother's thyroid. After birth, his physical and mental development is retarded. The unmistakable signs are: coarse hair and skin, protruding tongue, and pot belly.

Myxoedema, thyroid deficiency starting in adult life. The patient, usually a middle-aged woman, suffers from loss of energy and appetite; the body temperature is low; the skin is dry and puffy; the mind is dulled. All these changes are completely reversed by giving thyroxine.

Simple goitre, an enlargement of the thyroid gland due to lack of iodine in the diet. Large goitres may have to be removed surgically because neighbouring structures (trachea, veins, nerves) are impaired, or because they are unsightly; simple goitre is endemic in regions with lack of iodine in the soil.

Toxic goitre (Graves disease, Basedow's disease), marked by overactivity of the thyroid and increased fuel consumption, with often hardly any noticeable enlargement of the gland. The patient, usually a woman of about 40, becomes irritable and restless, she loses weight, the heart is overactive, its rhythm may be disturbed. The presence of long-acting thyroid stimulator, which is an antibody against thyroid protein, causes the eyes to protrude giving rise to **exophthalmic goitre.**

Parathyroid glands produce parathormone, which regulates the concentration of calcium in the blood. Disorders are rare, e.g. **tetany,**

the result of parathyroid hypofunction, marked by over-excitability of nerve and muscle, with twitching, cramp and tingling sensations; **renal calculi,** and **resorption of bone** due to an excess of parathormone.

Adrenal cortex — is responsible for the secretion of vital corticosteroids, particularly cortisol (hydrocortisone) and aldosterone, the former regulating mainly the carbohydrate metabolism, the latter salt and water balance.

Corticosteroids and ACTH are now widely used in medical treatment. Disorders include in particular —

Addison's disease, resulting from hypofunction of the adrenal cortex, with increased pigmentation of the skin and mucous membranes, irregular milk-white patches on the skin, weakness, fatiguability, hypotension, anorexia, loss of weight and hypoglycaemia.

Adrenal medulla — is really part and parcel of the sympathetic nervous system and is responsible for the secretion of adrenaline (epinephrine in the U.S.) and noradrenaline (norepinephrine), acting as vasoconstrictors and cardiac stimulants.

Gonads — produce sex hormones in the **ovaries** and testes, the latter otherwise acting as an exocrine gland. There are three groups of sex hormones: **androgens, oestrogens and progestogens.**

Both sexes have all three, but it is the proportion that makes the difference. If androgens predominate, male secondary characteristics develop (broken voice, facial hair, muscular physique). Oestrogens, on the other hand, are more concerned with function than structure; they determine the female sexual cycle on which fertility depends. Gonadal hypofunction invariably results in lack of sex development, or regression of it in adults; sex hormone hypersecretion may be the cause of abnormal sex development (satyriasis, nymphomania etc.).

Pancreas islets of langerhans — produce insulin and glucagon with complementary functions. While the former promotes the uptake of sugar from the blood by the tissues, for storage and combustion, the latter acts to release sugar from the tissues (mainly liver) into the blood. **Diabetes mellitus** is the most common disorder resulting from a deficiency of insulin. This may be either relative or absolute, depending on whether too little insulin is produced in the pancreas or none at all. The condition has a tendency to run in families. The principal signs include hyperglycaemia, glycosuria, polyuria, polydipsia and polyphagia, loss of weight, emaciation and debility. When severe diabetes is allowed to go untreated, coma ensues with weakness and sweet odour of breath. Diabetics should be placed on a well-balanced diet in all basic essentials, but the only effective treatment consists in the supply of the missing hormone — insulin.

5. Answer the following questions

1. What is the characteristic feature of endocrine as opposed to exocrine glands? 2. What are hormones in terms of physiology? 3. Which are the purely endocrine glands? 4. How are the thymus and pineal body classified? 5. How is the level of different hormones in the blood maintained? 6. What is the specific property of hormones in terms of humoral regulation? 7. How does endocrine dysfunction manifest itself? 8. Why is the pituitary gland often described as the master gland of the body? 9. What is the anatomical composition of the pituitary? 10. Which are the hormones secreted by adenohypophysis? 11. What are the clinical effects of STH deficiency or excess of the growth hormone? 12. What is the function of the follicle-stimulating hormone? 13. How does the interaction of FSH and luteinizing hormone affect the body? 14. What is prolactin and what is it responsible for? 15. Which substantial hormones are secreted by neurohypophysis? 16. Which hormone deficiency is diabetes insipidus due to? 17. Why is oxytocin important in pregnancy? 18. What is the anatomical location of the thyroid? 19. What is cretinism due to? 20. Which are the main clinical signs of myxoedema? 21. What is the difference between simple and toxic goitre? 22. What may give rise to exophthalmic goitre? 23. What are the disorders caused by parathyroid dysfunction? 24. Why is the adrenal cortex more important than the medulla? 25. What is the vital function of corticosteroids? 26. What is the cause and the clinical picture of Addison's disease? 27. Which body system does the adrenal medulla really belong to and why? 28. What is the common term used to describe the sex glands? 29. Which are the three basic sex hormones? 30. Which hormones are responsible for male or female secondary characteristics? 31. What is the main difference between androgens and oestrogens? 32. What are the clinical manifestations of gonadal dysfunction? 33. Why do we say that insulin and glucagon perform complementary functions? 34. Which are the principal signs of diabetes mellitus? 35. How is diabetes treated?

III. Word study

6. Make up English-Russian pairs of words

Profound, discharge, combine, congenital, various, manifestation, lack, uptake, govern, directly, retard, failure, grave, promote, purely, invariably, distinct, simultaneous, restore, master, retain, responsible.

Неизменно, поглощение, выделять, различный, одновременно, сочетать, проявление, стимулировать, чисто, ответственный, врожденный, главный, замедлять, удерживать, недостаточность, тяжелый, глубокий, непосредственно, регулировать, возвращать, недостаток, явный.

7. Form adverbs with opposite meaning

Directly, pure, dependent, adequate, efficient, responsible, complete, regular, relative, effective.

8. Make up English-English pairs of words with opposite meaning

Grave, profound, master, similar, lack, excess, restore, snuff, stimulator, disorder, development, uptake.

Drops, insignificant, release, presence, mild, norm, regression, secondary, different, disturb, inhibitor, deficiency.

9. Fill in the blacks with the proper terms from the list given below

1. ___ is a hormone secreted by the pituitary gland, usually under conditions of biological stress. 2. ___ stimulates thyroid activity and has been employed in bound cases of hypothyroidism that gave the impression to be the secondary results of primary pituitary insufficiency. 3. ___ is responsible for the development of the male characteristics during fetal, neonatal and pubertal maturation and finally for attaining the male phenotype and for androgen-dependent functions. 4. ___ is the most abundant hormone produced by the anterior pituitary lobe, accounting for as much as eight to ten per cent of the dry weight of the gland. 5. ___ regulates the development, growth, pubertal maturation, and reproductive processes of the body. 6. ___ is a hormone produced by the anterior pituitary gland. 7. ___ is a protein hormone produced by the pituitary gland of mammals and acts with other hormones to initiate secretion of milk by mammary glands. 8. ___ is a hormone found in most mammals, including humans that controls the reabsorption of molecules in the tubules of the kidneys by affecting the tissue's permeability. 9. ___ is a hormone found in the human body and secreted by the parathyroid glands. 10. ___ are a group of steroid compounds, named for their importance in the estrous cycle, and functioning as the primary female sex hormone. 11. ___ are hormones having antiestrogenic (counteracting the effects of estrogens on the body) and antigonadotropic (inhibiting the production of sex steroids by gonads) properties.

Antidiuretic hormone, thyrotropic hormone, testosterone, follicle-stimulating hormone, parathormone, progestagens, adrenocorticotropic hormone, luteinizing hormone, luteotropic hormone, oestrogens, somatotropic hormone.

10. From the list below choose the English equivalents for the Russian words in brackets

1. (Единственный) available member of growth hormone receptor antagonists is pegvisomant (Somavert). 2. Dopamine agonists are used for treatment of acromegaly (особенно) for those who are unresponsive to somatostatin analogues, or for whom they are otherwise contraindicated. 3. It is impossible to treat all symptoms of dwarfism (хотя) individual abnormalities such as bone growth disorders can sometimes

be treated through surgery, and some hormone disorders can be treated through medication. 4. Short parents tend to produce short children; (наоборот), persons with dwarfism may produce children of normal height, if the cause of their dwarfism is not genetically transmissible. 5. In general, goiter unassociated with any hormonal abnormalities will (едва ли) cause any symptoms aside from the presence of anterior neck mass. 6. Cretinism may not be obvious at birth (предположительно) because thyroid hormone from mother's blood can benefit the baby before and several months after birth. 7. In hyperthyroidism the thyroid gland makes (слишком) much of T4 and T3 hormones. 8. Cretinism is more common in nations with iodine deficiency (в отличие от) countries where enough iodine is present in water and soil. 9. Drug therapy may be used for treatment of the disorder (совместно) with strict diet with increased iodine content. 10. At first the symptoms may be mild and not quite obvious (в то время как) later on they become severe and apparent. 11. Diagnosis becomes (в конце концов) obvious but there is no effective treatment for the condition. 12. Growth hormone, also called somatotropin, is a polypeptide hormone which stimulates growth and cell reproduction, (отсюда) its lack may result in growth retardation and even dwarfism. 13. Hormonal deficiency was (только) a result of iodine deficiency in everyday diet.

Although, particularly, in conjunction, ultimately, conversely, merely, hardly, presumably, too, as opposed to, whereas, the only, hence.

IV. Learn to speak professional medical English

11. Complete the sentences

1. Luteotropic hormone induces ….
2. Thyroptopic hormone regulates ….
3. Lack of somatostatin may result in ….
4. Luetenizing hormone stimulates ….
5. Adrenocorticotropic hormone stimulates ….
6. Follicle-stimulating hormone governs ….
7. Parathormone regulates ….

12. Complete definitions

1. Simple goiter is ….
2. Tetany is ….
3. Simmond's disease is ….
4. Cretinism is ….
5. Diabetes insipidus is ….
6. Addison's disease is ….
7. Toxic goiter is ….
8. Myxoedema is ….
9. Diabetes mellitus is ….

13. Read the text and make up its summary in English

Несахарный диабет – очень редкое заболевание (примерно 1 на 100 000), связанное с нарушением функции гипоталамуса, либо гипофиза, которое характеризуется полиурией и полидипсией.

Нейросекреторные клетки гипоталамуса вырабатывают два вида гормонов: вазопрессин и окситоцин. Эти гормоны накапливаются в задней доле гипофиза, откуда по мере надобности выделяются в кровь. При недостаточности в крови вазопрессина происходит нарушение всасывания воды. Следствием служит полиурия, которая также является симптомом и для сахарного диабета.

Выделяют несколько типов несахарного диабета в зависимости от того, на каком уровне нарушено действие вазопрессина. При *нейрогенном* несахарном диабете нарушение происходит на уровне синтеза вазопрессина либо на уровне нарушения выделения гормона гипофизом в кровь. При *нефрогенном* – нарушение происходит на уровне восприятия антидиуретического гормона клетками дистальных отделов канальцев нефрона. Встречается также несахарный диабет нервного происхождения (выражается полидипсией) и несахарный диабет у беременных, который вскоре после родов проходит.

При диагностике несахарного диабета очень важно определить причину последнего, так как от этого будет зависеть курс лечения. При нейрогенном несахарном диабете применяют препараты десмопрессина (таблетки или капли). При нефрогенном несахарном диабете применяют тиазидные и калийсберегающие препараты. В обоих случаях уменьшают поступление воды в организм больного.

V. Learn to translate scientific medical texts

14. Find in Internet the site medical-dictionary.thefreedictionary.com **and make a short account of it in Russian**

15. Translate the following text

Diabetic Coma

Diabetic Coma is a severe emergency in which a person is not conscious because the blood glucose (sugar) is too low or too high.

If the glucose level is too low, the person has hypoglycemia; if the level is too high, the person has hyperglycemia and may develop ketoacidosis.

Patients with diabetes mellitus type 1 are especially prone to Diabetic Coma. Without performing a blood glucose test, it is difficult to tell with certainty whether the Diabetic Coma is caused by hypoglycemia or hyperglycemia as symptoms are very similar. Overall, the term

diabetic coma refers to the diagnostic dilemma posed when a physician is confronted with an unconscious patient about whom nothing is known except that the person has diabetes. Studies show that an estimated 2 to 15 per cent of people with diabetes will suffer at least one episode of diabetic coma during their lifetimes as a result of severe hypoglycemia.

Diabetic coma was a diagnostic problem before the late 1970s. But with the introduction of glucose meters and rapid blood chemistry analyzers it rarely takes more than a few questions, a quick look, and a glucose meter to determine the cause of unconsciousness in a patient with diabetes. Laboratory confirmation can usually be obtained in half an hour or less for people with Diabetic Coma. Diabetic people should understand how a diabetic coma can occur and the symptoms to watch out for. General guidelines should be followed to ensure that the person does not have another Diabetic Coma.

Treatment options for Diabetic Coma: Ketoacidotic Diabetic Coma: intravenous fluids, insulin and administration of potassium and sodium. Hyperosmolar Diabetic Coma: plenty of intravenous fluids, insulin, potassium and sodium given as soon as possible. Hypoglycaemic Diabetic Coma: administration of the hormone glucagon to reverse the effects of insulin, or glucose given intravenously.

LESSON 14

NEUROLOGY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[gængliən], [nj**u**ərait], [æm**i**gdələ], [h**ai**pəθæləməs], [n**ɔ:**rədr**e**nəlin], [s**i**ərɔut**ɔu**nin], [f**i**ʃə], [kɔnʃəsnis], [nj**u**ərən], [kənv**ə:**dʒəns], [p**ɔ:**lzi], [h**ai**pə:tr**ɔu**fi], [s**ai**nəps], [p**ai**əm**ei**tə], [dj**u**ərəm**ei**tə], [ərækn**ɔ**idm**ei**tə], [k**ɔ:**pəs kəl**ɔ**səm], [medʌləɔbləng**ei**tə].

2. Write the following words in transcription

Dendrite, myelin, axon, cerebellum, hemisphere, thalamus, hippocampus, cerebrum, acetylcholine, acuity, biceps, vasoconstrictor, conscious, cylindrical, brachial, cornea, secretory, subarachnoid.

3. Read the words and medical terms

Meninges, acetylcholine, gamma-aminobutyric acid, neurological, epilepsy, extravert, introvert, maniacal, melancholic, paranoic, hallucinatory, trochlea, corneal, atoxic, athetoid, jerky, tactile.

4. Read the names of the nerves

Olfactory nerve, optic nerve, oculomotor nerve, trochlear nerve, abducent nerve, trigerminal nerve, facial nerve, auditory nerve, hypoglossal nerve, glossopharyngeal nerve, spinal accessory nerve, vagus.

II. Text study

5. Read the text, translate it consulting a dictionary, if necessary, and answer the questions after the text

The **nervous system** controls the actions and functions of the body. It comprises the brain, spinal cord and their nerves (CNS — central nervous system), and the ganglia and nerve fibres which form the autonomic nervous system. The latter is subdivided into the sympathetic and parasympathetic systems to govern involuntary action.

The **neuron** is the structural unit of the nervous system. It consists of the cell-body with several branched processes or dendrites, and a single long process, the axon or neurite, which is the main conducting fibre. The nerve fibres, enclosed in an insulating sheath of myelin, transmit impulses between the periphery and the nerve centres. Afferent (receptor or sensory) nerves convey impulses from the tissues to the nerve centres, while efferent nerves act in the opposite direction and are also referred to as effector, motor, secretory, trophic, vasoconstrictor etc., according to the function and location.

There are twelve pairs of cranial nerves (olfactory, optic, oculomotor, trochlear, abducent, trigeminal, facial, auditory, hypoglossal, glossopharyngeal, spinal accessory and vagus), and thirty-one pairs of spinal nerves. Those from the upper and lower ends of the spinal cord form networks, the brachial and lumbosacral plexuses. At their origin from the spinal cord the motor and sensory fibres are in separate bundles or nerve roots, motor in front of sensory. Thus a group of muscle cells is activated by a single neuron in the spinal cord, but this neuron receives impulses through its dendrites from a multitude of other neurons of which some stimulate while others inhibit. Only a few of these, in the upper part of the brain, are involved in conscious activity or sensation. The rest operate reflex action.

The **brain** itself is that part of the CNS which is enclosed by the skull. The spinal cord continues into the cranial cavity as the medulla oblongata which, together with the pons and midbrain, forms the brain stem. The cerebellum is a fist-sized structure in the posterior fossa of the skull which controls much of the motor activity and co-ordination. The midbrain is a cylindrical body from which the stalks of the two cerebral hemispheres arise. It includes the reticular formation, an intermingled arrangement of grey and white matter, acting as a kind of central switchboard for the whole brain.

The **limbic system,** consisting of such structures as the amygdala, part of the thalamus, hypothalamus and hippocampus, regulates emotions. The **cerebrum** is the largest and uppermost part of the brain with areas that control thought and consciousness, i.e. the quality that enables man to remember his past, understand the present and anticipate his future. A longitudinal fissure divides the cerebrum into two hemispheres, each containing a lateral ventricle. The internal tissue is white, the outer, convoluted cortex is grey. The two hemispheres, anatomically subdivided into the frontal, parietal, temporal and occipital lobes, communicate with each other through a bundle of nerve fibres — the corpus callosurn. They are cross-wired, each controlling the opposite side of the body, but one of them — the left in most people — is dominant.

The supporting structures of the brain include the **meninges** (the dura mater, the arachnoid mater and the pia mater — mostly arranged in folds) and the **cerebrospinal fluid** which fills the subarachnoid space in the brain as well as in the spine.

A living **nerve** is electrically charged. If the potential (about 80 millivolts) is lost, the nerve is said to be depolarized. A nerve impulse then is a wave of depolarization started by various kinds of stimulus (electric current, heat, pressure or certain chemicals). When the impulse reaches the end of the fibre it has to be passed to the next nerve cell or to the effector organ involved. Neurons transmit information by secreting chemicals (acetylcholine, noradrenaline, serotonin, possibly gamma-aminobutyric acid, too) that cross the synaptic cleft and bind to receptor sites on neighbouring nerve cells. A nerve cell returns to its resting state almost immediately after transmitting the impulse. The electric charge is restored and ready to be fired again. It has been found that some of the brain's chemical reactions take as little as one-millionth of a second. As many as 100,000 neurons may be involved in transmitting the information that results in as simple an action as stepping back to avoid being struck by an oncoming car. The entire process occurs in less than a second.

The existence and changes of small electric currents in the brain enabled the development of **electroencephalography** (EEG), now an indispensable element of neurological investigation, particularly in cases of epilepsy. By using several leads from different parts of the scalp or even implanted microelectrodes, the potentials can be picked up and electrical patterns from different regions of the brain can be viewed, recorded and studied. In reading an EEG recording we talk of waves and spikes, their frequency and amplitude, neuronal discharges, evoked potentials, spike-wave complexes, projection and propagation over conducting pathways, after discharges etc.

A neurological examination includes taking the patient's own history, his family history (some disorders of the CNS are known to run in families) and the physical examination proper, using the classical

methods of inspection, percussion, palpation and auscultation. The neurologist must find out about the patient's mood or temperament — whether it is extrovert, introvert, maniacal, melancholic or paranoic, restless, quiet, depressed, unstable, hypersensitive, hallucinatory etc.

The cranial nerves are checked one by one, making sure in particular that the patient's optic, oculomotor, trochlear and abducent nerves are working properly; paying special attention to his pupils to see whether they are pin-point or dilated, equal, round, central and regular; testing his field of vision, accommodation and convergence, and visual acuity. The corneal reflex is evoked by touching the corneo-scleral junction gently with a fine wisp of cotton wool. The gag reflex is tested by asking the patient to say «ah» and by touching the nasopharynx with a swab to make sure about the state of the glossopharyngeal and vagus nerves. In the course of this part of the examination the patient may be asked to shut his eyes, to raise his eyebrows, to show his teeth, to clench his teeth, to blow out his cheeks, to put out his tongue, to shrug his shoulders, to turn his head, to nod his head, to smell certain volatile substances etc.

In **examining the motor system,** the neurologist will be interested in the patient's gait (reeling, drunken, ataxic gait in cerebellar lesions, scissors gait in cerebral palsy, high-steppage gait in foot-drop, wooden-block gait etc.), in his power of coordination (using the nose-finger test), in the quality of his movements (whether they are normal, choreiform, athetoid, jerky etc.), in the state of his muscles to see whether they are wasted (atrophied) or hypertrophied, in his motor power (testing e.g. the power of his grasp) and — if necessary — in the patient's EMG (electromyogram).

In **examining the sensory** system, the neurologist may test the patient for tactile sensibility, localization and discrimination, for pain, thermal, deep or vibration sensibility, paying special attention to the quality of the patient's deep and superficial reflexes. The knee-jerk (brisk, sluggish, pendular or absent), the ankle jerk, the jaw, biceps and abdominal reflexes are tested for possible irregularities and signs which may be diagnostic. Thus, indicative of meningitis are Kernig's sign (inability to straighten the leg at the knee joint when the thigh is flexed at right angles to the trunk) and Brudzinski's sign (involuntary flexion of the knees and hips on raising one's head from the pillow). Babinski's reflex, dorsiflexion of the great toe on stroking the sole of the foot (instead of the normal plantar flexion) is indicative of disease or injury to upper motor neurons.

Most reflexes are inborn, involuntary responses to a stimulus. **Conditioned reflexes,** first demonstrated by the great Russian physiologist, Nobel Prize winner, I.P.Pavlov, are either modifications of nborn reflexes or completely new automatic responses to a recognized stimulus.

6. Answer the following questions

1. What is the role of the nervous system in the body? 2. How is the nervous system divided? 3. How is the neuron defined? 4. Give an anatomical description of the nerve cell. 5. What is the difference between afferent and efferent nerves? 6. Can you give the names of the twelve pairs of cranial nerves? 7. What is a nerve root? 8. What is the difference between an impulse and a stimulus? 9. What is the difference between conscious activity and reflex action? 10. How would you define the brain in terms of neurology? 11. What parts of the brain does the brain stem comprise? 12. What is the physiological function of the cerebellum? 13. What makes the midbrain an important part of the CNS? 14. Which parts of the brain constitute the limbic system? 15. What is the role of the cerebrum? 16. How are the two hemispheres of the telencephalon divided anatomically? 17. What is the corpus callosum? 18. What is the difference between grey and white matter of the cerebrum and spinal cord? 19. Which are the supporting tissues of the brain? 20. What is the role of the cerebrospinal fluid? 21. What is the electric charge of a living nerve? 22. Explain the meaning of depolarization in neurology. 23. How are nerve impulses passed from one nerve to another? 24. What kinds of stimuli can you name? 25. What is the synaptic cleft? 26. What happens after depolarization? 27. What practical use is made of the existence of electric potentials in the CNS? 28. What special terms are used in electroencephalography? 29. Give a description of a spike-wave complex. 30. What is the difference between frequency and amplitude? 31. What is a neurologist interested in as to the patient's temperament? 32. What is the point of testing the corneal reflex? 33. What information is obtained by testing the patient's gag reflex? 34. Give a few examples of the patient's gait suggesting neurological disorder. 35. How does cerebral palsy affect the spastic's gait? 36. What are athetoid movements? 37. Give a description of the nose-finger test and its point. 38. What is the appearance of someone whose muscles are atrophied? 39. How is the sensory system examined? 40. What is the difference between deep and tactile sensibility? 41. When do we speak of the knee jerk being pendular? 42. What is the Kernig's sign indicative of? 43. What is the difference between inborn and conditioned reflexes? 44. What was I. P. Pavlov awarded the Nobel Prize for? 45. Where is the seat of higher nervous activity?

III. Word study

7. Find synonyms from the list below

Comprise, govern, enclose, transmit, act, receive, involve, arise, enable, anticipate, support, start, find, investigate, evoke, shut, check, indicate, modify.

Surround, show, include, initiate, analyze, close, operate, transfer, control, emerge, maintain, examine, stimulate, permit, convey, demonstrate, change, entail, get, allow, begin, induce, test, study, work, embed, alter, obtain, foresee, determine, regulate, implicate, forestall, originate, establish.

8. Form adjectives, using suffixes: -al, -ar, -ic

Neuron, spine, face, vision, thalamus, atrophy, dendrite, cerebellum, maniac, cornea, vagus, limb, periphery, ganglion, cranium, neurite.

9. Make up English-Russian pairs of words

a) Process, bundle, thought, sheath, root, sensation, charge, mood, jerk, discharge, propagation, origin, lead, course, projection.

Распространение, заряд, отросток, настроение, выступ, рефлекс, начало, оболочка, ход, разряд, мышление, пучок, корешок, отвод, ощущение.

b) Operate, arrange, enclose, evoke, receive, branch, bind, convey, record, continue, arise, fire, reach.

Продолжаться, получать, вызывать, заключать, связывать, ветвиться, располагать, передавать, записывать, выполнять, разряжать, возникать, достигать.

10. Fill in the blanks with the proper words from the list below

1. The ... is the center of the nervous system in all vertebrate, and most invertebrate, animals. 2. In anatomy, a ... is a biological tissue mass, most commonly a mass of nerve cell bodies. 3. A ... is an electrically excitable cell that processes and transmits information by electrochemical signaling, via connections with other cells called synapses. 4. ... are the branched projection of a neuron that act to conduct the electrochemical stimulation received from other neural cells to the cell body, or soma, of the neuron from which the dendrites project. 5. In vertebrates, a ... is an area where nerves branch and rejoin. 6. Functions of the ... include protection of the brain, fixing the distance between the eyes to allow stereoscopic vision, and fixing the position of the ears to help the brain use auditory cues to judge direction and distance of sounds. 7. The part of the brainstem that links the medulla oblongata and the thalamus is called .... 8. In mammals, ... serves primarily to connect the forebrain with the hindbrain. 9. The ... plays an important role in the integration of sensory perception and motor control. 10. ... performs a primary role in the processing and memory of emotional reactions, the amygdalae are considered part of the limbic system. 11. All sensory pathways (from eyes, ears, skin, etc.), except some of those concerned with the sense of smell, pass through the ... on their way to the cerebral cortex. 12. One of the most important functions of the ... is to link the nervous system to the endocrine system via the pituitary gland (hypophysis). 13. The ... is located inside the

medial temporal lobe, beneath the cortical surface. 14. The ... or telencephalon, together with the diencephalon, constitute the forebrain. 15. The ... are filled with cerebrospinal fluid (CSF) which bathes and cushions the brain and spinal cord within their bony confines. 16. The great longitudinal ... is the deep groove which separates the two hemispheres of the vertebrate brain. 17. Each hemisphere of the cerebral cortex is divided into four ... by various sulci and gyri. 18. The ... is the anatomical area bordered by the face anteriorly and the neck to the sides and posteriorly.

Amygdala, hippocampus, fissure, neuron, thalamus, lobes, brain, cerebellum, dendrites, hypothalamus, ganglion, ventricles, plexus, midbrain, scalp, skull, cerebrum, pons.

11. Fill in the blanks with proper prepositions from the list below

1. The nervous system is divided ... the somatic nervous system and the autonomic nervous system (ANS). 2. Autonomic nervous system is not subjected ... voluntary control. 3. The preganglionic outflow of the parasympathetic nervous system arises ... the cell bodies of the motor nuclei of the cranial nerves. 4. The chemical transmitter ... both pre- and postganglionic synapses in the parasympathetic system is Acetylcholine (Ach). 5. ... rapid scientific progress, much about how brains work remains a mystery. 6. ... invertebrates (e.g., insects, molluscs, worms, etc.) the components of the brain differ so greatly from the vertebrate pattern that it is hard to make meaningful comparisons except on the basis of genetics. 7. The cells in the blood vessel walls are joined tightly, forming the blood-brain barrier which protects the brain from toxins that might enter ... the blood. 8. The brain is composed ... two broad classes of cells: neurons and glia. 9. Even in the human brain, sensory processes go well ... the classical five senses of sight, sound, taste, touch, and smell. 10. Motor systems are areas of the brain that are more or less directly involved ... producing body movements, that is, in activating muscles. 11. Understanding the relationship ... the brain and the mind is a challenging problem both philosophically and scientifically. 12. Even ... physicians and philosophers had accepted the primacy of the brain the idea of the heart as seat of intelligence continued to survive in popular idioms, such as «learning something by heart». 13. Through most of history many philosophers found it inconceivable that cognition could be implemented ... a physical substance such as brain tissue (that is neurons and synapses). 14. The energy consumption of the brain does not vary greatly ... time, but active regions of the cortex consume somewhat more energy than inactive regions: this fact forms the basis for the functional brain imaging methods PET and MRI. 15. The oldest method of studying the brain is

anatomical, and ... the middle of the 20th century, much of the progress in neuroscience came from the development of better stains and better microscopes. 16. In humans, the effects of strokes and other types of brain damage have been a key source of information ... brain function. 17. Galen did a masterful job of tracing out the anatomical relationships ... brain, nerves, and muscles, demonstrating that all muscles in the body are connected to the brain via a branching network of nerves. 18. Simple reflexes are completed entirely ... the organ concerned, whereas more complex reflexes are controlled by the higher autonomic centres in the CNS, principally the hypothalamus.

For, after, until, from, within, beyond, into, through, over, among, to, in, at, about, between, despite, by, of.

IV. Learn to speak professional medical English

12. Complete the following sentences

1. The cerebrum is ….
2. In cranial nerves examination special attention is paid to ….
3. The cranial nerves are ….
4. Conditional reflexes are ….
5. The nervous system consists of ….
6. Electroencephalography is based on ….
7. The supporting structure of the brain includes ….
8. The neuron consists of ….
9. In examining the motor system the neurologist is interested in ….
10. The two hemispheres are divided into ….
11. The task of the nerve fibres are ….
12. In examining the sensory system the neurologist tests ….
13. The brain stem is formed by ….
14. Neurons transmit information by ….
15. Unlike efferent afferent nerves ….
16. A neurological examination includes ….
17. The limbic system consists of ….
18. In checking cranial nerves it is necessary to make sure that ….

13. Open the site www.nda.ox.ac.uk/wfsa/html/u05/u05_010.htm **and make up a summary of the text Sympathetic nervous system (page 2)**

V. Learn to translate scientific medical articles

14. Make a written translation of the below text

Neurology and Psychiatry

Although many mental illnesses are believed to be neurological disorders affecting the central nervous system, traditionally they are

classified separately, and treated by psychiatrists. In a 2002 review article in the American Journal of Psychiatry, Professor Joseph B. Martin, Dean of Harvard Medical School and a neurologist by training, wrote that *the separation of the two categories is arbitrary, often influenced by beliefs rather than proven scientific observations. And the fact that the brain and mind are one makes the separation artificial anyway.*

There are strong indications that neurochemical mechanisms play an important role in the development of, for instance, bipolar disorder and schizophrenia. Also, «neurological» diseases often have «psychiatric» manifestations, such as post-stroke depression, depression and dementia associated with Parkinson's disease, mood and cognitive dysfunctions in Alzheimer's disease and Huntington disease, to name a few. Hence, there is no sharp distinction between neurology and psychiatry on a biological basis — this distinction has mainly practical reasoning and strong historical roots (such as the dominance of Freud's psychoanalytic theory in the first three quarters of the 20th century — which has since then been largely replaced by the focus on neurosciences — aided by the tremendous advances in genetics and neuroimaging).

LESSON 15

NERVOUS AND MENTAL DISORDERS

I. Learn to pronounce, write and read English words and medical terms

1. Write in letters

[**e**pilepsy], [kə**riə**], [nj**u**ərəs**i**filis], [p**əu**liəmaiəl**ai**tis], [njuər**əu**sis], [saik**əu**sis], [hist**iə**riə], [skizəufr**i**niə], [p**ɔ:**lzi], [gl**ai**ə], [pət**i:**m**a:**l], [t**ei**bi:z dɔ:s**ei**lis], [dim**e**nʃə pr**i:**kɔks], [gr**a:**ŋmæl], [dipl**əu**piə].

2. Write the following words in transcription

Parkinsonism, tetanus, hydrophobia, delusion, hallucination, athetosis, rhesus, aura, haematoma, dementia, despondent, sever, psychiatrist, insomnia, neurosis.

3. Read the following terms

a) Anxiety, dopamine, incompatibility, irritability, hereditary, stereotactic, myelin, numbness, schizophrenic, psychopathic.

b) Little's disease, Jacksonian disease, Sydenham's disease, Huntington's disease, Parkinson's disease, Romberg's sign, Argyll Robertson sign, paralysis agitans, multiple sclerosis, manic-depressive psychosis.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Both groups of diseases result from disorders in the central nervous system, the difference being that no apparent physical cause can be traced in most cases of mental illness.

Parkinsonism (paralysis agitans, shaking palsy) — a generation of the basal ganglia resulting in the complete or partial loss of motor function. Muscles become still and sluggish, there is a mask-like expression, shuffling gait, tremor of the limbs, and pin-rolling movements of the fingers. The worst cases used to be treated by stereotactic surgery, the severing of certain nerve pathways deep in the cerebrum. Ever since it became known that parkinsonism is caused by a deficiency of dopamine, one of the brain's most important chemical transmitters, the administration of L-dopa has been preferred to relieve the palsy.

Little's disease (spastic paralysis, cerebral palsy) — a congenital spastic paralysis due to failure of groups of nerve cells in the cerebral cortex. It is marked by lack of co-ordination if the cerebellum is affected, or by athetosis if the basal ganglia are involved. Paralysis is often confined to legs, giving rise to «scissor leg» deformity. Causes include severe jaundice due to rhesus incompatibility, physical perinatal injury, temporary shortage of oxygen immediately after delivery, and lack of glucose as a result of immaturity at birth. Mental development is often, though not always retarded.

Chorea — the childhood form (Sydenham's chorea, chorea minor) is usually associated with rheumatic fever and characterized by uncontrolled jerky movements, grimacing, twitching of the hands or merely by restlessness, irritability and nervousness. The knee jerks are pendular or sustained. The adult form (Huntington's chorea), a rare hereditary disease, is part of a cerebral degenerative process. In addition to the jerky movements there is progressive mental disorder.

Epilepsy — a recurrent paroxysmal disorder of cerebral function with various degrees of loss of consciousness and localized or generalized convulsions. In terms of electroencephalography, epilepsy is known to be caused by excessive electrical discharges in the brain. An attack of grand mal may be preceded by epileptic aura or a cry, a croak or shout heard from an epileptic falling unconscious. Epilepsy is due either to cerebral tumour or haematoma, trauma or vascular abnormality (symptomatic or focal epilepsy) or to idiopathic causes. In terms of the clinical picture, we distinguish: 1) **grand mal** — the major form with loss of consciousness, tonic-clonic muscular spasms, foaming at the mouth and — in some cases — after-seizure fits of uncontrollable rage; 2) **petit mal** — a fleeting clouding of consciousness with no convulsions, a brief staring spell characterized by spike-wave complexes in the EEG; in **focal**

epilepsy (Jacksonian e.) the aura is the most prominent part of the attack, starting with localized twitching that rapidly spreads to more and more muscles and, sometimes, culminating in a grand mal attack. Treatment in focal epilepsies is surgical, in the rest by drugs (phenobarbitone, phenytoin, primidone, dilantin etc.) or, of late, by means of electronic pacemakers implanted in the cerebellum.

Multiple sclerosis (disseminated sclerosis) — a chronic and variably progressive disease of the CNS, most commonly first affecting young adults. Scattered areas of the brain, spinal cord and optic nerves degenerate, while nerve fibres lose their myelin sheath and their ability to conduct impulses. Glia scars resemble those after a virus infection. Symptoms range from diplopia to weakness and unsteadiness of a limb; there may also be disturbances in micturition.

Tabes dorsalis (locomotor ataxia) and **general paralysis of the insane** (GPI) are both varieties of **neurosyphilis** and, therefore, belong among CNS diseases resulting from microbiological infection. Typical symptoms of **tabes dorsalis** include lightning pains, diplopia, numbness and tingling in the legs, difficulty in walking and unsteadiness. The patient is atactic (ataxic) with positive Romberg's sign (inability to stand erect, without swaying, when the eyes are closed and the feet held together), the pupils showing the Argyll Robertson sign, the large joints swelling painlessly. While in tabetics the posterior columns of the spinal cord and sensory nerve roots are affected, in **general paralysis of the insane** the brain itself is damaged by syphilitic infection. The onset may be slow or rapid with loss of sensation and memory, headache and insomnia as early signs; delusions, epileptiform convulsions, a complete disintegration of the personality and eventually dementia follow in due course.

Poliomyelitis (infantile paralysis) — attacking the motor neurons of the anterior horns in the brain stem and spinal cord and resulting in loss of muscular power and flaccidity —

hydrophobia (rabies) — caused by a neurotropic virus which attacks the spinal cord and results in violent and fatal spasms of the muscles, particularly the throat muscles — and

tetanus — caused by the toxin of anaerobic *Clostridium tetani* which blocks the automatic impulses that restrain motor nerve cells — are all examples of infectious diseases affecting the central nervous system.

Mental illnesses fall roughly in three groups: **neuroses, psychoses,** and **personality disorders.**

While it is doubtful if the third group should be counted as a mental illness in its own right (with the possible exceptions of psychopathic personalities — drug addicts, alcoholics, perverts, habitual criminals), the essential difference between the first two is that neurosis does not affect ordinary reasoning whereas psychosis does.

Neurosis is defined as a functional disorder consisting of symptoms caused by mental disorder and arising as a result of stresses and anxieties in the patient's environment. The four commonest are:

anxiety state — a conditioned reflex involving irrational response to other than immediate physical danger;

depression — a prolonged change of mood or temperament probably due to noradrenaline deficiency, and subdivided into endogenous depression and

reactive depression. Particularly severe cases are often difficult to be told from the depressive component of manic-depressive psychosis. Treatment is either by antidepressant drugs, preventing the destruction of noradrenaline, or by ECT (electroconvulsive therapy);

hysteria — characterized by a number of neurotic symptoms, including partial paralysis, tics, and disorders of sensation (e.g. absence of response to a pinprick);

obsessional neurosis — involves either constant preoccupation with recurring thoughts or compulsive actions, usually associated with feelings of guilt.

Psychosomatic diseases are those in which mental disturbance (usually of the neurotic type) produces actual physical changes in the body (digestive disorders, duodenal ulcers, migraine, high blood pressure, certain cardiovascular conditions etc.).

Strictly speaking, there are only two types of real **functional psychosis,** as opposed to organic psychoses occurring in epilepsy, GPI, delirious states in fevers, alcoholism etc.

Affective psychosis (manic-depressive syndrome) makes the patient either endlessly busy, talkative and in pursuit of a number of pointless tasks, or else profoundly melancholic and despondent, in extreme cases to the point of listless immobility and even attempted suicide. The phases of excitement and depression alternate, both leaving the patient completely at the mercy of his confused emotions. Relapses are common and the condition shows a tendency to run in families. The personality does not deteriorate. Treatment includes ECT, tranquilizers or antidepressant drugs, whatever the case may be. Schizophrenia was originally referred to as dementia praecox, but some psychiatrists prefer the term «schizophrenic reaction» to indicate the involvement of a number of mental illnesses with such symptoms as personality derangement, delusions, hallucinations etc. The onset, commonly in early adult life, is either sudden or insidious, the causes largely unknown, though several chemical abnormalities in the brain have been identified (an excess or deficiency of adrenaline, serotonin etc.). Bleuler, who coined the term schizophrenia, also described the four main types: in the simple form the patient is merely withdrawn, solitary and inactive; in the catatonic form, stages of excitement alternate with episodes of stupor

and muscular rigidity; in the paranoid form, the patient is hallucinated, deluded and troubled by fears of persecution; in the hebephrenic form there is failure of logical thought, silly and purposeless behaviour and mannerism. Therapy by chlorpromazine and shock treatment is now largely preferred to keeping the patients confined to mental hospitals.

5. Answer the following questions

1. What is the difference between nervous diseases and mental illness? 2. What is the aetiology of Parkinson's disease? 3. Give a list of the characteristic signs of shaking palsy. 4. When is stereotactic surgery resorted to in the treatment of paralysis agitans? 5. Can parkinsonism be classified as a deficiency disorder and if so why? 6. Which nervous disorder is the scissor gait characteristic of? 7. What are the possible causes of cerebral palsy? 8. How and according to what would you diagnose chorea minor? 9. What is the difference between the childhood and adults forms of chorea? 10. How is epilepsy defined? 11. What are the distinguishing signs of grand mal and petit mal? 12. Describe a typical seizure in Jacksonian epilepsy. 13. How would you treat a case of focal epilepsy? 14. What is the clinical picture of disseminated sclerosis? 15. Which population groups are susceptible to multiple sclerosis? 16. What is it that tabes dorsalis and general paralysis of the insane have in common? 17. What is the difference between the two? 18. What does the term «positive Romberg's sign» imply? 19. Why is poliomyelitis so dangerous as to call for strict prophylactic precautions? 20. In what sense is hydrophobia considered a serious disease of the central nervous system? 21. What is the clinical picture of an untreated case of tetanus? 22. How is tetanic infection transmitted? 23. How are mental illnesses usually classified? 24. What is the essential difference between a neurosis and a psychosis? 25. How do you tell anxiety state from normal worry? 26. What seems to lie at the root of depression? 27. What is the principle of electroconvulsive therapy? 28. How can you tell hysteria from obsessional neurosis? 29. Why are some digestive disorders, migraine, hypertension etc. described as psychosomatic diseases? 30. What is the difference between functional and organic psychoses? 31. How do you recognize a mentally affected patient suffering from the manic-depressive syndrome? 32. What treatment would you suggest for a victim of affective psychosis? 33. What are the characteristic symptoms of schizophrenia? 34. Which are the four different forms of schizophrenic reaction? 35. How does a hebephrenic behave?

III. Word study

6. Form nouns, using suffixes: -ness or -ity

Possible, anxious, immature, numb, able, unsteady, personal, com-

plete, excessive, weak, immobile, conscious, abnormal, nervous, flaccid, incompatible, restless, sensitive.

7. Make up English-Russian pairs of words equivalent in meaning

Jerky, apparent, prominent, essential, insidious, still, excessive, fleeting, irrational, sluggish, actual, focal, recurrent.

Мимолетный, фактический, повторяющийся, вялый, явный, заметный, очаговый, основной, резкий, пассивный, коварный, избыточный, нелогичный.

8. Match symptoms and diseases

1. Weakness, diminished reflexes, paresthesias including morbid cutaneous sensations having no objective cause, shooting and burning pains, pricking sensations, and formication (a sensation like that produced by small insects crawling over skin), and hypoesthesias (abnormally diminished cutaneous, especially tactile, sensory modalities), progressive degeneration of the joints, loss of coordination, episodes of intense pain and disturbed sensation, personality changes, dementia, deafness, visual impairment, and impaired response to light.

2. Disruption of motor skills, with symptoms such as spasticity, paralysis, or seizures.

3. Radical changes in personality, impaired functioning, and a distorted or non-existent sense of objective reality.

4. Recurrent seizures that may include repetitive muscle jerking called convulsions.

5. Tremor, hypokinesia, rigidity, and postural instability.

6. Negative sense of inadequacy and a visual lack of activity, feelings of sadness, despair, low self-esteem, low self-reproach and discouragement.

7. Emotional excitability and sometimes amnesia or a physical deficit, such as paralysis, or a sensory deficit, without an organic cause.

8. Staring for seconds or even tens of seconds into space with or without jerking or twitching movements of the eye muscles, sometimes purposeless movement from one location to another.

9. Fever, fatigue, headache, vomiting, stiffness in the neck, and pain in the limbs in some cases paralysis, which is often permanent.

10. Anxiety, sadness or depression, anger, irritability, mental confusion, low sense of self-worth, etc., behavioral symptoms such as phobic avoidance, vigilance, impulsive and compulsive acts, lethargy, etc., cognitive problems such as unpleasant or disturbing thoughts, repetition of thoughts and obsession, habitual fantasizing, negativity and cynicism, etc. Interpersonally, neurosis involves dependency, aggressiveness, perfectionism, schizoid isolation, socio-culturally inappropriate behaviors.

11. Loss of consciousness, sudden rhythmic muscular contraction, alternately flexing and relaxing, foaming at the mouth.

12. Changes in sensation muscle weakness, muscle spasms, difficulty in moving; difficulties with coordination and balance; problems in speech or swallowing, visual problems, fatigue, acute or chronic pain.

13. Rapid, uncoordinated jerking movements affecting primarily the face, feet and hands.

Hysteria, parkinsonism, multiple sclerosis, epilepsy, petit mal, depression, Little's disease, grand mal, neurosis, tabes dorsalis, psychosis, poliomyelitis, Sydenham's disease.

9. Fill in the blanks with the proper words from the list below

a) 1. There is no standard ... of treatment for chorea. 2. The basic ... of choreic movements is overactivity of a neurotransmitter called dopamine in a set of structures deep within the brain known as the basal ganglia. 3. A ... of tabes dorsalis is a result of slow degeneration of the nerve cells and nerve fibers that carry sensory information to the brain. 4. The prognosis of chorea depends on its .... 5. Depression may be a precursor to substance use disorder in some youngsters, and substance abuse might complicate the subsequent ... of depression. 6. Epilepsy is usually controlled, but cannot be cured with medication, although surgery may be considered in a difficult .... 7. Seizures can ... involuntary changes in body movement or function, sensation, awareness, or behavior. 8. Blows to the head, fever (febrile seizure), reactions to medications, tumours some times ... single epileptic seizures. 9. In the first ... the chorea had lasted a month and was increasing in intensity.

Case, cause, course.

b) 1. He and thousands of other people with spinal cord injuries now await new treatments that will at least lessen the ... of their paralysis. 2. The transplanted PNS tissue may enhance the regeneration of brain or spinal cord axons for ... reasons. 3. The detailed information about the nervous pathways is provided since injuries and diseases may damage or ... the pathways resulting in impaired or absent erogenous zones. 4. The extent of damage and recovery depends upon the ... and location of the injury. 5. Glossopharyngeal neuralgia consists of ... recurring attacks of pain in the back of the throat, the area near the tonsils, the back of the tongue, and part of the ear. 6. Trauma happens when limbs or vertebrae become fractured and the nerves close to them are crushed, pinched or even .... 7. Qualifying the ... of the pain is essential in diagnosis and in evaluating the effectiveness of the treatment. 8. Loss of intra-epidermal nerve fibers (IENF) has been observed in ... cases of neuropathic pain. 9. ... nerves may form a network under the nipples and areola, but the nerves that form this network vary somewhat from individual to individual. 10. The researchers measured the recovery process in ... ways — by observing the animals' ability to move their hind

limbs and support some of their body weight, and by tracing the regrowth of the severed axons in spinal cord tissue samples obtained from the rats. 11. Nerve cells in the spinal cord and brain can't be repaired now if they are ... or damaged, but two ways to get them to grow again are being proposed by separate groups of researchers. 12. Cheng added to the graft a mixture of biological «glue» that contained fibrin (a blood-clotting protein) and a chemical that enhances the outgrowth of fibers from the ... spinal cord axons. 13. In the atypical form of trigeminal neuralgia, the pain presents itself as ... constant aching along the nerve. 14. A neuron's response to trauma can often be determined by the ... of the injury, classified by Seddon's classification. 15. Although the damage to Reeve's spinal cord was ..., he has regained some of the function of his spinal nerves just below the site of injury. 16. The brain is not involved in this response, as it must occur very quickly to protect our body from ... injury.

Sever, severe, several, severity, sever/severed.

10. Fill in the blanks with the proper words from the list below

1. Little's disease is ... by the impairment of normal physiological function affecting all or part of an organism. 2. A generalized tonic-clonic (grand-mal) seizure may be ... by a loud cry before the person having the seizure loses consciousness and falls to the ground. 3. It is necessary to ... between simple partial seizures and complex partial seizures. 4. The results of the treatment ... depending on the symptoms and the age of the patient. 5. Many patients with this pathology should be ... in their activities. 6. Many children with poliomyelitis were ... to bed for the rest of their life. 7. The heredity was ... up to the 3-d generation. 8. Brain ... signals with the help of its most important transmitter dopamine. 9. Vaccine for poliomyelitis is ... subcutaneously.

Distinguish, restrain, trace, precede, administer, transmit, mark, alternate, confine.

IV. Learn to speak professional medical English

11. Complete the sentences

1. Neurosis is ….
2. Little's disease is characterized by ….
3. Epilepsy is ….
4. The symptoms of Parkinsonism include ….
5. Multiple sclerosis is ….
6. The childhood form of chorea is characterized by ….
7. The typical symptoms of tabes dorsalis are ….
8. Depression is ….
9. Hysteria is characterized by ….
10. Affective psychosis symptoms are ….

12. Read the text and speak about the Intoxication Psychosis

Интоксикационные психозы

При токсическом воздействии на головной мозг различных факторов (промышленные яды, лекарственные препараты и др.) часто возникают психические нарушения. Для острой интоксикации характерно развитие помрачения сознания, чаще в форме делирия, иногда переходящего в сопор и кому. Сопровождается рядом соматических и неврологических расстройств. При длительной хронической интоксикации развиваются депрессивно-параноидные, кататонические синдромы, иногда амнестический (корсаковский) синдром. Впоследствии могут наблюдаться снижение интеллекта, нарушение памяти, нарастающее слабоумие.

Лечение. Симптоматическое и дезинтоксикационное. Необходима госпитализация больных, показан постельный режим.

13. Speak about one of the nervous or mental disorders in a form of report or presentation

V. Learn to translate medical articles

14. Make a written translation of the abstract below

Migraine

Migraine is a very painful type of headache. People who get migraines often describe the pain as pulsing or throbbing in one area of the head. During migraines, people are very sensitive to light and sound. They may also become nauseated and vomit.

Migraine is three times more common in women than in men. Some people can tell when they are about to have a migraine because they see flashing lights or zigzag lines or they temporarily lose their vision.

Many things can trigger a migraine. These include:

- anxiety;
- stress;
- lack of food or sleep;
- exposure to light;
- hormonal changes (in women).

Doctors used to believe migraines were linked to the opening and narrowing of blood vessels in the head. Now they believe the cause is related to genes that control the activity of some brain cells. Medicines can help prevent migraine attacks or help relieve symptoms of attacks when they happen. For many people, treatments to relieve stress can also help.

SURGERY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[prəs**i:**dʒə], [ænisθ**i:**ziə], [kæθitəraiz], [n**ei**sɔugæstrik], [b**au**əl], [**e**nimə], [**æ**trəpin], [dih**i**sns], [gængri:n], [imp**e**əment], [**i**ndʒəri], [liθ**ɔ**təmi], [læmin**e**ktəmi], [**ɔ:**kwəd], [θairəid**e**ktəmi], [kreini**ɔ**təmi], [m**ɔ:**fi:n], [ʌpwədz].

2. Write the following words in transcription

Anaesthetic, anaesthetist, varicose, rupture, forceps, subcutaneous, congestion, incision, atraumatic, insertion, precaution, advantage, remove.

3. Read the following English words and terms

Debridement, closure, detachment, adhesive, intracranial, sterile, convenient, analgesic, ligament, copious, mandatory, downwards, suture, wound, subcutaneous.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Before a surgical procedure to be carried out under general anaesthesia, the patient should be fasted overnight. The operation site is shaved and the area washed with an antibacterial preparation. The patient may require to be catheterised, have a nasogastric tube passed, or intravenous infusion introduced. The bowel preparation is either mechanical removal of faeces by enemas or the use of antibacterial drugs.

Blood should be **cross-matched** prior to all but minor operations; it should be stored at 4 °C to 6 °C and should be removed from the refrigerator immediately before use.

Pre-medication should be arranged in consultation with the anaesthetist. For most operations in adults under general **anaesthesia** atropine is given intramuscularly 30—60 minutes prior to the anaesthetic. A sedative drug is given at the same time. For procedures under local anaesthesia or for endoscopic examinations sedation by intramuscular or slow intravenous injections may be used to induce both sleep and detachment of the patient.

A great deal of the surgeon's work is concerned with the **care of wounds:** the insertion of stitches, the removal of stitches, wound infections and wound dehiscences. Most important of all, however, at least to the patient, is the problem of wound pain.

Cleaning and debridement of traumatic wounds are mandatory prior to closure. Local anaesthesia is performed. Cleaning is accomplished by washing the wound edges and deeper structures with saline or a mild antiseptic solution. All foreign bodies and dirt should be removed by scrubbing if necessary. Having cleaned the wound, the edges and deeper structures are examined carefully. Except in the case of clean incisions the wound edges should be trimmed. Areas suspected of being non-viable, by virtue of a bluish colour and diminished capillary return on pressure, should be excised until bleeding occurs, along with damaged muscle. Failure to remove such **necrotic tissue** may lead to poor wound healing or even to gas gangrene. As a prophylactic measure patients with traumatic wounds should be given the first injection of a course of tetanus toxoid together with a long-acting penicillin.

Atraumatic needles, that are needles with an attached stitch, are generally preferred. For skin sutures silk or linen is used. For facial wounds a finer material is preferred. Some needles are large enough to be used by hand but the smaller ones will require a needle holder. Various types of needle holders are available, most have jaws held by a spring clip.

For most wounds the **stitches** should be inserted approximately 0.5 to 1 cm apart. Equal bits of the skin should be taken so that the edges lie correctly together and the stitches are tied. For most facial wounds smaller bits should be taken and stitches inserted at more frequent intervals. **Closure of wounds** by adhesive tapes is convenient in some cases but certain precautions should be taken before use. If the wound is deep or there is excess fat, then subcutaneous stitches of an absorbable material such as plain catgut should be inserted first.

Operations in different parts of the body require different positions.

In the **spine position** the patient lies flat on his back and there is neither impairment of chest expansion nor danger of postural hypotension, little danger of ligamental strain or nerve injury.

In the Trendelenburg position the patient is arranged on the table with feet upwards and head downwards. In the **lithotomy position** the lower section of the table is removed and the legs supported. In the **prone position** firm supports must be placed beneath the pectoral and pelvic girdles to allow for thoracic and abdominal expansion; it is a good test to make sure that a hand can be inserted easily between the table and the abdomen. This position has proved to be of value in thoracic surgery if copious secretions are present. This is particularly true in the case of small children in whom the use of bronchial blockers or double-lumen tubes is not practicable.

In neurosurgery the prone position and the «Mohammedan praying» position with the knees drawn up under the abdomen are both used for

laminectomy. The **praying position** is particularly awkward for the anaesthetist.

Semi-prone position is useful in varicose vein operations.

Lateral position is used particularly for renal and thoracic operations. The modified lateral or «Brook» position, in which the shoulders of the patient are tilted at an angle of 60 degrees, is very satisfactory for the submammary approach to the valve.

For any operation on the head and neck including those of the eyes and ears the head should be slightly elevated in order to reduce congestion and haemorrhage. In thyroidectomy the head must be extended and elevated during the exposure and removal of the gland but must be flexed for closure.

The **sitting position** is probably the most frequently used for craniotomy, the advantages being ease of access, low intracranial pressure, reduced haemorrhage and unimpeded respiration; the disadvantages are the danger of cerebral damage by postural ischaemia and the possibility of air embolus.

Post-operative **wound pain** is usually present for the first few days after operation. It may be controlled by morphine or other analgesics given subcutaneously or, in smaller doses and more frequently, intravenously; the dosage and drug used will depend on the weight and the age of the patient.

If continuous wound pain persists then it is likely that there is some pathological process, such as a wound infection, present. The patient's temperature is elevated, the wound is inflamed, swollen and tender, and there may be a discharge of pus. If the pus is draining there is usually no need to give antibiotics as the infection will settle within a few days. In a small proportion of post-operative patients the wound ruptures exposing the underlying structures. If the dehiscence becomes complete, immediate resuture should be performed.

To remove stitches, the wound and surrounding skin is first cleaned with antiseptic solution. Using sterile forceps and scissors, or a stitch cutter, the suture is first elevated by the forceps and the stitch cut as close to the skin as possible, then removed. This avoids pulling contaminated suture material through the wound. With tape closed wounds, the tapes are left in place for 7 to 10 days and then gently removed by traction.

5. Answer the following questions

1. What procedures must the patient undergo before a surgical intervention under general anaesthesia? 2. What pre-medication is arranged? 3. What does the care of wounds include? 4. What is debridement? 5. What other procedures are necessary? 6. Is anaesthesia performed in cleaning and debridement of traumatic wounds? 7. How are

non-viable areas recognized? 8. What may be the consequence of not removing the necrotic tissue? 9. What needles are used? 10. What sewing material is used? 11. How is closure of wounds performed? 12. What positions are used in operations? 13. What is the spine position like? 14. What advantage has this position? 15. How is the patient arranged in the Trendelenburg position? 16. In what cases of operation has it proved to be of value? 17. How is the patient arranged in lithotomy? 18. What is the prone position? 19. What positions are used in neurosurgery? 20. What position is used for laminectomy? 21. Can the anaesthetist have free access to the patient in that position? 22. What position is useful in varicose vein operations? 23. When is lateral position used? 24. What is the Brook position? 25. What position is adopted for operations on the head and neck? 26. How does the surgeon proceed in thyroidectomy? 27. What position is the most frequently used in craniotomy? — Why? 28. How is postoperative pain controlled? 29. What symptoms suggest some pathological process in the wound? 30. How is it treated? 31. Are antibiotics necessary if the pus is draining? 32. What must be immediately performed in case of a dehiscence? 33. Describe the removing of stitches.

III. Word study

6. Make up adjectives using suffixes: -ous, -ic, -al

Injury, face, endoscope, thorax, surgery, haemorrhage, abdomen, posture, advantage, trauma, danger, vein, spine.

7. Make up English-Russian pair of words

Access, insertion, site, congestion, approach, rupture, strain, jaw, dehiscence, incision, scissors, clip, detachment, contamination, precaution, support, girdle, forceps, fast.

Разрыв, пинцет, область, доступ, отстраненность, растяжение, разрез, гиперемия, пояс, бранша, подход, пост, ножницы, расхождение, введение, поддержка, зажим, загрязнение, предосторожность.

8. From the list below choose synonyms

Introduce, diminish, carry out, control, accomplish, remove, lead, require, arrange, include, persist, support, suspect, induce, occur, modify, elevate.

Cause, maintain, alter, need, reduce, insert, regulate, finish, remain, result in, organize, arise, excise, involve, think, rise, perform.

9. Substitute the words in brackets with appropriate English equivalents

1. When the surgeon uses the open approach, he makes an (разрез) in the lower right section of the abdomen. 2. Most often the anesthesiologist uses a general (обезболивающий) technique whereby patients

are put to sleep and made pain free by administering drugs in the vein or by agents inhaled through a tube placed in the windpipe. 3. An anesthesiologist is also present during the operation to (ввести) an anesthetic. 4. If the appendix has not (разрывать), the complication rate is only about 3%. 5. Wound (расхождение), hemorrhage and infection, and anastomosis failure have low, mild, and high mortality risks, respectively. 6. Primary wound (закрытие) is an important step in the management of clean open wounds. 7. (Санация) reduces wound contamination and reduces further tissue destruction. 8. Before closure the wound edges should be carefully (обрабатывать). 9. The first principle of wound (лечение) is the removal of nonviable tissue, including necrotic (dead) tissue, slough, foreign debris, and residual material from dressings. 10. The (дренаж) is often not sutured in place to allow its removal without disturbing bandages or dressings. 11. Joseph Lister introduced great change in suturing technique (as in all surgery) when he endorsed the routine sterilization of all (шовный) threads.

10. Fill in the blanks with the proper word combinations from the list below

1. Drug therapy was tried ... traditional surgical treatment used for such pathology. 2. The surgical strategy is designed ... the results of pre-operative tests and examinations. 3. Inoperability of the patient was established ... analyses and radiological data. 4. Wound infection rate was decreased ... anaesthetic use before closure of the wound. 5. Spinal anaesthesia is used ... the surgical site is too large or deep for a local block but general anaesthesia may not be desirable. 6. In control group placebo was used ... mesalizine. 7. Surgical site infections contribute greatly to the morbidity and mortality associated with surgery ... that most of them are superficial. 8. Mean post-discharge patients' return rate ... wound infection was 39.68%. 9. Summelweis ... ridicule and opposition introduced compulsory handwashing for everyone entering maternal wards. 10. Surgery was a traumatically painful procedure ... anaesthesia and surgeons were encouraged to be as swift as possible to minimize patient sufferings.

Because of, in case of, by virtue of, inspite of, instead of.

IV. Learn to speak professional medical English

11. Finish the following definitions

1. The spine position is when ….
2. The Trendelenburg position is when ….
3. The lithotomy position is when ….
4. The prone position is when ….
5. Mohammedan position is when ….
6. The Brook position is when ….

12. Find in Wikipedia text «Surgery» www.en.wikipedia.org/wiki/Surgery **and read the part «History of Surgery» and speak about the history of surgery**

V. Learn to translate medical articles

13. Translate the text

Операция при аппендиците

Операция при аппендиците заключается в вырезании у пациента червеобразного отростка. Как правило, операцию по удалению аппендикса выполняют под местным наркозом. В большинстве случаев аппендицит удаляют через небольшой разрез, который проводят по косой линии в правом боку. При неразорвавшемся аппендиксе операция занимает не более 40 минут. После удаления аппендикса на рану накладывают швы. При отсутствии осложнений аппендикса больной может приступить к обычной повседневной деятельности уже через 5—7 дней после операции.

Швы с раны, оставшейся после удаления аппендицита, снимают на 10—11-й день. Удаление швов — это безболезненная процедура, которая хорошо переносится даже детьми.

После удаления швов больному можно нормально двигаться, самостоятельно вставать, ходить.

LESSON 17

TRAUMATOLOGY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[l**əu**kəm**əu**tə], [s**i:**nail], [**ə**sti**ə**pər**əu**sis], [spl**i**ntidʒ], [[h**i:**mət**əu**mə], [**əu**vərikspə**u**ʒə], [k**ɔ:**stik]. [ris**i**piənt], [k**ɔ**nvə:t], [spr**i**ndʒinis], [ə**l**a**i**nmənt]. [r**i:**həbilit**ei**ʃən], [**ə**sti**ə**təmi], [d**i**sl**əu**keiʃən], [ækr**əu**mi:əukl**ə**v**i**kjulə], [t**eə**], [p**e**ritəun**ai**tis], [risʌsit**ei**ʃən], [s**u:**tʃə], [l**i:**θəl], [rʌptʃə].

2. Write in transcription

Ageing, management, shearing, congelation, oxygenation, violence, cancellous, capsular, spinous, surface, transverse, viscous, scald, injury, maintenance, survival.

3. Read the following words and terms

Elderly, accident, further, coloration, raw, merely, blow, compression, contused, casualty, bruising, ultraviolet, frostbite, injured, damage, radium, viable, recipient.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Two factors are tending to make the management of trauma in modern times increasingly important. Firstly mechanization, secondly the ageing population, as, due to improved medical treatment and social conditions, many more people reach old age. In the elderly, owing to a combination of loss of locomotor control and senile osteoporosis, falls and various injuries become more common and more serious.

In any accident first **aid** is given to the injured to save the patient's life and to prevent further damage. Locally, it consists of the splintage of injured parts and the control of bleeding. Open wounds should be covered by a clean dressing to prevent further contamination. General measures are directed towards minimizing shock by keeping the patient warm, and reducing movement to a minimum. The preservation of a good airway is important in unconscious cases. **Resuscitatory measures** fall into two categories — the control of pain and the maintenance of an adequate blood pressure. Measures to combat tetanus must be taken in all patients brought to hospital with open wounds. Later management begins after the patient has been moved to a ward. Ideally, this should be a resuscitation ward, linked with the casualty department, where all the facilities necessary to deal with such patients are available. Local and general wide-spectrum antibiotics should be administered in all but trivial cases.

Minor crushing injuries, such as may follow direct blows, produce only bruising, which is due to damage to the capillary blood vessels in the subcutaneous fat, and causes local swelling and blue coloration of the skin — known as haematoma.

Both, skin and deeper structures will be destroyed when an injury is due to a more severe crushing force, particularly if there is also a shearing element present. This also happens in deep **burns** caused either by heat (thermal burns), by overexposure to radium, X-rays, ultraviolet rays, sunlight or other form of radiant energy (radiation burns), by friction (brush burns), or due to a caustic chemical (chemical burn). Severe scalds and frostbite (congelation) have the same effect.

In such cases, suture is impossible and primary treatment consists of excision of all non-viable material. Where possible, the raw area is then covered with split skin grafts. If this is not practicable, then the wound is packed open and skin cover provided as soon as possible. There are two basic methods of replacing skin loss, either by the use of free grafts or by **flaps**. With free grafts, the skin is taken directly from the donor site and applied to the recipient area, the graft then being dependent for survival upon direct oxygenation from its new bed.

Where a flap is employed, the skin for grafting remains attached to the area from which it has been raised by its base, thereby retaining its blood supply. Only when new vessels have grown into the flap from the recipient site it is detached from the donor area.

The presence of a **fracture** should be suspected if, following an injury, the patient complains of severe localized pain and tenderness in the region of a bone on movement. A **simple fracture** is one in which there is no skin wound directly communicating with the bone at the fracture site. The term does not imply that the fracture will be easy to manage, or will unite rapidly. **A compound fracture** is one where there is a skin wound directly communicating with the bone ends. A **comminuted fracture** is present when the bone has been broken into more than two fragments. A **«greenstick» fracture** is an incomplete fracture occurring when a long bone is broken on the convex side, but buckled on the concave. They can only occur in the growing bones of children where there is some springiness present. A **pathological fracture** is one occurring in a bone rendered abnormally fragile because of a pathological process already taking place within it. A stress **fracture** may occur in bones subjected to abnormal stress.

Complications of fractures consist in mal-union, delayed union or non-union. The early complications of a fracture all occur in the surrounding soft tissues, either due to damage from within, the bone ends damaging important structures, or from without, as a result of the direct violence of the injury. The damages include the skin, muscles and tendon, nerves, blood vessels.

The **treatment** of the average fracture can be divided into three phases: **reduction** — to restore normal bony alignment, **immobilization** — to maintain the reduced position until union has occurred, and finally, **rehabilitation** — to restore normal function to the injured part.

Bony complications are corrected in different ways. Where there is a degree of mal-union sufficient to cause early or late disability it must be treated by osteotomy. Where non-union is established, or appears to be inevitably developing, bone grafting should be employed. This may be either cortical or cancellous.

Joint injuries consist in **dislocations** — which is complete separation of the articular surface in a normal joint, **subluxations** — which is partial displacement of the articular surfaces of a joint, most commonly occurring in «plane» joints such as the acromioclavicular, **sprains,** which means tears of the capsular lining of a joint of trivial nature or they may be severe, involving a complete disruption of one of the collateral ligaments in a hinge joint.

Treatment of joint injuries is similar to that of fractures: reduction, immobilization after which the joint is actively mobilized; passive

stretching of any injured part carries the risk of further damage and merely irritates the affected joint.

Fractures of the spine may be due to direct blows on the back, leading to fractures of transverse, or more rarely, of spinous processes. Secondly, they may be due to vertical compression forces, which with an antero-posterior shearing strain lead to a dislocation of one vertebra on another. The last type of injury follows a forced flexion injury, by which the neurological contents of the spinal canal are almost inevitably damaged.

In the management of all **chest injuries** the maintenance of normal oxygen and carbon dioxide levels in the blood stream must be the dominant feature. Chest injuries may result from either a direct blow, a crushing force, a penetrating wound, or blast from an explosion. There are rib fractures, fractures of the sternum, injuries of the pleura and lung, injuries of the heart and great vessels. Diaphragmatic injuries may be associated with both thoracic and intra-abdominal damage.

Abdominal injuries may be caused by blunt trauma or penetrating wounds. The two major effects of either type of abdominal injury are haemorrhage producing shock and rupture of a hollow viscus producing peritonitis or a combination of both, either of which may be lethal if left untreated. **Injuries to the urinary system** are due to either blunt trauma or to a penetrating wound. The kidney may be contused, the bladder ruptured, the ureter often escapes trauma.

5. Answer – using as many new expressions as possible

1. Why is the management of trauma becoming increasingly important? 2. Which two conditions must be met first of all in any accident? 3. What are the dangers of shock in traumatic accidents? 4. What special precautions must be taken in cases of unconsciousness? 5. How is the danger of primary infection met? 6. Describe the usual organisational management of a traumatic case: what happens before the injured subject is moved to a ward? 7. How are minor crushing injuries treated? 8. What types of thermal injury do you know? 9. What procedure is taken if split skin grafts cannot be used? 10. What is the difference between the skin graft and flap techniques? 11. When would you suspect the presence of a fracture? 12. What types of fracture do you recognize? 13. How is a comminuted fracture defined? 14. What are the characteristic features of a «greenstick» fracture and in what category of patients is it most often met? 15. What are the complications of fractures? 16. What is the usual phasing of fracture treatment? 17. When do you resort to osteotomy if complications in fracture healing arise? 18. What is the difference between a dislocation and a sprain? 19. Under what circumstances will a surgeon decide in favour of bone grafting? 20. What pattern does the treatment of joint injuries

follow? 21. How is immobilization achieved in fractures and joint injuries? 22. How do fractures of the spine usually arise? 23. When do surgeons speak of forced flexion injuries? 24. How are plasters put on and removed? 25. What must be particularly borne in mind in all chest injuries? 26. What injuries can occur to tendons? 27. When would a surgeon suspect thoracic and intraabdominal damage? 28. What are the specific dangers of abdominal injury? 29. What is the difference between contusion and rupture? 30. What is the difference between a scald, a burn and frostbite?

III. Word study

6. Make up English-Russian pairs of words

Tend, scald, bruising, subluxation, preservation, bed, lining, dressing, swelling, combat, ligament, splintage, facility, dislocation, sprain, blow, contamination, disability, disruption.

Обварение, удар, шинирование, выстилка, недееспособность, борьба, ложе, способствовать, связка, опухоль, повязка, оборудование, вывих, растяжение, разрыв, сохранение, посинение, подвывих, заражение.

7. Make up adjectives with negative meaning using one of the prefixes from the list below

Ability, viable, important, direct, conscious, adequate, available, possible, practicable, dependent, easy, complete, normal, union, trivial, mobile.

im-, ab-, dis-, non-, in-, un-.

8. Choose synonyms from the list below

Injury, disruption, damage, management, disability, bruise, suture, flap, senile, dislocation, swelling, bleeding, tenderness, accident, immobilization, contamination, rehabilitation, feature.

Ecchymosis, graft, character, catastrophe, pain, rupture, treatment, stitch, harm, oedema, inability, haemorrhage, old, trauma, restoration, displacement, fixation, infection.

9. Fill in the blanks with the proper words from the list below

1. A bone ... can be diagnosed clinically, based on the history given and the physical examination performed by a healthcare professional. 2. A partial or incomplete dislocation is called a ... . 3. Immediately after the ..., the joint almost always swells significantly and feels painful when pressure is applied (point tenderness). 4. A ... is an injury to ligaments that is caused by being stretched beyond their normal capacity and possibly torn. 5. Partial ... of ligaments is usually much more painful than full tears, which can sometimes be painless.

Tear, fracture, subluxation, sprain, dislocation.

10. Fill in the blanks with the proper words from the list below

1. Most treatment of spinal-cord injuries involves a «wait and see» ….. 2. If the injury is minor, only time will ... the extent of recovery. 3. For those with major injuries, a complete ... is highly unlikely. 4. The treatment consists of providing supportive ... and teaching new skills and developing coping strategies. 5. Surgery sometimes is ... for spinal-cord trauma when damage to the bony structures surrounding the spinal cord must be stabilized or a blood clot must be ….. 6. Active areas of ... include nerve-cell transplant, nerve ... and medication therapies to improve recovery of neurologic …..

Research, reveal, function, approach, care, required, recovery, regeneration, removed.

11. Insert a necessary preposition

1. The degree ... which the person is paralysed can vary from the impairment of leg movement, to complete paralysis of the legs. 2. ... a hot environment, the body sends a signal to the brain via the spinal cord to say the body is overheating. 3. A pressure sore, also known as a bed sore, is an injury ... the skin and the tissue under it. 4. These days there are a number of options available ... you to cover the cost of treatment. 5. The level of injury is the exact point ... the spine cord at which damage occurred. 6. Damage towards one side of the spinal cord results in impairment or loss of movement ... the injured side. 7. The person may experience difficulty ... coordinating movements of his limbs. 8. Traumas occur more frequently ... the elderly. 9. Bone grafting is usually used ... non-union bones. 10. It is possible for someone to suffer a broken neck or a broken back ... becoming paralysed. 11. One of the best ways ... a person with a spine cord injury to cool down is to have a cold wet towel wrapped around the back of the neck. 12. Most people ... complete spinal cord injuries do not sweat below the level of the injury. 13. Paraplegics will be in a hospital ... around 5 months. 14. Typical common causes ... damage to the spinal cord are trauma or disease. 15. The effects ... the respiratory system from a spinal cord injury will vary from person to person. 16. The inability to cough is of major importance ... a person with a spinal cord injury, as failure to remove dust, mucus or saliva from the lungs can lead to infection. 17. Coughing is induced ... a rapid contraction of the abdominal muscles to expel air at force from the lungs. 18. People who smoke are also ... an increased risk of developing a pressure sore, as are those who are overweight or diabetic. 19. Muscle spasms can occur ... a person with a spinal cord injury any time the body is stimulated below the level of injury. 20. If I get too cold, the only thing I can do is sit ... the fire and put plenty of clothes on, and drink warm fluids to bring my core temperature back up to normal.

IV. Learn to speak professional medical English

12. Make up definitions

Simple fracture is ….
Compound fracture is ….
Comminuted fracture is ….
Greenstick fracture is ….
Incomplete fracture is ….

13. Find in the Internet text «Femoral Neck Fracture» www.emedicin.medscape.com/article/86659-overview **and speak about it in English**

V. Learn to translate medical articles

14. Translate the following abstract into Russian

Spinal-Cord Trauma

The spinal cord carries nerve signals from the brain to the rest of the body. Trauma to the spinal cord can result from a number of injuries, most commonly from motor-vehicle accidents, falls and violence. More than 80 per cent of cases of spinal-cord trauma occur in people between the ages of 15 and 35, and approximately 80 per cent of those affected are male. Most spinal cord injuries occur in the area of the neck called the cervical region. Trauma can result from bruising to the spinal cord itself, loss of blood flow to the cord or cuts in the cord. Cuts or a complete severing of the spinal cord are quite rare. Spinal cord injuries are serious and can cause diminished strength, coordination and sensation as well as other functions, such as bladder control.

LESSON 18

ORTHOPAEDICS

I. Learn to pronounce, write and read English words and medical terms

1. Write in letters

a) [**ɔ:**θɔup**i:**diks], [lɔd**ɔu**sis], [pærən**i**ki:ə], [eikɔndrɔpl**ei**siə], [t**i:**nɔvædʒin**ai**tis], [kaif**ɔu**sis], [spɔndilɔulisθ**i:**sis], [æŋkil**ɔu**sis], [a:θrɔud**i:**sis], [a:θrɔtɔmi], [tenɔdəsis], [**a:**θrɔuplæsti], [kɔndr**ɔu**mə], [ɔksɔst**ɔu**sis], [tənɔtəmi], [ɔstiɔumaiəl**ai**tis], [ɔstiɔtəmi].

b) [dʒ**i:**nju:], [s**ei**krəl], [æsitæbjuləm], [**e**pikɔndil], [**ɔu**likr**ei**nən], [ip**i**fisis], [p**i:**z].

2. Write in transcription

a) Osteotomy, scoliosis, polyarthritis, chondrosacoma, tenosynovitis,

prosthesis, tenolysis, osteogenesis, osteoma, osteoarthritis, bursa, osteochondroma, arthritis, metatarsalgia, achondroplasia.

b) Coxa, lumbar, lamina, siquestrum, pallet, trocanther, marrow.

3. Read English compound terms

Structural scoliosis, postural scoliosis, genu valgum, genu varum, pes planus, pes valgus, pes cavus, talipes equinovarus, infective arthritis, hallux valgus, hallux rigidus, osteogenic sarcoma, osteogenesis imperfect, plaster-of-Paris spica, tibial tubercle, ischial tuberocity, hammer toe, mallet toe, spina bifida, fragilitas ossium.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

This branch of medicine is primarily concerned with the **locomotor system** of the body. This consists primarily of the bones, joints, muscles, and peripheral nervous system as they affect the limbs and spine.

Words of Latin and Greek origin are employed in orthopaedics. In operations upon joints, arthrodesis means that the joint is fused. This in practice implies that an artificial fracture has been made, and it must therefore be splinted. Where a diseased joint fuses spontaneously, this is ankylosis, which can be either **bony** — a natural arthrodesis — or **fibrous,** where some movement still remains. Arthroplasty means that the joint has been re-made, often by the employment of a metallic implant (prosthesis) to replace one or more of the joint components. Arthrotomy implies merely that the joint has been opened and, probably, explored. In operations upon bones, osteotomy is division of a bone. Tenotomy is used to describe simple operative division of a tendon. Tenodesis is an operation to anchor a tendon at a new site. Tendons may also be transplanted. Tenolysis means freeing a tendon from adhesions.

Individual parts are often given their Latin names (cubitus, coxa, genu, pes). In the case of the spine, **kyphosis** is used to describe a flexion deformity at one level. **Lordosis** means the spine is extended. A lateral curve is described as **scoliosis.**

The vertically upright position of man brings about a lot of conditions due to mechanical strains upon his spine and lower limbs.

Prolapsed inter-vertebral disc is very liable to impinge against a nerve root causing pain, sensory impairment, and muscle weakness in the area supplied by that segment. The most frequent level for a disc prolapsed is the lumbo-sacral, because here the mobile lumbar spine joins the rigid sacrum and pelvis.

Spondylolisthesis is a condition, probably of congenital origin, due to failure of fusion of the lamina and body of a vertebra. The lower lumbar vertebrae are those usually affected. Lateral curvature of the

spine may be due to some abnormality in the spine itself — this is called **structural scoliosis** — or because the spine is held tilted — this is **postural scoliosis.** Structural scoliosis may be congenital or paralytic, as a consequence of poliomyelitis.

The lower limbs, especially the knees and feet are considerably affected by posture. The conditions are **genu valgum, genu varum,** «flatfoot» — **pes planus, pes valgus, pes cavus,** Morton's metatarsalgia, hallux valgus, hallux rigidus, hammer toe, mallet toe.

Congenital disorders may be considered in two groups: generalized congenital abnormalities, such as achondroplasia, osteogenesis imperfecta (fragilitas ossium) etc. Local congenital abnormalities include spina bifida and **congenital dislocation of the hip.** The latter is very common, but owing to early diagnosis and treatment is easy to correct. The treatment may be conservative or operative. The former is usually successful where treatment commences before the infant begins to walk. It consists in holding the thighs abducted, as in this position the femoral head drops down into the acetabulum, and its constant pressure against the acetabulum floor assists in deepening its cavity. Later reduction on a metal frame over a period of two to three months follows. Congenital **talipes equinovarus** («clubfoot») is a common congenital abnormality of the locomotor system. The condition is obvious at birth and treatment should commence forthwith. Initially treatment consists of regular weekly moulding of the foot into a position of dorsiflexion and eversion. The position gained is retained by strapping the foot by a plaster-of-Paris spica. When a reasonable degree of correction has been obtained Denis-Browne splints may be substituted. In the more severe group, surgical intervention is often required.

Like any other living tissue, bone is liable to infection, which may be acute or chronic. Organisms may reach the bone either directly through a skin wound which communicates with it, usually as a complication of a compound fracture, or directly via the blood-stream. The latter tends to be the more acute. Thus acute haematogenous **osteomyelitis** develops, as a consequence of a trauma, which is often trivial; chronic osteomyelitis occurs after irreversible changes have taken place in the affected bone, and is due to the fact that the causative organisms can lie dormant in avascular necrotic areas, occasionally becoming reactivated, resulting in a flare-up. The bone is thickened and sclerotic, often containing an abscess cavity in which a sequestrum may lie.

In the joints the most common infection is **infective arthritis.** Acute suppurative arthritis is usually due to *Staphylococcus pyogenic;* acute septic arthritis in infants is due to a *Streptococcus.* While, with improvements in hygiene and the standard of living throughout the world, tuberculosis is becoming less frequent, it remains an important cause of chronic bone and joint infection. Arthritis is a term used to

describe any lesion of a joint. This may be due to some purely local abnormality in one joint, or to some more widespread condition affecting several joints and possibly other structures in addition. Broadly, there are four groups: infective arthritis, osteoarthritis, polyarthritis, and miscellaneous arthritis. Affections of soft tissues may affect the tendon sheaths. Chronic inflammatory thickening of the sheaths is known as **tenovaginitis.** Traumatic **tenosynovitis** consists of an inflammatory reaction around a tendon as a result of repetitive movements which impose a strain upon it. Musculo-tendinous lesions are usually located at points near where a muscle is attached to bone, and there may be a history suggesting some mild repetitive trauma as the original cause, possibly due to rupture of some muscle fibres. «Tennis elbow» is a term used to describe a point of tenderness near the lateral epicondyle of the elbow.

Bursae occur wherever the skin across a prominent bone is subject to pressure. Such points include the patella (pre-patellar bursa), the tibial tubercle, the olecranon, the ischial tuberosity, and the great trochanter. In addition a bursa is liable to form over any bone which is abnormally prominent — that occurring in hallux valgus.

The hand, being the part most subjected to injury, is particularly liable to infection as a result of some minor trauma such as a prick. The causative organism is usually the *Staphylococcus pyogenes.* The most common are the nail-bed infections (paronychia).

Neoplasms originating in bone may arise from osseous tissue, or from cartilaginous cells associated with the epiphyses, or from the blood forming elements contained in red bone marrow. Benign bone growths are osteoma, osteochondroma (oxostosis), chondroma. Malignant tumours of bone are osteogenic sarcoma, chondrosarcoma. Less common are neoplastic diseases in soft tissue.

5. Answer the following questions

1. When does a person go to an orthopaedist? 2. What does the term arthrodesis mean? 3. What is ankylosis? 4. What term is used for an operation when the joint is remade? 5. What does the term arthrotomy imply? 6. What is osteotomy? tenotomy? tenolysis? 7. Can tendons be transplanted? 8. What is the difference between the terms kyphosis, lordosis and scoliosis? 9. What causes pain in the back? 10. Which is the most frequent level of a disc prolapse? 11. What is spondylolisthesis? 12. Is spondylolisthesis an acquired disease? 13. What conditions of the feet are a consequence of posture? 14. How are congenital disorders divided? 15. Name some generalized congenital anomalies. 16. Which of them is very common? 17. What is the main condition for a successful treatment of a hip dislocation? 18. What does such treatment consist of? 19. What is meant by the term talipes

equinovarus? 20. What does its treatment consist of? 21. When are splints applied? 22. Is surgical treatment always necessary? 23. Can bone be affected by infection? 24. How do pathogenic organisms reach the bone? 25. What infectious diseases of the bone do you know? 26. What is acute haematogenous osteomyelitis? 27. What are the changes in the bone in chronic osteomyelitis? 28. What is the most common infection of the joint? 29. What does the term arthritis include? 30. What types of arthritis do orthopaedic surgeons recognize? 31. What are the clinical features of tenovaginitis? 32. What are the usual sites of musculo-tendinous lesions? 33. What is the actual complaint of people suffering from the «tennis elbow»? 34. What are bursae? 35. Where do bursae occur? 36. What injuries does the hand suffer from? 37. Can neoplasms develop in the locomotor system? 38. What type of tissue do neoplasms of the locomotor system arise from? 39. What is osteochondroma? 40. Name some of the commonest malignant tumours of the bone.

III. Word study

6. Give English equivalents of the following Latin terms

Genu, pes, bursa, os, hallux, tibia, ischia, cubitus, coxa, extremitas, lumbus, patella.

7. Make up English-Russian pairs of words

Remain, employ, join, explore, arise, assist, extend, splint, anchor, retain, tilt, subject, fuse, impinge, impose, gain, replace, imply.

Воздействовать, накладывать, шинировать, подразумевать, подвергать, применять, помогать, прикреплять, соединять, получать, удерживать, обследовать, возникать, замещать, распрямлять, соединяться, наклонять, оставаться.

8. Form adjectives, using suffixes: -al, -ous, -ar, -y

Tibia, bone, bursa, fiber, tendon, pes, cartilage, sacrum, lumbus, genu, ischia, patella, os.

9. Fill in the blanks with appropriate words from the list below

1. In order to get the tendon rid of adhesions ... had to be performed. 2. Close examination showed the joint fused as a result of ... . 3. Almost any lesion of the joint can be described as ... . 4. Paronychia is a painful ... infection. 5. This particular malignancy is known as ... sarcoma. 6. Chronic ... may be due to causative organisms that lie dormant in avascular ... area of the bone. 7. Congenital dislocation of the hip is treated in infancy making the ... head press against the ... floor. 8. Lateral curvature of the spine is called postural ... when the spine is held tilted. 9. The thickening of the tendon ... is called tenovaginitis. 10. Spina ... is a congenital malformation of the spinal column.

Sheaths, nail-bed, necrotic, femoral, tenolysis, ankylosis, scoliosis, arthrodesis, osteogenic, bifida, osteomyelitis, acetabulum.

10. Fill in the blanks with an appropriate preposition

1. In trauma patients, obesity is associated ... higher morbidity and mortality. 2. Surgical Techniques in Orthopaedics programs show you modern techniques in detail to help you prepare ... key procedures and make crucial operating room decisions. 3. Continuous peripheral nerve catheters (CPNCs) have become increasingly popular ... postoperative analgesia in orthopedic surgery involving the lower limbs. 4. ... a mean follow-up of 8 years, we found consistent alleviation of pain, restoration of joint stability. 5. The operation ... the joint was necessitated by its severe dislocation. 6. Knee arthroscopy sometimes (though rarely) brings ... symptomatic seep venous thrombosis. 7. Each program presents a wide, yet balanced, selection of surgical techniques ... each orthopaedic procedure. 8. The mechanical strain ... the spine increases with age. 9. It was suggested that surgery would have few perioperative complications when performed ... a pediatric center. 10. Seldom are osteochondromas found ... the undersurface of the scapula. 11. Two patients were treated by debridement and closed continuous irrigation and suction using normal saline followed ... early exercise with satisfactory results. 12. Before treating wound it was necessary to free it ... debridement. 13. ... immunocompetent patients, septic arthritis of the acromioclavicular (AC) joint is a rare entity. 14. Autotransfusion is widely used after total hip arthroplasty, but there are concerns ... damage of red blood cells collected after surgery. 15. In patients who recover, the orthopedic injuries can be more difficult to manage ... a later date. 16. In pulmonary embolism it is essential to have reliable means ... diagnosis and evaluation of severity. 17. Recognized experts demonstrate their surgical methods ... superior visual detail.

11. Fill in the blanks with appropriate words from the list below

1. ... is a deformity of the spine that causes a sideways S- or C-shaped curvature to develop over time. 2. ..., also called hunchback, is a common condition of a curvature of the upper spine. 3. ... is a surgical procedure, also known as joint fusion. 4. ... and rehabilitation treat a variety of bone, joint, nerve, and muscle ailments. 5. ... is the surgical opening of a joint in order to inspect the interior or carry out any of various procedures. 6. ... is a stiffness of a joint due to abnormal adhesion and rigidity of the bones of the joint, which may be the result of injury or disease. 7. ... is the surgical division of a tendon to correct a deformity caused by congenital or acquired shortening of a muscle, as for the correction of strabismus. 8. ... is the operation of freeing a tendon from adhesions. 9. ... is a medical term used to describe an inward curvature of a portion of the vertebral column. 10. ... describes

the anterior displacement of a vertebra or the vertebral column in relation to the vertebrae below. 11. ... or club foot is a congenital deformity involving one foot or both. 12. ... is a chronic inflammatory thickening of the tendon sheath. 13. ... is the inflammation of the fluid-filled sheath (called the synovium) that surrounds a tendon. 14. ... is surgery to relieve pain and restore range of motion by realigning or reconstructing a joint. 15. ... is a surgical operation whereby a bone is cut to shorten, lengthen, or change its alignment.

Tenotomy, osteotomy, arthrotomy, talipes equinovarus, lordosis, arthroplasty, kyphosis, scoliosis, ankylosis, tenovaginitis, tenolysis, tenosynovitis, spondylolisthesis, arthrodesis, orthopedics.

IV. Learn to speak professional medical English

12. Complete the following definitions

1. Orthopaedics concerns with ….
2. Arthrodesis means ….
3. Arthroplasty is ….
4. Arthrotomy implies ….
5. Osteotomy is ….
6. Tenotomy is ….
7. Tenolysis means ….
8. Kyphosis is ….
9. Lordosis means ….
10. Scoliosis is ….
11. Spondylolisthesis is ….
12. Tapis equinovarus is ….
13. Tenovaginitis is ….
14. Tenosynovitis is ….
15. Ankylosis is ….

13. Read the text and retell it as close to the text as possible

What is replantation?

Replantation refers to the surgical reattachment of a body part (such as a finger, hand, or toe) that has been completely cut from the body. The goal of replantation surgery is to give the patient back as much use of the injured area as possible.

Sometimes, replantation of a lost body part is not possible because the part is too damaged. If the lost part cannot be reattached, a patient may have to use a prosthesis, a device that substitutes for a missing part of the body. In some cases, a prosthesis may give a person without hands or arms the ability to function.

Replantation is usually recommended when the replanted part will work at least as well as a prosthesis. For example, a surgeon would not

replant a missing hand knowing that it would not work, be painful, or get in the way of the patient's everyday activities. Before surgery, the doctor will explain the procedure and how much function is likely to return following replantation. The patient or family member must decide whether the regain of use of the body part justifies the long and difficult operation, time in the hospital, and months or years of rehabilitation.

V. Learn to translate medical articles

14. Translate the below text into Russian

Introduction: Crohn's disease (CD) is a form of inflammatory bowel disease, which may affect any part of the gastrointestinal tract from mouth to anus, causing a wide variety of symptoms. The arthritis is counted as the worst side effect of CD. The orthopaedic manifestations of CD are: peripheral arthritis, spondylitis, sacroiliitis. **Material and method:** The authors evaluated the orthopedic clinical manifestation in Sicilian group of forty-five patients with Crohn's disease. All patients were analyzed with clinical exams, laboratory data, radiographic exams. In addition, all patients were screened for the presence of the antigen HLA B27. **Result:** Arthritis occurred in 8 patients (17.7%). Patients with arthritis had more active inflammation and all were seronegative. The patients with arthritis were classified into the categories used by Gravallese and Kantrowitz for IBD: peripheral arthritis, spondylitis, sacroiliitis. Peripheral arthritis was found in 7 patients (87.5%); spondylitis was diagnosed in 1 patients (12.2%); sacroiliac joint abnormality was observed in 1 patients (12.2%) who had peripheral arthritis. **Conclusion:** the extent of the intestinal lesion in ulcerative colitis seems to be important in the expression of the articular complications. The association between CD and Arthritis is clear reported in the literature and in our study, but the basis of this association is unknown.

LESSON 19

NEOPLASMS

I. Learn to pronounce, write and read English words and medical terms

1. Write in letters

[kaːsin**ɔu**mə], [saːk**ɔu**mə], [ædin**ɔu**mə], [**æ**dinɔukaːsin**ɔu**mə], [maiəl**ɔu**mə], [miks**ɔu**mə], [luːk**iː**miə], [ænəpl**ei**siə], [mait**ɔu**sis], [iːti**ə**lədʒi], [s**ɔː**], [**æ**dʒʌŋkt], [l**aː**nsit], [nj**u**ərɔublæst**ɔu**mə].

2. Write in transcription

Malignant, epithelioma, lymphoblastoma, nephroma, metastasis, wart, forewarning, neoplasm, discharge, chemotherapeutic, nephroblastoma.

3. Read the following words and medical terms

Compliment, gradually, berserk, indistinctness, carsinogenic, mole, lump, insidious, herald, irradiation, chemotherapy.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Statistically speaking, cancer accounts for a good 20 per cent of all deaths in the advanced industrialized countries, second only to coronary disease. In clinical terms, it means a malignant tumour or neoplasm, a growth of which is often classified according to the kind of tissue it arises from, or according to the embryonic tissue it resembles.

Thus we refer to carcinoma, an epithelial cell neoplasm arising in covering and lining membranes, as opposed to sarcoma, cancer arising in connective tissue, bone, muscle, but also kidneys, bladder, liver, lungs, parotids, and spleen. Bringing in more detail about the origin or location of the malignant growth, clinicians, histologists and cytologists talk of adenoma, adenocarcinoma, epithelioma, lymphoblastoma, neuroblastoma, nephroma, myeloma, myxoma, cancers of the stomach, liver, lungs, colon, kidney etc. **Leukaemia,** often inaccurately described as cancer of the blood, is in effect a cancer-like disease of the white blood cells, with not a single focus, but rather a wide-spread affection of the bone marrow and other blood forming tissue.

Whatever the case, neoplasms are always the result of disorder of cell growth. At birth, only the nervous system has its full complement of cells, and they are so highly differentiated that they have lost the ability to replace themselves, as those of other tissues do. Nor do the cells of voluntary muscles, as a rule, reproduce themselves. A muscle grows by increasing the size, not the number of its cells. All other types of cells continue to multiply. The rate gradually slows; when growth is complete it just keeps pace with the continuous degeneration and loss of cells.

Cancer begins in a group of cells, or perhaps even a single cell that has gone berserk, multiplying regardless of need. Thus a cancer cell found in a neoplasm possesses characteristics which differentiate it from normal tissue cells. Prominent among the distinctive features are the degree of anaplasia, irregularity in shape, indistinctness of cell outline, nuclear size, changes in the structure of the nucleus and cytoplasm, increased number of mitoses and, most important from the clinical point of view, the ability to metastasize.

Although some cancer cells keep the special function of the cell-type, most tend to lose it, regressing towards an embryonic type with less differentiation. The rare cancers of infancy (nephroblastoma or Wilms' tumour, neuroblastoma etc.) are thought to arise from cells that have failed to outgrow the embryonic state, but this is no longer believed to explain cancer in adults.

In effect, a cancer is a parasite formed from the patient's own tissues; it is not subject to the normal control of nerves and hormones, drawing on the general supply of nutrients and contributing nothing in return. Because they have nothing to do but reproduce themselves, cancer cells in time outnumber the healthy cells in their neighbourhood, spreading beyond the limits of their original organ through lymph vessels or veins to other parts of the body where they form metastases.

Although, generally speaking, the aetiology of cancer is unknown, a number of factors have been suspected of being conductive to malignant neoplasms. Some part is played by inherited constitution; people with a family history of cancer are rather more liable to the disease than others. But while hereditary factors may predispose to cancer, they seldom if ever are the sole cause. Much the same seems to be true of chronic irritation; evidence of it being the chief aetiological factor remains poor. On the other hand, some special types of injury may presumably alter the genetic make-up of a cell, giving rise to mutation, so that not only the reproductive behaviour of the cell is disturbed but also that of its progeny.

The known physical and chemical agents of cancer include ionizing radiation, such as X-rays, radioactive substance, even tropical sunlight, and many chemical poisons. Of the so called carcinogenic substances, many products of the distillation of coal and oil (tar, soot), arsenic and some intermediate products in the synthesis of dyes are able to cause cancer following repeated or prolonged exposure.

Of late, by far the most discussed sole cause of cancer has been virus **infection.** The idea is that a virus, which is little more than a tiny bit of genetic material itself, might become incorporated with the cell's own material and cause the kind of mutation that would lead to cancer. No virus infection has been positively identified in human cancer, but there is evidence that Burkitt's sarcoma, known in Africa, may be due to a virus transmitted by mosquitoes.

Cancer is an insidious disease with few if any clinical manifestations in the early stages. There are, however, important warning signals. The patient may complain of unusual bleeding or discharge from any internal or external body site, indigestion or difficulty in swallowing, unexplained loss of weight; he may notice a change in size or shape or appearance of a wart or mole or a sore that does not heal. There may be a lump

or thickening in any area but especially in the breast, heralding cancer of the breast, or hoarseness or persistent cough, forewarnings of lung cancer. Any change in bowel or bladder habits may be an early symptom of some form of abdominal cancer.

Surgery is the all too obvious, though by far not the only form of treatment which may have a satisfactory prognosis if the new growth is detected early enough. X-rays and radioactive material are applicable in several ways. They completely cure some surface cancers, where the radiation can be directly applied without passing through healthy tissue. They are a valuable adjunct to surgery; irradiation may kill off stray cancer cells that the lancet has missed, or at least retard the progress of disease that is no longer curable. Some cancers can be made more susceptible to irradiation by increasing their supply of oxygen.

A third group of cancer treatment methods are cytotoxic chemotherapeutic agents. Drugs are most used in the treatment of cancers of the lymphatic system and blood. Some cancers of sex organs, e.g. breast, prostate gland, respond to sex hormones of the opposite sex.

Both radiation and drugs are known to suppress cell division in general. They are effective because cancer cells are much more actively engaged in reproducing themselves than normal cells. The problem of chemotherapy, however, is that while the appearance and behaviour of cancer cells are distinctive and have been described in some considerable detail, no chemical difference from normal cells is yet known. When one is found, it should be possible to attack cancer cells specifically.

There will probably never be one universal remedy for all types of malignant growth just because cancer is no more a specific disease with a single defined cause than bleeding or heart failure. It is much more likely to be conquered step by step and, in any case, whatever treatment has already been developed has a fine record and offers considerable hope.

5. Answer the following questions

1. What is the proportion of deaths due to cancer in industrialized countries? 2. How are neoplasms classified (according to which principle)? 3. What is the difference between a carcinoma and a sarcoma? 4. What is an adenoma as opposed to myeloma? 5. What is the position of leukaemia? 6. Why are neoplasms considered to be the result of disorder of cell growth? 7. Why are the nervous system and voluntary muscle cells rather immune to malignant growth? 8. How does a muscle grow? 9. How does cancer begin and where? 10. Which are the distinctive features of a typical cancer cell? 11. What does the term anaplasia mean? 12. What is meant by the ability to metastasize? 13. What makes cancer cells lose the special function of their cell-type?

14. How are cancers of infancy explained? 15. Why is cancer taken as a parasite? 16. Why do cancer cells gradually outnumber the neighbouring cells? 17. How do cancer cells spread from the original focus? 18. Which are the factors conducive to malignant neoplasms? 19. What happens if the whole genetic make-up of a cell is altered? 20. What is the relationship between ionizing radiation and cancer? 21. Why are tar, soot, arsenic and other products considered to be carcinogenic? 22. What is the possible relationship between cancer and virus infection? 23. What evidence is there of cancer being caused by viruses? 24. Why is cancer referred to as an insidious disease? 25. What are the clinical manifestations — if any? 26. Which are the tell-tale forewarnings of malignant growth? 27. What is change in bowel or bladder habits indicative of? 28. What is the position of surgery in the treatment of cancer? 29. In what way are X-rays and radioactive substances (name a few) applicable in cancer treatment? 30. How can some types of cancer be made more susceptible to radiation? 31. What is the position of chemotherapeutic agents in the treatment of malignancies? 32. Why are drugs most used in the treatment of cancers of the lymphatic system and blood? 33. Where do sex hormones find their use in combatting cancer? 34. What is the common feature of radiation and chemotherapy? 35. In what way are radiation and chemotherapy effective? 36. What is the chief problem of chemotherapy in terms of specificity? 37. Is there any chemical difference between normal and malignant cells? 38. Why is the discovery of one single remedy for all types of cancer unlikely? 39. What makes the outlook reasonably optimistic?

III. Word study

6. Make up English-Russian pairs of words

Indistinctness, draw, complement, sole, liable, outgraw, suspect, predispose, inaccurately, reproduce, prominent, inherit, seldom, progeny, adjunct, conquer, presumably, exposure, insidious, retard, affection, suppress, herald.

Неточно, поражение, комплект, воспроизводить, выдающийся, нечеткость, перерастать, получать, подозревать, наследовать, подверженный, предрасполагать, редко, единственный, предположительно, потомство, воздействие, коварный, предвещать, вспомогательное средство, замедлять, подавлять, побеждать.

7. Form adjectives, using appropriate suffix from the list below

Cancer, neoplasm, embryo, carcinoma, epithelium, membrane, leukemia, anaplasia, cytoplasm, nucleus, metastase, aetiology, malignancy, heredity, carcinogen, chemotherapy.

-ic(-nic/-tic), -ous(-tous), -ary, -al, -ant

8. Make up chains of words corresponding to Russian

Statistics
Статистика — статистический — с точки зрения статистики.

Industry
Производство — производственный — индустриализованный.

Cytology
Цитология — цитологический — с точки зрения цитологии.

Predispose
Предрасполагать — предрасположение — предрасполагающий.

Susceptible
Восприимчивый — восприимчивость.

Conduct
Проводить — проводимость — проводящий.

Genetics
Генетика — генетический – с точки зрения генетики.

Inherit
Наследовать — наследственность — наследственный.

Continue
Продолжать — продолжительный — продолжение.

Produce
Производить — продукт — производство — продуктивный.

9. Fill in the blanks with corresponding words from the list below

1. ... is a type of malignant lymphoma whose parenchyma is composed of lymphoblasts. 2. ... is a benign tumor of epithelial tissue, such as the mucosa of the stomach, small intestine, and colon, in which tumor cells form glands or gland-like structures. 3. Cancer that begins in the epithelial cells, which line certain internal organs and have glandular (secretory) properties is termed ... . 4. An invasive malignant tumor consisting of transformed epithelial cells is called ... . 5. A tumour of the renal tissue is termed ... . 6. ... is an abnormal growth of the epithelium, which is the layer of tissue that covers the surfaces of organs and other structures of the body. 7. ... is a cancer of the white blood cells known as plasma cells. 8. ... is the most common extracranial solid cancer in childhood and the most common cancer in infancy. 9. ... is a tumor of primitive connective tissue. 10. ... is a cancer of the blood or bone marrow characterized by an abnormal increase of blood cells, usually leukocytes (white blood cells).

Nephroma, neuroblastoma, carcinoma, myeloma, myxoma, leukemia, lymphoblastoma, adenoma, epithelioma, adenocarcinoma.

10. From the list below chose the proper Russian equivalents of the italicized English word combinations

1. The pain, *if any,* is sudden, acute and intermittent usually occurring after intake of spicy and salty food. 2. This complication is, *generally speaking*, much more common than it is used to be thought. 3. *Statistically speaking*, breast cancer is on the first place among other types of cancer. 4. *In effect*, the disease is caused by a specific group of viruses, namely Staphylococcus pyogenus. 5. *Whenever the case*, surgery is attempted to remove the tumour entirely. 6. Radical treatment *accounts for* 50% of all cancer cases in the Western world which can be treated to remission. 7. *In general* a procedure is considered surgical when it involves cutting a patient's tissue or closure of a previously sustained wound. 8. *Of late* the number of researches conducted on all frontiers of oncology, ranging from cancer cell biology to chemotherapy treatment regimens and optimal palliative case and pain relief has increased considerably. 9. Such patients are treated, *if ever*, by a multidisciplinary approach. 10. Breast cancer is *by far the most* spread type of cancers in middle aged women. 11. If diagnosed *in time* the disease presents no serious clinical problems. 12. These data are *all too obvious* to indicate the involvement of the lower part of ileum. 13. Our approach *keeps pace* with the latest achievements of the WHO approved recommendations.

Слишком явно, значительно более, на самом деле, в общем, вовремя, если когда-нибудь, с точки зрения статистики, вообще говоря, не отстает, в последнее время, если присутствует, составлять, в любом случае.

11. Complete definitions by translating parts in the brackets

1. Carcinoma is... (вид злокачественной опухоли, развивающейся из клеток эпителиальной ткани различных органов).

2. Adenoma is... (доброкачественная опухоль железистого эпителия).

3. Adenocarcinoma is... **(**злокачественная (эпителиальная) опухоль, состоящая из железистых эпителиальных клеток, входящих в состав большинства внутренних органов человеческого тела**)**.

4. Epithelioma is... (доброкачественная и злокачественная опухоль поверхностного эпителия, преимущественно кожи и её придатков).

5. Lymphoblastoma is... (злокачественная опухоль из незрелых лимфоидных клеток).

6. Neuroblastoma is... (злокачественная опухоль симпатической нервной системы).

7. Myeloma is... (онкологическое заболевание, при котором происходит бесконтрольное накопление «миеломных» клеток в костном мозге, ведущее к разрушению костной ткани).

8. Myxoma is... (доброкачественная опухоль из соединительной ткани с большим содержанием слизи).

9. Leukaemia is... (группа опухолей, которая характеризуется бесконтрольной пролиферацией и разной степенью дифференцировки кроветворных клеток).

12. Fill in the blanks with corresponding prepositions

1. Damage ... the bone marrow ... way ... displacing the normal bone marrow cells ... higher numbers of immature white blood cells, results ... a lack of blood platelets, which are important ... the blood clotting process. 2. No single known cause ... all of the different types of leukemia exists. 3. Viruses have also been linked ... some forms of leukemia. 4. Diagnosis is usually based ... repeated complete blood counts and a bone marrow examination following symptoms observed. 5. The adenomatous proliferation is characterized ... different degrees of cell dysplasia. 6. The most common subtype, prolactinoma, is seen more often ... women, and is frequently diagnosed during pregnancy. 7. Bronchial adenomas are adenomas ... the bronchi. 8. ... patients with relapsed AML, the only proven potentially curative therapy is a stem cell transplant, if one has not already been performed. 9. The single most important prognostic factor ... acute myeloid leukaemia is cytogenetics, or the chromosomal structure of the leukemic cell. 10. Exposure ... anticancer chemotherapy, in particular alkylating agents, can increase the risk of subsequently developing acute myeloid leukaemia. 11. Cytochemical stains ... blood and bone marrow smears are helpful ... making differential diagnosis. 12. Acute myeloid leukemia is a curable disease; the chance of cure ... a specific patient depends ... a number of prognostic factors.

IV. Learn to speak professional medical English

13. Read the text and speak about the tumors of the brain

Pathophysiology

Tumors of the brain produce neurologic manifestations through a number of mechanisms. Small, strategically located tumors may damage specific neural pathways traversing the brain. Tumors can invade, infiltrate, and supplant normal parenchymal tissue, disrupting normal function. Because the brain dwells in the relatively restricted repository of the cranial vault, growth of intracranial tumors with accompanying edema may compress normal tissue and impair function. Tumors proximal to the third and fourth ventricles may obstruct the flow of cerebrospinal fluid, leading to hydrocephalus. In addition, tumors generate new blood vessels (i.e., angiogenesis), disrupting the normal blood-brain barrier and promoting edema.

The cumulative effects of tumor invasion, edema, and hydrocephalus may elevate the intracranial pressure (ICP) and impair cerebral perfusion. Intracranial compartmental rise in ICP may provoke shifting or herniation of tissue under the falx cerebri, through the tentorium cerebelli, or through the foramen magnum.

Slow-growing tumors, particularly tumors expanding in the so-called silent areas of the brain, such as the frontal lobe, may be associated with a more insidious course. These tumors tend to be larger at detection.

Most primary brain tumors do not metastasize. Of those neural element tumors that do, intraparenchymal metastasis generally precedes distant hematogenous dissemination via the arterial system.

Metastatic brain tumors from non-CNS primary tumors may be the first sign of malignancy, or they may herald a relapse. Nonetheless, the signs and symptoms of brain metastases simulate those of primary brain tumors.

14. Complete definitions

1. Carcinoma is ….
2. Adenoma is ….
3. Adenocarcinoma is ….
4. Epithelioma is ….
5. Lymphoblastoma is ….
6. Neuroblastoma is ….
7. Myeloma is ….
8. Myxoma is ….
9. Leukaemia is ….

15. Make a report (in a form of presentation) about one of the malignant tumors

V. Learn to translate medical articles

16. Translate the following text

Does obesity increase the risk of kidney cancer

Studies have consistently found a link between a type of kidney cancer (renal cell carcinoma) and obesity in women, with some studies finding risk among obese women to be two to four times the risk of women of a healthy weight.

Results of studies including men have been more variable, ranging from an association similar to that seen in women, to a weak association, to no association at all. A meta-analysis (where several studies are combined into a single report), which found an equal association of risk among men and women, estimated the kidney cancer risk to be 36 per cent higher for an overweight person and 84 per cent higher for an obese person compared to those with a healthy weight.

The mechanisms by which obesity may increase renal cell cancer risk are not well understood. An increased exposure to sex steroids, estrogen and androgen, is one possible mechanism.

17. Read the following text and write a short abstract in Russian

Stomach cancer

Stomach cancer (also known as gastric cancer) is relatively uncommon in the United States and other Western countries. Worldwide, however, it is the second leading cause of cancer deaths. Stomach cancer can be cured if the tumor is found early and completely removed surgically. However, the disease is often not diagnosed until it has already spread (metastasized) to other tissues and organs. Outcomes are very poor for patients with advanced stomach cancer that cannot be surgically removed.

A drug known as S-1 is used as a first-line treatment for stomach cancer in Japan. As yet, S-1 is not approved for use in the United States. Instead, U.S. doctors treat advanced stomach cancer with a drug called fluorouracil (5-FU). S-1 contains tegafur, a substance that in the body converts to 5-FU.

A potential advantage of S-1 over the drug 5-FU is that S-1 can be taken by mouth, whereas 5-FU must be given intravenously. A phase I/II study showed promising results when Japanese patients with advanced stomach cancer were treated with a combination of S-1 and a second drug called cisplatin, a commonly used cancer chemotherapy.

LESSON 20

EAR, NOSE AND THROAT

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[sp**e**kjuləm], [**ɔ**rikl], [mi**ei**təs], [d**e**fnis], [mæliəs], [mæstɔid**e**ktəmi], [**ɔ**stiɔuskliər**ɔu**sis] [k**ɔ**kliə] [k**ɔ**nkə], [sf**i:**nɔid], [s**ai**nəs**ai**tis], [ənɔzmiə], [**e**pistæksis], [n**ei**zɔufæriŋks], [tɔnsil**e**ktəmi], [kw**i**nzi], [str**ai**də], [pær**i:**sis], [færindʒ**ai**tis].

2. Write in transcription

a) Auditory, tympanum, incus, stapes, tinnitus, ethmoid, maxillary, adenoids, tonsillitis, audiography, thyroid, fauces.

b) Fenestra vestibuli, otitis media, mastoid antrum, otolith organ, labyrinthine nystagmus, Eustachian tube.

3. Read the following medical terms

Pinna, rhinitis, polyp, ataxia, hysteria, neurasthenia, gullet, cricoid, oropharynx, epiglottis, tonsils, hoarseness, hyoid, laryngitis.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

An otolaryngologist is easily recognized among other surgeons by the head mirror he invariably wears attached to his forehead, or by the nasal and aural speculums and the tongue depressor he readily produces in examining his patients. He is in charge of the E.N.T. department where a variety of diseases affecting the ear, nose, nasopharynx, oropharynx and larynx are treated.

The auricle or pinna, with its core of elastic cartilage and lobe, the external auditory meatus and the outer wall of the tympanum or eardrum, are all parts of the **external (outer) ear.** There are relatively few afflictions, the commonest of them being **excessive accumulation of wax,** which may cause temporary deafness by plugging the meatus, **foreign bodies** stuck down the canal (such as insects, pebbles, peas etc.) and small, painful **boils. Protruding ears** can easily be improved by plastic surgery.

Three ossicles: the malleus, the incus, and stapes, are joined together, extending from the tympanic membrane to the fenestra vestibuli, to form the **middle** ear — an irregular cavity in the temporal bone. Severe earache is most often caused by **otitis media** which, if untreated, may spread further back to the mastoid antrum, a hollow in the bone immediately behind the ear. This is an emergency often calling for mastoidectomy. To relieve the pressure caused by accumulated pus, the tympanum may have to be carefully perforated to enable drainage. Abnormal deposition of bone in the middle ear interfering with the movement of the ossicles is called **otosclerosis,** a familial disorder demanding surgical treatment.

While the organs of the middle ear merely transmit vibration, it is in the cochlea, the container for the organ of Corti, that nervous impulses are produced for transmission to the brain along the auditory nerve. This process, going on in the **inner (internal) ear,** is quite distinct from the working of the vestibular apparatus which contains the receptors for equilibrium (balance) and the sense of movement. The former is effected by sensitive cells of the otolith organ, the latter by the three semicircular canals, lying at right angles to each other. Both are innervated by the vestibulocochlear nerve. **Vertigo,** a type of giddiness with a false sense of movement, is a symptom of disorder within the internal ear. So is **labyrinthine nystagmus.**

Diseases of the inner ear are often associated with deafness. Deafness may be partial or complete, congenital (resulting in deaf-muteness) or acquired, often as **occupational deafness,** i.e. one caused by working in places where noise levels are too high. Deafness in old age is loss of sensitivity to high-pitched notes, including consonants in ordinary speech. Such people are spoken of as hard-of-hearing.

In testing the patient's hearing, the otolaryngologist wants to establish the **hearing threshold.** To find out, he will use the whisper test, tuning forks or **audiography.** Defective **air-conduction** needs to be distinguished from defective **bone-conduction** as well as from **nerve deafness.** Loss of bone conduction leads to **bone deafness.** While pallor of the ears indicates shock or anaemia, hissing or ringing in the ears — tinnitus — is often a symptom of hyperaemia, **Meniere's disease,** or excessive intake of drugs like quinine, salicylic acid etc.

To maintain normal atmospheric pressure, the middle ear communicates with the outer air via the **Eustachian tube** leading to the back of the **nose,** the organ of olfaction and of warming, moistening and filtering the air for the respiratory tract. The outer, visible part of the nose is supported by a triangle of cartilage and bone, and lined with mucous membrane. This membrane is easily distended by blood and tissue fluid when inflamed by infection or allergy. **The nasal cavity,** which extends to the back of the hard palate, is divided into right and left halves by the cartilaginous nasal septum. The three turbinate bones (superior concha, middle concha, inferior concha) form three meatuses which add to the surface area of the cavity and protect the opening to the **paranasal sinuses.**

The sinuses (frontal, ethmoid, sphenoid, and maxillary — also called the antrum of Highmore) communicate with the nasal cavity via small openings which tend to become blocked during **sinusitis** causing severe pain. The surface of the mucous membrane of the nose is covered with cilia whose undulating movement keeps secreted mucus moving towards the back of the nose.

The organ of olfaction proper is situated at the top of the nasal cavity with the receptor nerve-endings passing through small holes in the ethmoid bone to join the olfactory nerves (1st cranial). **Anosmia,** or loss of sense of smell, may be the result of acute or chronic **rhinitis,** nasal **polyps,** dryness of the nasal mucuous membrane, pollen or very offensive odours. Apart from such obvious causes as disease or injury of the olfactory tract itself, locomotor ataxia, hysteria and neurasthenia may also be found responsible.

Rhinitis may be atrophic or dry with dry crusts collecting in the nostrils. **Epistaxis** or **nose-bleeding,** if not caused by an obvious injury, is often a symptom of diseases other than those pertaining to the nose itself; e.g. fevers of childhood and typhoid, hypertension, haema-

tological disorders etc. To stop the bleeding, pinching the nose for a few minutes is often found helpful. The clinical approach is to pack the nose skillfully with gauze. Like that of the pinna, the shape of the nose, too, can be altered by plastic surgery if necessitated by severe injury, leprosy, syphilis and other disfiguring diseases.

The nasal cavity opens straight into the pharynx, the muscular back-wall of the nose, the **oral** cavity and **throat**, extending from the base of the skull down to the gullet. Its muscle fibres are attached to the **hyoid bone**, and to the sides of the thyroid and cricoid cartilages, curving back to meet in front of the backbone. While nasopharynx is concerned with breathing only, the oropharynx serves both breathing and swallowing, and laryngeal pharynx swallowing only.

Once masticated food has been pushed to the back of the tongue, swallowing becomes a reflex action; the palate is raised to close the back of the nose, the **epiglottis** covers the entrance to the larynx causing the vocal cords to close. If an object such as a fish-bone sticks in the throat it may sustain the reflexes which prevent breathing: the subject chokes.

The pharynx contains lymphoid tissue, particularly the **adenoids** and the **tonsils** (fauces). Although the function of both is to set up resistance to infecting microbes, it is particularly the latter that are often subject to **tonsillitis,** repeated bouts of which may require tonsillectomy. Luckily, faucial tonsils tend to shrivel and disappear in late childhood.

The pharynx is often the site of streptococcal infection causing scarlet fever or rheumatic fever in children preceded by pharyngitis (sore throat). **Quinsy** is a dangerous abscess around the tonsils. **Oedema of the glottis** is distension by tissue fluid of the mucous membrane lining the entrance to the larynx. The condition tends to carry some risk because the swelling may obstruct the airway. Other disorders of the throat include **laryngitis** with the patient being hoarse due to stridor, polyps, paresis of the vocal cords due to defective recurrent laryngeal nerve, but also — to a certain degree — diphtheria, tuberculosis, cancerous growths etc.

5. Answer the following questions

1. How do you recognize an E.N.T. surgeon when you see one? 2. What parts of the body is otolaryngology concerned with? 3. What does the outer ear consist of? 4. Which are the commonest afflictions of the external ear? 5. What is the anatomical composition of the middle ear? 6. Which is the most frequent complication of otitis media? 7. Why does otosclerosis call for surgical treatment? 8. How are nervous impulses transmitted from the middle ear to the brain? 9. Which two distinct functions does the inner ear perform? 10. How is the sense of equilibrium effected? 11. What is the role played by the semicircular canals? 12. What is the difference between vertigo and labyrinthine

nystagmus? 13. What are the types and degrees of deafness? 14. How is hearing routinely tested? 15. What is the difference between defective air-conduction, defective bone-conduction and nerve deafness? 16. Which causes may tinnitus be attributed to? 17. How does the middle ear communicate with the nasal cavity? 18. What are the principal functions of the nose? 19. What is the anatomy of the nose? 20. Which paranasal sinuses do you recognize? 21. How does sinusitis develop? 22. Which are the usual causes of anosmia? 23. What are the causes and clinical features of acute rhinitis? 24. How is epistaxis treated? 25. Can the shape of the outer ear and nose be corrected? 26. What is the anatomical constitution of the nasopharynx? 27. What is the difference between the nasopharynx and oropharynx? 28. How is swallowing effected as regards the pharynx? 29. What is the function of the epiglottis? 30. Why may a fishbone stuck in the throat cause choking? 31. What are the common features of both the adenoids and the fauces? 32. When is tonsillectomy called for? 33. What is quinsy? 34. What are the dangers of oedema of the glottis? 35. What particular lesions and pathological conditions may account for hoarseness? 36. What instruments does an E.N.T. surgeon use to examine the patient's throat?

III. Word study

6. Make up adjectives, using necessary suffixes

Auricle, cartilage, lobe, tympanum, pain, ossicle, temple, bone, antrum, pus, cochlea, equilibrium, canal, symptom, occupation, part, hyperaemia, nose, larynx, pharynx, oedema, olfaction, concha, cilium, tonsil, fauce, glottis.

7. Make up English-Russian pairs of words

Meatus, nasopharynx, hissing, sinus, tonsil, cochlea, olfaction, incus, temple, cilium, epiglottis, palate, concha, stapes, oropharynx, swallowing, malleus, ringing, ossicle, larynx, threshold, cartilage, pharynx, septum.

Шипение, звон, обоняние, нёбо, перегородка, наковальня, раковина (ушная), стремечко, носоглотка, хрящ, канал, молоточек, ротоглотка, висок, порог, улитка, гортань, косточка, пазуха, ресничка, глотание, надгортанник, миндалина, глотка.

8. From the list below find synonyms to the given words

Equilibrium, epistaxis, bout, external ear, gullet, speculum, affliction, meatus, vertigo, movement, inner ear, throat, auricle, bleeding, pharyngitis.

Giddiness, pinna, oesophagus, internal ear, fauces, motion, outer ear, nosebleeding, haemorrhage, attack, mirror, disorder, balance, sore throat, canal.

9. From the list below fill in the blanks

1. The girl was operated for ….. 2. Chronic suppurative ... involves a perforation (hole) in the tympanic membrane and active bacterial infection within the middle ear space for several weeks or more. 3. ... and noise induced hearing loss are phrases which can be used to denote a deterioration of a person's hearing as a result of his or her working environment. 4. ... most often arises from defects in the cochlea itself, but also describes the hearing deficit that results from damage to the auditory nerve. 5. ... involves a swelling of the part of that canal that controls the filtration and excretion of the fluid in the inner ear. 6. ... is a relatively common occurrence of hemorrhage from the nose, usually noticed when the blood drains out through the nostrils. 7. While ... is, in many cases, a complication of laryngeal or pharyngeal inflammations, it does occur at times as a distinct and separate clinical phenomenon. 8. The ... connects the middle ear cavity with the nasopharynx. 9. ... is a recognised complication of tonsillitis and consists of a collection of pus beside the tonsil (peritonsillar space). 10. ... has two relatively flat blades with handle, and when the handles are squeezed together the blades spread laterally, allowing to examine nasal cavities. 11. ... is a thin blade for pressing down the tongue during a medical examination of the mouth and throat. 12. Only a doctor can make the proper diagnosis of otitis externa, otitis media, or other less common causes of ... including problems that are not infectious. 13. The ... is the sensitive element in the inner ear and can be thought of as the body's microphone. 14. The ..., which contributes to our balance and our sense of spatial orientation, is the sensory system that provides the dominant input about movement and equilibrioception. 15. A loss of hearing that is less than profound is generally considered ….. 16. The process of transmitting sound waves to the cochlea by way of the outer and middle ear is called ….. 17. Measurement of the absolute ... provides some basic information about our auditory system. 18. ... is the conduction of sound to the inner ear through the bones of the skull. 19. Nose-associated sinuses are called ….. 20. ... is the largest of the paranasal sinuses, and is pyramidal in shape. 21. The function of the ... is to provide attachments for the various muscles, cartilages, and ligaments involved in opening and closing the airway and in speech production. 22. The ... is a horseshoe-shaped bone situated in the anterior midline of the neck between the chin and the thyroid cartilage.

Hearing threshold, vestibular apparatus, quinsy, cricoid cartilage, hyoid bone, otitis media, air conduction, occupational deafness, antrum of Highmore, nerve deafness, nosebleeding, edema of the glottis, protruding ears, Eustachian tube, nasal speculum, Meniere's disease, tongue depressor, severe earache, organ of Corti, hard of hearing, bone conduction, paranasal sinuses.

10. Fill in the blanks with appropriate propositions

1. Otitis externa responds well ... treatment. 2. ... diabetics rapid examination by an otolaryngologist (ear, nose, and throat physician) is very important. 3. Like many types of inflammation, pharyngitis can be acute — characterized ... a rapid onset and typically a relatively short course — or chronic. 4. Pharyngitis can result ... very large tonsils which cause trouble in swallowing and breathing. 5. It is hard to differentiate a viral and a bacterial cause of a sore throat based ... symptoms alone. 6. Symptoms of glossitis include smooth appearance ... the tongue due to Pernicious anemia (vitamin B_{12} deficiency). 7. ... mild cases, topical applications (such as a prednisone mouth rinse that is not swallowed) may be recommended to avoid the side effects of swallowed or injected corticosteroids. 8. Drinking plenty of water and the production of enough saliva, aid ... the reduction of bacterial growth. 9. Anosmia can have a number ... detrimental effects. 10. The common view of anosmia as trivial can make it more difficult ... a patient to receive the same types of medical aid as someone who has lost other senses, such as hearing or sight. 11. A temporary loss of smell can be caused ... a blocked nose or infection. 12. A permanent loss of smell may be caused by damage ... the olfactory nerve or damage to brain areas that process smell (see olfactory system). 13. The lack of the sense of smell ... birth, usually due to genetic factors, is referred to as congenital anosmia. 14. Another specific cause of permanent loss could be ... damage to olfactory receptor neurons because of use of certain types of nasal spray. 15. Polyps are found ... people with allergies, histories of sinusitis and family history. 16. Individuals ... cystic fibrosis often develop nasal polyps.

IV. Learn to speak professional medical English

11. Finish the following definitions

1. External ear includes ….
2. Sinusitis is ….
3. Plastic surgery is used to improve ….
4. Quinsy is ….
5. Otitis media is caused ….
6. Otosclerosis is ….
7. The organ of Corti is contained in the ….
8. Vertigo is a symptom of ….
9. The pharynx contains ….
10. Defective air conduction should be distinguished from ….
12. Miniere's disease is ….
13. Antrum of Highmore is ….
14. The most common inflictions of the external ear are caused by ….
15. Anosmia is ….

16. Epistaxis is ….
17. Occupational deafness is caused by ….
18. The middle ear is formed by ….

12. Read the text and speak about laryngitis

Laryngitis

Laryngitis is the medical term for inflammation and swelling of the larynx, which is also known as the voice box.

Laryngitis is usually caused by a virus or occurs in people who overuse their voice. Occasionally, you may develop laryngitis from bacterial infections and, rarely, from infections such as tuberculosis, syphilis, or a fungal infection. People with prolonged laryngitis should see their doctor to be checked for tumors, some of which may be cancerous. Smokers are especially at risk for cancer.

The most common symptoms of laryngitis are hoarseness, feeling a tickle in your throat, the urge to constantly clear your throat, fever, cough, congestion.

Many times laryngitis may develop with a sore throat.

After a careful examination the doctor will decide on a course of treatment.

Most of the time, the doctor will recommend the home care actions and may prescribe a steroid injection or prescription.

If the doctor is concerned about a bacterial infection causing the laryngitis, then he or she will prescribe a course of antibiotics.

Sometimes, the doctor may choose to observe you in the office or the emergency department for a short period of time in order to be sure you are not getting worse quickly.

If you have any signs of respiratory distress or think your airway could swell and close, then you will be admitted to the hospital.

In some emergency situations, more commonly in children than adults, the danger of your throat swelling shut exists.

It may be necessary to place a breathing tube into your throat in order to breathe for you (the procedure is called intubation).

You will then be placed on a machine to breathe for you called a ventilator.

13. Make up presentation of one of the otolaryngological diseases not mentioned in the lesson.

V. Learn to translate medical articles

14. Translate into Russian

Otitis externa

Otitis externa (also known as «External otitis» and «Swimmer's ear») is an inflammation of the outer ear and ear canal. Along with

otitis media, external otitis is one of the two human conditions commonly called «earache». It also occurs in many other species. Inflammation of the skin of the ear canal is the essence of this disorder. The inflammation can be secondary to dermatitis (eczema) only, with no microbial infection, or it can be caused by active bacterial or fungal infection. In either case, but more often with infection, the ear canal skin swells and may become painful and/or tender to touch.

Pain is the predominant complaint and the only symptom directly related to the severity of acute external otitis. Unlike other forms of ear infections, the pain of acute external otitis is worsened when the outer ear is touched or pulled gently. Patients may also experience ear discharge and itchiness. When enough swelling and discharge in the ear canal is present to block the opening, external otitis may cause temporary conductive hearing loss.

Because the symptoms of external otitis lead many people to attempt to clean out the ear canal (or scratch it) with slim implements, self-cleaning attempts generally lead to additional trauma of the injured skin, so rapid worsening of the condition often occurs.

LESSON 21

OPHTHALMOLOGY

I. Learn to pronounce, write and read English words and medical terms and memorise their Russian equivalents

1. Write in letters

[k**ɔ:**niə], [skl**i**ərə], [kɔndʒʌnkt**ai**və], [**ai**əris], [pj**u:**pil], [trəb**e**kjulə], [r**e**tinə], [kænθəs], [k**æ**rənkl], [t**i**ə], [h**ai**pəmetr**ɔu**piə], [prezbi**ɔu**piə], [æst**i**gmətizm], [strəb**i**zməs], [əktr**ɔu**piən], [blefər**ai**tis], [zænθilæzmə], [ju:vi**ai**tis], [n**i:**vəs], [l**ai**ɔmai**ɔu**mə], [**ai**əridɔudai**æ**lisis], [**e**piskl**i**ərə], [**æ**mbli**ɔu**piə], [k**æ**tərækt], [glɔ:k**ɔu**mə].

2. Write in transcription

Eyelid, globe, refraction, myopia, squint, ptosis, intraocular, keratoconus, luster, episcleritis, cataract, glaucoma, dacryoadenitis, blepharitis, iridocyclitis, melanoma.

3. Read the following medical terms

a) Eyeball, episcleral, pupillary, choroid, conjunctival, corneal, orbital.

b) Aqueous humor, Schlemm's canal, uveal tract, macula lutea, geniculate body, fovea centralis, orbicularis muscle, Meibomian gland, palpebral fissure, punctum lacrimalis, catarrhal conjunctivitis, scleromalacia perforans, Snellen's test types, quadrigeminal bodies, disciform keratitis,

scleromalacia perforans, molluscum contagiosum, ciliary body, optic chiasma, herpes ophthalmicus, keratitis sica.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

The normal eye. The eyeball is so positioned in the orbit that the anterior surface of the cornea is just in line with the superior and inferior orbital margins — a useful relation in the assessment of proptosis. The **cornea** joins the sclera at the limbus, the corneal epithelium of the conjunctiva becoming continuous with the epithelium of the conjunctiva which is adherent here to the underlying episcleral tissue. The anterior chamber is the space enclosed by the cornea anteriorly and the lens and iris posteriorly.

The pupillary margin of the iris is in constant contact with the anterior surface of the **lens,** although aqueous humour is able to flow from the posterior chamber through the pupil into the anterior chamber, from which it drains through the trabeculae into Schlemm's canal. The iris, ciliary body and choroid form a continuous structure called the uveal tract.

The inner layer, the **retina,** is composed of visual purple, made up of rods and cones. The retina has three spots, the macula lutea or yellow spot, the fovea centralis and the optic disc, where it is pierced by optic nerve.

The **eyelids** consist essentially of a plate of condensed fibrous tissue lined internally by conjunctiva and covered externally by the orbicularis muscle and skin. The Meibomian glands are embedded in the tarsal plate and open on the free margin of the lid very close to its posterior border. The inner and outer angles of the palpebral fissure are known as the inner and outer canthi, the caruncle and plica semilunaris can be seen at the inner canthus. The punctum lacrimalis, through which the tears flow, lies in close apposition to the globe and cannot normally be seen unless the lid is everted.

The eye is moved by the eye muscles. The visual pathways include the optic nerves, the optic chiasma, with crossed and uncrossed fibres, the medial and lateral geniculate bodies, the superior quadrigeminal bodies, optic radiations and the occipital cortex.

Visual acuity is tested by reading Snellen's test types; the error is measured by refractions. Errors of refraction are classified as hypermetropia, myopia, presbyopia and astigmatism.

A squint or **strabismus** is a fairly common condition in children. It is treated by prescribing spectacles to correct the error of refraction. If one eye is amblyopic, occlusion of the good eye is often useful. If all fails, operation may be needed to correct the cosmetic defect.

The eyelids may be affected by several diseases. Orbital **cellulitis** is an infection that extends from the nasal sinuses giving rise to acute swelling of the orbital tissue. The condition is serious because of the possibility of meningitis or cavernous sinus thrombosis.

Acute **dacryoadenitis** is rare but may occur as a complication of mumps. A painful swelling appears in the outer region of the upper lid, causing some degree of ptosis. A dermoid cyst as well as a drooping lid on one or both sides is a congenital defect.

Ectropion is a condition in which the lower lid falls away from the globe and becomes everted; in entropion the lid turns inwards and the lashes cause much irritation by rubbing on the cornea.

Inflammatory lesions of the lids include marginal cysts, blepharitis which is chronic inflammation of the lid margin, in severe form it affects the lash follicles, leading to destruction of the lashes and deformity of the lid margin (ulcerative blepharitis) and to molluscum contagiosum, a virus disease. Among skin conditions of the lids contact dermatitis is very common, which may follow the topical application of drugs, cosmetics or any foreign material. The thin skin and loose subcutaneous tissue of the lids predispose to oedema in this region. Local inflammations, renal disease, myxoedema are some of the many causes.

Xanthelasma, deposition of lipid material, does not cause any symptoms but may require excision for cosmetic reasons.

Herpes opthalmicus may occur in the area of the ophthalmic division of the trigeminal nerve.

Haemangioma. neurofibroma. papilloma are **neoplasms** of the lids of benign type. Malignant neoplasms must be excised and careful follow-up examination is necessary for many years.

The most common diseases of the conjunctiva are inflammations; acute catarrhal **conjunctivitis,** vernal, chronic, angular, and viral conjunctivitis.

The cornea, being an avascular structure, is very rarely the site of origin of a tumour. Many new growths, however, arise from the limbus, which is the site of transition from conjunctival to corneal epithelium, and these are grouped together under the title of **bulbar tumours** (epibulbar dermoid, haemangioma, cystic naevus, epithelioma, sarcoma). Inflammations of the cornea include the dendritic ulcer, mycotic ulcer, superficial, interstitial, or disciform keratitis. Keratoconus is of degenerative character. Deficiency of tear production leads to **keratitis sicca,** a characteristic picture in the cornea and conjunctiva which loses its normal lustre and on microscopic examination with the slit-lamp the precorneal tear film can be seen to be reduced.

The sclera may be affected by **episcleritis** probably allergic in nature in some type and by less common scleritis. Scleromalacia perforans is characterized by the appearance of degenerate areas in the sclera.

Acute **iridocyclitis** is accompanied by pain, photophobia lacrimation and blurring of vision. Chronic anterior uveitis occurs in two main types: one caused by granulomatous disease such as tuberculosis and sarcoidosis, is characterized by severe destructive lesions, often with nodules in the iris; the other type is a quiet process involving more particularly the ciliary body.

The lens, being an avascular structure, is never the site of a new growth, but the iris and ciliary body may be the site of tumours similar to those occurring in the choroid, the commonest being neuroectodermal in origin, such as naevus, leiomyoma of the iris, malignant melanoma of the ciliary body or iris, ring sarcoma of the iris. The anterior segment may suffer some trauma. **Perforation wounds** of the cornea frequently involve the iris and lens. The thinnest part of the iris is at its origin from the ciliary body, and a contusion of the eye may tear the iris at this point, causing an iridodialysis. Contusion injuries may rupture the zonule of the lens and cause its dislocation, laterally or downwards.

A wide variety of **foreign bodies** may enter the eye in injuries. The immediate symptoms may be slight, and a small corneal wound is easily overlooked. Radiography of the eye should be taken after every injury in which it is at all possible that a foreign body may have entered the eye. Glass may not be revealed by radiography, an examination with a slit-lamp microscope may enable it to be seen in the anterior segment.

The lens may be affected by congenital, coronary, senile or diabetic **cataract**. Surgical treatment is indicated in most cases.

Glaucoma is a condition in which raised intraocular pressure causes pathological changes in the eye.

5. Answer the following questions

1. What parts does the eye consist of? 2. How is the eyeball positioned? 3. Where do the cornea and the sclera join? 4. Describe the interior chamber. 5. What is the function of the conjunctiva? 6. What do we call the uveal tract? 7. What is the retina composed of? 8. What spots do we distinguish there? 9. Where does the optic nerve enter the eye? 10. Can you describe the structure of the eyelids? 11. Where are the Meibomian glands? 12. What are canthi? 13. Where is the caruncle? 14. What muscles make the eye move? 15. Can the punctum lacrimalis normally be seen? 16. What do you understand under the term the visual pathways? 17. What is used for testing visual acuity? 18. How are the errors of refraction classified? 19. What is squint? 20. How is it treated? 21. What may be useful if one eye is amblyopic? 22. What diseases may affect the eye? 23. Why is orbital cellulitis a serious disease? 24. Describe the symptoms of acute dacryoadenitis. 25. What disease is it associated with? 26. What is meant by ectropion and

entropion? 27. What skin conditions of the lids are very common? 28. What other conditions of the lids can you name? 29. Are the eyes affected by neoplasms? 30. What are the most common diseases of the conjunctiva? 31. Where do tumours usually arise from? 32. What is keratoconus? 33. What is the probable cause of episcleritis? 34. Name the most common diseases of the iris. 35. Do new growths appear in the lens? 36. What parts of the eye may suffer from trauma? 37. What injuries may it cause? 38. What may complicate an injury to the eye? 39. What is used in order to reveal a foreign body in the eye? 40. What diseases may affect the lens?

III. Word study

6. From a list of nouns given below form adjectives

Iris, orbit, cornea, limbus, conjunctiva, sclera, pupil, trabecula, cilia, choroid, uvea, retina, vision, sclera.

7. Form plural

Canthus, macula, naevus, palpebra, retina, trabecula, uvea.

8. Make up English-Russian pairs of words

a) Form, pierce, droop, lead, predispose, group, affect, cause, involve, include, suffer.

Включать, поражать, опускаться, образовывать, группировать, страдать, вызывать, вовлекать, пронизывать, вести, предрасполагать.

b) Retina, cornea, iris, eyelid, choroid, canthus, eyeball, sclera, conjunctiva.

Угол глазной щели, роговая оболочка, глазное яблоко, слизистая оболочка глаза, радужная оболочка, белочная оболочка, сетчатая оболочка, глазное веко, сосудистая оболочка глаза.

9. Find synonyms from the list below

Arise, position, join, test, follow, follow up, tear, drain, occlude, indicate, reveal.

Close, occur, rupture, adhere, accompany, observe, flow, prescribe, find, examine, place.

10. Fill in the blanks with appropriate words from the list below

1. ... is a condition in which the eye's cornea, the front part of the eye, becomes inflamed and is often marked by moderate to intense pain and usually involves impaired eyesight. 2. Children with ... may initially have double vision because of the misalignment of the two eyes in relation to one another. 3. ... is most commonly due to viral or bacterial infection such as mumps, Epstein-Barr virus, staphylococcus, and gonococcus. 4. ... is a flat, yellowish growth on the outside of the eye-

lid, usually close to the nose, composed of fatty material, and is usually a warning sign of high cholesterol levels. 5. ... occurs when the eyeball is slightly longer than usual from front to back, thus causing light rays to focus at a point in front of the retina, rather than directly on its surface. 6. ... is a refraction anomaly in which the refracting power in a vertical and horizontal planes is different; for example the cornea refracts down stronger than across, thus objects both in the near and in the distance are seen with distortions. 7. ... can occur due to any weakening of tissue of the lower eyelid. 8. ... is usually a minor eye infection that is caused by a bacteria or virus, but it can develop into a more serious condition, being the most common cause of red eye and quite contagious. 9. When with age people develop ..., they find they need to hold books, magazines, newspapers, menus and other reading materials at arm's length in order to focus properly. 10. ... is usually caused by direct exposure of the eyes to chemicals, particularly lachrymators, but can also be caused by ocular viral infection such as herpes zoster (i.e. herpetic iridocyclitis). 11. ... is a clouding that develops in the crystalline lens of the eye or in its envelope, varying in degree from slight to complete opacity and obstructing the passage of light. 12. ... refers to a category of eye disorders often associated with a dangerous buildup of internal eye pressure (intraocular pressure or IOP), which can damage the eye's optic nerve that transmits visual information to the brain. 13. ... is an ocular condition characterized by chronic inflammation of the eyelid, the severity and time course of which can vary. 14. Inflammation of the retina in the eye is termed ... . 15. ... is an inflammatory usually a mild, self-limiting, recurrent disease affecting the episcleral tissue that lies between the conjunctiva and the sclera. 16. ... is also known as «long-sight». This means that a child who is «long-sighted» is more likely to see better at «long» distance than «short».

Strabismus, retinitis, xanthelasma, iridocyclitis, myopia, ectropion, conjunctivitis, presbyopia, astigmatism, dacryoadenitis, glaucoma, blepharitis, episcleritis, keratitis, cataract, hypermetropia.

11. Translate the italicized words

1. The results described in the previous article are *in close apposition to* those obtained in the present study. 2. In one patient the lid was *turned inwards* and caused severe pain in the eye. 3. The obtained results were *in line with* those previously described by the German group. 4. The right eye was *covered by* a thick non-transparent band. 5. The anterior chamber of the eye is *enclosed by* the cornea anteriorly and the lens and iris posteriorly. 6. The work was performed *in close contact with* the relatives. 7. The accumulated fluid *drained through* a thin elastic tube introduced through the skin. 8. The temporarily relapse in pa-

tients receiving placebo *made up* 35% comparing with those who were given a treatment. 9. In ectropion the lid *falls away* from the globe and becomes everted. 10. The described study is *continuous with* the study performed two years ago in our laboratory, but the present one was more sophisticated. 11. The patient's eye was *pierced by* a long acute pin. 12. The final samples were *embedded into* the agar gel for further use.

IV. Learn to speak professional medical English

12. Finish the sentences

1. The most common tumours of the iris and ciliary body include … .
2. Snellen's test types are used to … .
3. Strabismus is … .
4. Scleromalacia perforans is characterized by … .
5. Dacryoadenitis is characterized by … .
6. Herpes ophthalmicus may occur … .
7. Benign neoplasms of the lid include … .
8. Glaucoma is … .
9. Xanthelasma is … .
10. Conjunctivitis may be … .
11. Bulbar tumours is a general term, which includes … .
12. Ectropion is … .
13. Inflammations of the cornea include … .
14. Acute iridocyclitis is accompanied by … .
15. The different types of cataract include … .
16. One type of chronic uveitis is characterized by … and the other by … .

13. Read the text and speak about squint

Squint

Squint is a condition where one eye turns inwards, outwards, upwards or downwards while the other eye looks forwards. The misalignment of the eye is caused by an incorrect balance of the eye muscles. The medical name is strabismus.

Squints are common and affect about one in 20 children. They usually develop during the first three years of life, but can appear later. A squint is often spotted in early childhood, sometimes within weeks of a baby being born.

There are four different types of squint. They are classified according to the direction in which the eye turns.

- Esotropia: the eye turns inwards.
- Exotropia: the eye turns outwards.
- Hypertropia: the eye turns upwards.
- Hypotropia: the eye turns downwards.

Hypertropia and hypotropia are less common than esotropia and exotropia.

Squints can also be:

- constant, apparent at all times, or
- intermittent, only apparent at certain times.

The cause, severity and direction of a squint vary from person to person.

It is very important that a squint is picked up and treated as early as possible to avoid vision problems developing. If a squint is identified when a child is young, there is a good chance it will be successfully treated.

In young children, a squint can mean binocular vision fails to develop. This may result in a «lazy eye» (amblyopia). To avoid double vision, the child's brain ignores the signals from the eye with the squint and only recognises images from the normal eye. As the squinting eye is not being used, it eventually becomes «lazy».

In older children, a squint may cause double vision but not result in a lazy eye. This is because their vision has fully developed and their brain is unable to ignore signals from the eye with the squint.

If the vision in a child's squinting eye is poor, they may have to wear a patch over their other eye to encourage the vision in the squinting eye to develop.

V. Learn to translate medical articles

14. Translate the text into Russian

Xanthelasma

Xanthelasma are yellow plaques that occur most commonly near the inner canthus of the eyelid, more often on the upper lid than the lower lid. Xanthelasma palpebrarum is the most common cutaneous xanthoma.

Xanthelasma can be soft, semisolid, or calcareous. Frequently, they are symmetrical; often, 4 lids are involved. Xanthelasma have a tendency to progress, coalesce, and become permanent.

One half of these lesions are associated with elevated plasma lipid levels. Some occur with altered lipoprotein composition or structure, such as lowered high-density lipoprotein (HDL) levels. They frequently occur in patients with type II hyperlipidemia and in the type IV phenotype.

Xanthelasmas are the most common type of xanthoma. They often present in the absence of xanthomas elsewhere on the body, although, histologically, they are the same.

Once plaques are established, they will remain static or increase in size.

Patients generally complain about aesthetic concerns.

Xanthelasmas or xanthoma palpebrarum usually are located on the medial side of the upper eyelids.

Lesions are yellowish and soft, and they form plaques.

Generally, these lesions do not affect the function of the eyelids, but ptosis has been known to occur.

Approximately one half of individuals with xanthelasma have a lipid disorder.

Eruptive xanthomas can be seen in primary and secondary causes of hyperlipidemia.

Examples of primary genetic causes include familial dyslipoproteinemia, familial hypertriglyceridemia, and familial lipoprotein lipase deficiency.

Diabetes that is out of control is a common cause of secondary hyperlipidemia. However, most xanthelasmas occur in normolipemic persons who may have low HDL cholesterol levels or other lipoprotein abnormalities.

LESSON 22

DERMATOLOGY

I. Learn to pronounce, write and read English words and medical terms

1. Write in letters

[epid**ɔ:**mis], [kir**æ**tin**ɔ**us**ai**t], [m**e**l**ə**nin], [k**e**r**ə**tiniz**ei**ʃ**ə**n], [v**ə**r**u:**k**ə**], [k**ɔ**ri**ə**m], [k**ɔ:**p**ʌ**sl], [s**i:**b**ə**m], [fj**u**r**ʌ**nkl], [seljul**ai**tis], [sk**ei**bii:z], [**e**kzi:m**ə**], [p**æ**pju:l], [**æ**kni], [k**ɔ**m**ə**d**ɔ**u], [d**ə:**m**ə**taitis], [h**ə:**piz], [m**e**l**ə**nin], [k**e**r**ə**tin].

2. Write in transcription

a) Ectodermal, columnar, cutaneous, erythematous, apocrine, axilla, dermis, eczematous, syphilis, impetigo, psoriasis, leprosy.

b) Neural crest, prickle cell, stratum granulosum, stratum corneum, cutis vera, dermal papilla, verrucosus plaque.

3. Read the following medical terms

Melanocyte, keratinization, wart, sweat, subcutaneous, sebaceous, anogenital, pustular, intraepidermal, exocrine, mesodermal, erythematous.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Anatomy. The skin is a protective, elastic, waterproof and sensitive organ covering the entire body surface. It consists of two parts. A thin

outer layer, the epidermis, is composed of keratinocytes (keratin-producing cells) of ectodermal origin intermingled with melanin-producing cells, the melanocytes. The melanocytes arise from specialized embryonic ectodermal tissue, the neural crest. The underlying dermis forms the bulk of the skin. In contrast with the epidermis, the dermis is relatively acellular and predominantly fibrous, containing blood vessels. It also contains several structures derived from the embryonic ectoderm although it is of mesodermal origin. The basal layer of the epidermis forms a single row of columnar cells resting on a basement membrane. Among these cells are the pigmented melanocytes. The basal cells constitute a stem cell population that gives rise to a lineage of identical daughter cells, prickle cells or keratinocytes, which pass towards the surface, mature, keratinize and are finally shed. Basal cells continue to divide throughout life and in this respect they resemble the ever active cells in the bone marrow and intestinal epithelium. The process of maturation and keratinization of prickle cells normally takes about four weeks and as each cell passes towards the skin surface it first becomes granular before complete keratinization occurs. The epidermis itself consists of the basement membrane, basal-cell layer, wide prickle-cell layer, narrow granular layer (stratum granulosum) and horny layer (stratum corneum) on the surface.

Specialized structures directly derived from the foetal epidermis include hair, nails and cutaneous glands. These structures arise from proliferation of the undersurface of the epithelium as small bud-like downgrowths which subsequently differentiate.

In the epidermis there are several elements apart from the prickle cells which include specialized cells ensheathing the sweat ducts and hair follicles. Fibres of two main types are seen in the dermis (cutis vera, corium). Collagen fibres, which far outnumber elastic fibres, are responsible for the main mass and resilience of the dermis. Elastic fibres form a subepidermal network and are only thinly distributed elsewhere in the dermis. The dermis and epidermis are nourished by blood vessels that pass upwards from the subcutaneous layer. In the dermis they form relatively small channels (arterioles) which pass towards the undersurface of the epidermis forming a rich capillary network in the dermal papillae. Other structures found in the dermis include veins, lymph vessels, sensory corpuscles, autonomic and sensory nerves. Hair follicles with their attendant hair muscles and cutaneous glands are also situated in the deeper layer of the skin.

Sebaceous glands are found adjoining and partly surrounding hair follicles. They form an appendage to the hair follicle and are composed of groups of lipid containing cells. The glandular content is discharged directly into the lumen of the follicle and the secretion — sebum — lubricates the hair shaft and spreads on to the skin surface. Apocrine

glands are found in close association with hair follicles but are limited in distribution. They occur in the axillae, around the nipples and in the anogenital region. Activity begins at puberty when the apocrine secretion is discharged on to the skin surface near the hair follicle or into the intraepidermal part of the follicular lumen. Exocrine glands are widely distributed over the body surface and are particularly profuse on the forehead, axillae and palms and soles. They have a thermoregulatory function and are innervated by cholinergic fibres of the sympathetic nervous system.

Diseases. Knowledge of the mass migrations, fusions, foldings and minor rearrangements that occur in this complex cell population during foetal development helps our understanding of developmental errors and gives some insight into the curious, apparently haphazard, reactions of groups of cells that occur in the diseased skin. Many common skin diseases show evidence of genetic determination. Any metabolic structural or immunological defect based on protein abnormality is transmitted from one generation to the next according to the rules of Mendelian inheritance.

About 30% of all skin diseases belong to **dermatitis-eczema** group. This group incorporates exogenous or constitutional dermatitis of various patterns. The dermatitis most commonly encountered is the eczematous type characterized by minute vesicles in the epidermis which are visible in florid cases as pinhead size vesicles or papules. Less acute cases may show only redness of the skin to the naked eye. Eczematous dermatitis may be of external or internal origin and the term eczema is sometimes used as a convenient abbreviation to describe such cases.

Psoriasis is a chronic relapsing dermatosis characterized by well demarcated red plaques with a dense adherent white scale. It may occur anywhere on the body surface, especially the knees, elbows and scalp.

Acne is a common disease which manifests itself at puberty. In its mildest form, a few papules and an occasional comedone studded over the forehead or cheeks may be the only sign of this condition. Progressively more severe forms exhibit pustular nodules and cystic lesions.

Bacterial infections such as boils (furuncles), cellulitis, impetigo, tuberculosis of the skin, syphilis and leprosy are of increasing importance. The commonest organisms in skin infections are the staphylococci and streptococci.

The commonest **viral diseases** which affect the skin are warts (verrucae) and herpes. Warts are single or multiple and may coalesce to form a verrucose plaque. Common warts are seen mostly on the fingers, hands and knees. Infection with herpes may be preceded by general malaise. The eruption is characteristically unilateral and

segmental with vesicles set on an erythematous base. Vesicles are grouped, tend to run together and may be 1 mm – 1 cm in diameter. In severe instances haemorrhage or local necrosis may be seen at the site of the lesions.

Scabies belongs to **parasitic infestations.** It used to be a common contagious disease, caused by the itch mite, *Sarcoptes scabiei.* Scabies is characterized by intense itching mainly at night. The eruption is most marked over the fingers, wrist, elbows, lower abdomen, thighs, waist, axillae, external genitals and in women around the areola of the breast.

Cutaneous changes may be also produced by metabolic disorders, neurological diseases, abnormalities of endocrine function and systemic diseases.

Recently there have been many changes affecting the practice of dermatology. The advent of antibiotics and steroids brought about a revolution in the method and scope of the treatment. However, clinical experience and correct diagnosis are essential if the best use is to be made of the "wonder drugs". Dermatology has an increasingly important place in the science of medicine because of the interrelationship between systemic disease and abnormalities of the skin.

5. Answer the following questions

1. What is the function of the skin? 2. What does the skin consist of? 3. What does the epidermis consist of? 4. What is the origin of keratin-producing cells? 5. Where do the melanocytes originate? 6. What is the difference between the dermis and epidermis? 7. What structures can be found in the dermis? 8. How are the cells in the basal layer of the epidermis arranged? 9. Where are the pigmented melanocytes found? 10. How do the basal cells divide? 11. When do the basal cells divide? 12. How long does the process of maturation and keratinization of prickle cells take? 13. What structures are derived from the foetal epidermis? 14. Where do these specialized structures originate and what do they look like? 15. How many types of fibres are there in the dermis? 16. What are collagen fibres responsible for? 17. How are the dermis and epidermis nourished? 18. Where are hair follicles, hair muscles and cutaneous glands situated? 19. What types of glands are there in the skin? 20. What is the function of sebaceous glands? 21. Where are the apocrine glands situated? 22. When does the activity of apocrine glands begin? 23. Where is the apocrine secretion discharged to? 24. How are the apocrine glands distributed? 25. What are the causes of dermatitis? 26. What is dermatitis characterized by? 27. How many types of dermatitis do you know? 28. What are the commonest parasitic infestations? 29. What are cutaneous changes produced by?

III. Word study

6. Form adjectives, using one of the following suffixes: -ive, -al, -ic, -ar, -ous

Epidermis, keratinocyte, metabolism, protection, embryo, staphylococcus, cell, column, epithelium, granule, cutis, follicle, papilla, corpuscle, sebum, lumen, foetus, eczema, papule, pustule, cyst, segment, vesicle, erythema, eruption.

7. Make up English-Russian pairs of words

Attendant, occasional, essential, waterproof, horny, intense, common, profuse, single, convenient, predominant, responsible.

Преимущественный, водонепроницаемый, роговичный, глубокий, обильный, случайный, частый, ответственный, удобный, отдельный, сопутствующий, существенный.

8. Make up synonyms

a) Intermingle, shed, ensheath, manifest, advent, limit, adjoin, discharge, nourish, derive, transmit, coalesce.

Development, remove, enclose, transfer, unite, restrict, exhibit, border, excrete, supply, mix, arise.

b) Basement, resilience, evidence, pattern, relapse, distribution, scope, association, insight.

Connection, spread, character, elasticity, recurrence, range, proof, base, understanding.

9. Make up chains of words corresponding to Russian

1. Защищать — защита — защитный.
   Protect —
2. Чувствовать — чувство — чувствительный.
   Sense —
3. Производить — производство — продуктивный.
   Produce —
4. Специализироваться — специализация — специальный.
   Specialize —
5. Происходить — происхождение — производный.
   Derive —
6. Продолжать — продолжение — непрерывный.
   Continue —
7. Делить — деление — делящийся.
   Divide —
8. Включать — включение — включающий.
   Include —
9. Распространяться — распространение — распространяющийся,
   Proliferate —

10. Смазывать — смазывание — смазывающий.
    Lubricate —
11. Связывать — связь — связывающий.
    Associate —
12. Возникать — возникновение — возникающий.
    Occur —
13. Определять — определение — определяющий.
    Determine —
14. Передавать — передача — передающийся.
    Transmit —
15. Наследовать — наследование — наследуемый.
    Inherit —

10. Fill in the blanks with the words from the list below

1. ... is a deep infective folliculitis, almost always caused by infection by the bacterium Staphylococcus aureus, resulting in painful swollen area on the skin caused by an accumulation of pus and dead tissue. 2. ... can be caused by normal skin flora or by exogenous bacteria, and often occurs where the skin has previously been broken: cracks in the skin, cuts, blisters, burns, insect bites, surgical wounds, or sites of intravenous catheter insertion. 3. ... is a very contagious skin condition that is caused by a mite which cannot live more than three days without a human host, but it can survive up to a month when living on a human. 4. ... is primarily a granulomatous disease of the peripheral nerves and mucosa of the upper respiratory tract; skin lesions are the primary external sign. 5. ... is a common condition that usually isn't life-threatening or contagious, but it can make you feel uncomfortable and self-conscious. 6. ... is a slightly raised and circular in shape, with a thickened rim of surrounding skin, the surface of which may have black dots («pepper-pot» appearance). 7. ... is an infection that is caused by a herpes simplex virus causing cold sores around the mouth or face. 8. ... is a highly contagious bacterial skin infection most common among pre-school children. 9. ... is a chronic, autoimmune disease that appears on the skin when the immune system sends out faulty signals that speed up the growth cycle of skin cells, though the disease is not contagious. 10. ... is usually caused by excessive oil developing on the skin, when the latter is overloaded with oil and has no other choice but to start forming a bump that ends up being filled with pus. 11. ... is a range of persistent skin conditions, which include dryness and recurring skin rashes that are characterized by one or more of these symptoms: redness, skin edema (swelling), itching and dryness, crusting, flaking, blistering, cracking, oozing, or bleeding.

Eczema, cellulitis, impetigo, leprosy, furuncle, verruca, psoriasis, acne, dermatitis, scabies, herpes.

IV. Learn to speak professional medical English

11. Finish the sentences

1. The skin is ….
2. The epidermis is ….
3. The dermis is ….
4. Stem cell population gives rise to ….
5. Basal cells resemble ….
6. The epidermis consists of ….
7. Collagen fibers are responsible for ….
8. Structures found in the dermis include ….
9. Sebum lubricates ….
10. Sebaceous glands form ….
11. Apocrine glands are found ….
12. Exocrine glands are distributed in ….
13. Dermatitis-eczema group of diseases incorporates ….
14. Dermatitis is characterized by ….
15. Psoriasis is ….
16. Acne is ….
17. Scabies is characterized by ….
18. Warts are ….
19. Metabolic disorders may produce ….
20. Skin bacterial diseases include ….

12. Read the text and speak about psoriasis

What is Psoriasis?

Psoriasis is a medical condition that occurs when skin cells grow too quickly. Faulty signals in the immune system cause new skin cells to form in days rather than weeks. The body does not shed these excess skin cells, so the cells pile up on the surface of the skin and lesions form.

The lesions vary in appearance with the type of psoriasis. There are five types of psoriasis: Plaque, guttate, pustular, inverse, and erythrodermic. About 80 % of people living with psoriasis have plaque psoriasis, also called «psoriasis vulgaris». Plaque psoriasis causes patches of thick, scaly skin that may be white, silvery, or red. Called plaques, these patches can develop anywhere on the skin. The most common areas to find plaques are the elbows, knees, lower back, and scalp.

Psoriasis also can affect the nails. About 50 % of people who develop psoriasis see changes in their fingernails and/or toenails. If the nails begin to pull away from the nail bed or develop pitting, ridges, or a yellowish-orange color, this could be a sign of psoriatic arthritis. Without treatment, psoriatic arthritis can progress and become debilitating. It is important to see a dermatologist if nail changes begin or joint pain develops. Early treatment can prevent joint deterioration.

Psoriasis is not contagious. You cannot get psoriasis from touching someone who has psoriasis, swimming in the same pool, or even intimate contact. Psoriasis is much more complex.

Psoriasis can begin at any age, from infancy through the golden years. There are, however, times when psoriasis is most likely to develop. Most people first see psoriasis between 15 and 30 years of age. About 75% develop psoriasis before they turn 40. Another common time for psoriasis to begin is between 50 and 60 years of age.

For some people, psoriasis is a nuisance. Others find that psoriasis affects every aspect of their daily life. The unpredictable nature of psoriasis may be the reason. Psoriasis is a chronic (lifelong) medical condition. Some people have frequent flare-ups that occur weekly or monthly. Others have occasional flare-ups.

When psoriasis flares, it can cause severe itching and pain. Sometimes the skin cracks and bleeds. When trying to sleep, cracking and bleeding skin can wake a person frequently and cause sleep deprivation. These cycles of flare-ups and remissions often lead to feelings of sadness, despair, guilt and anger as well as low self-esteem. Depression is higher in people who have psoriasis than in the general population. Feelings of embarrassment also are common.

13. Speak about one of dermatologic diseases

V. Learn to translate medical articles

14. Translate the text

Eczema

Eczema is a chronic skin condition that causes the skin to become itchy, reddened, dry and cracked.

Atopic eczema is the most common form of eczema, and mainly affects children. The exact cause of atopic eczema is unknown, but it often occurs in people who are prone to allergies («atopic» means sensitivity to allergens).

Approximately three in 10 people who visit their GP with a skin problem are diagnosed with atopic eczema. The number of people who are diagnosed with it has increased in recent years. Males and females are affected equally, as are people from different ethnic backgrounds.

About eight in 10 atopic eczema cases occur before a child reaches five years of age. Many children develop it before their first birthday.

Atopic eczema can vary in severity. Some people are only mildly affected and have small areas of dry skin, which are occasionally itchy. Others may experience more severe symptoms, such as cracked, sore and bleeding skin.

For most children with atopic eczema, it clears up or significantly improves as they get older. In approximately 53% of young chil-

dren with atopic eczema, it clears up by the time they reach 11, and in 65% of cases it clears up by the age of 16.

People with severe eczema often find that it has a significant impact on their daily lives. It may be difficult to deal with, both physically and psychologically. However, there are many different treatments that can help control symptoms and manage the eczema.

15. Translate the text into English

Герпес представляет собой вирусное заболевание, возбудителем которого является вирус.

Известно множество разновидностей вируса герпеса, из которых восемь видов могут вызывать различные заболевания человека.

Установлено, что 90% населения Земли заражено данным вирусом (латентная инфекция). Этот вирус наделен замечательной способностью выживать в тканях организма на протяжении долгого времени. Некоторые виды данного вируса могут пожизненно присутствовать в чувствительных ганглиях спинного мозга. При этом далеко не у всех латентная инфекция переходит в активную. Факторами, облегчающими такой переход, являются снижение иммунитета, хронический стресс, обострение хронических заболеваний, гиповитаминоз, нарушение функции эндокринных желез и обмена веществ в организме, загрязнение окружающей среды.

LESSON 23

THE UROGENITAL SYSTEM

I. Learn to pronounce, write and read English words and medical terms

1. Write in letters

a) [perin**e**frik], [ædr**i:**nəlz], [glɔm**e**rələs], [h**ai**ləm], [juər**i:**tə], [juər**i:**θrə], [j**u**ərinɔmitə], [j**u**əriə], [gl**ai**kɔusj**u**əriə], [f**e**nilk**i:**tɔunj**u**əriə], [sist**ɔ**skəpi], [juər**i:**miə], [p**ai**ələnefr**ai**tis], [sist**ai**tis], [prɔstət**e**ktəmi].

b) [dai**ə:**nəl], [j**u**əreit], [kriætini:n], [**æ**mileiz], [nɔkt**ə:**nəl], [p**i**rəmid], [**æ**ldɔst**i**ərɔun], [j**u**ərɔubail**i**nɔudʒen].

2. Write in transcription

Apex, papilla, penis, tubule, urine, urochrome, polyuria, urate, bicarbonate, albuminuria, haematuria, pyelography, pyelitis, glomerulus.

3. Read the following medical terms

Capsule, medulla, micturition, prostate, nephron, specimen, cystitis, sediment, creatinine, ketone, cytoscope, calculus, glomerulonephritis.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Kidneys are the central organs of the urinary system. They are bean-shaped, retroperitoneal, urine-secreting glands, one on either side of the vertebral column, embedded in a special kind of firm perinephric fat, and supporting the **adrenals.**

Macroscopic examination reveals the kidney as consisting of the **capsule,** the cortex — granular in appearance because of the presence of **glomeruli,** the **medulla,** made up of 10 to 20 renal pyramids with their apices or papillae projecting into the **renal** pelvis, a funnel-shaped structure in the hilum which narrows to a slender tube, the **ureter.** The ureter passes straight down the back of the abdomen into the urinary **bladder,** a flexible muscular bag designed to receive a continuous dribble of urine from the kidneys and to store up to half a litre of it. The **urethra** by which the bladder empties during micturition (voiding, passing water) opens from the lowest point. It is guarded by a sphincter muscle which relaxes when the main muscle of the bladder is allowed to contract. The female urethra is short, passing bellow the pubis to open in front of the vagina. The male urethra passes downwards through the **prostate gland** before turning forwards to run the length of the penis; unlike the former, it is constituted to receive sperms from the **vas deferens** which joins it near the prostate gland.

From either side of the aorta a large **renal artery** enters the renal pelvis carrying about 70 litres of blood an hour. The blood, filtered by the kidneys, returns to the vena cava by way of the **renal veins.**

The working unit of the kidneys is the **nephron.** A small arteriole, a twig of the renal artery, it forms a tangle of fine capillary vessels, the so-called glomerular tuft. This is ensheathed in **Bowman's capsule,** which in turn drains into the proximal and distal convoluted renal tubules with **Henle's loop** connecting them. It is there that the large amount of fluid delivered from Bowman's capsule is condensed to a relatively small amount of urine. This process is called selective reabsorption. In the case of salt, reabsorption is adjusted to need.

Under average conditions a man passes about 1.5 litres of urine daily. Normally, over 99 per cent of the glomerular filtrate — 120 c.c. per minute or 160 litres daily — returns to the blood. However, slight downward changes in reabsorption can greatly increase this amount giving rise to a complaint called frequency (either diurnal or nocturnal).

The release of ADH (antidiuretic hormone), in response to slight changes in the dilution of blood, is governed by the pituitary gland. (Lack of ADH is the cause of a rare condition, diabetes insipidus which

makes the patient pass up to 20 litres of urine a day, the result of poor reabsorption of the glomerular filtrate.) The amount of salt in the urine is determined by aldosterone, a hormone from the adrenal glands.

Examining the urinary system

Kidneys are best examined indirectly by testing the urine, the abnormalities of which are often valuable clues in diagnosis. Urine specimens are, as a rule, tested for:

Quantity — taking into account the fluid intake and the amount of fluid lost from the body by routes other than the kidney (e.g. perspiration).

Colour — this is due to several pigments, urochrome and urobilinogen in particular. The presence of bile gives urine a greenish-orange colour, that of blood makes the urine look smoky and pale reddish, that of pus gives it a white opacity, whereas in polyuria it is very pale as it is highly diluted.

Odour — normal urine has only a faint smell; in diabetes mellitus the presence of acetone may give it a sweetish odour, while in cystitis urine may have an offensive fishy smell etc.

Specific gravity (S.G.) — taken with a urinometer and varying, under normal conditions, between 1,015—1,025, S.G. is likely to be higher in a febrile state with diminished output of urine, and lower where there is increased output, though this is not the case in diabetes mellitus.

Sediment — thus e.g. a white sediment is usually an indicator of phosphates, while a pinkish curdy deposit is due to an excess of urates. Deposits are either unorganized or organized, in which case they may include blood or pus cells, epithelial, cellular and granular parasites etc.

The presence (absence or excessive proportion) **of substances** a) normally occurring in the urine (Nad, urea, bicarbonates, sulphates, creatinine, amylase etc.), b) present only under pathological conditions 1) **protein** (in albuminuria), the simplest test being to curdle the urine by boiling. The degrees of albuminuria are referred to as a trace, a faint cloud, a fair cloud, a heavy cloud, or solid, 2) **blood** (haematuria), using reagent strips to indicate a small, moderate, or large urinary concentration of blood, 3) glucose (in glykosuria), using Benedict's or Fehling's tests, 4) **ketone bodies** (in diabetes), 5) **bile pigments** (in jaundice), 6) **phenylketones,** again using reagent strips to detect phenylketonuria.

Other methods of urinary tract examination include:

Intravenous pyelography — radiographic visualization of the renal pelvis and ureter by injecting a radio-opaque liquid (iodine compounds) into the blood stream.

Retrograde or ascending pyelography – the same aim is achieved by delivering the contrast medium into the renal pelvis or ureter by way of a fine catheter introduced through a cystoscope.

Cystoscopy – using a specially adapted endoscope for the optical examination of the inside of the bladder. A local anaesthetic is usually instilled before the instrument is passed. **The Addis count** – to establish the exact proportion of cells and casts in the urine.

Common diseases of the urinary system

Renal oedema – is rather an effect of renal insufficiency than a disease, in itself. It is due either to leakage of protein through the defective nephrons or failure of the diseased kidneys to excrete enough salt. The general signs of oedema include puffiness under the eyes, swelling of the ankles, pallor and, in the early stages, albuminuria.

Renal colic – often associated with nephritis or cystitis, is due to calculi, mineral deposits, lodged in the ureter or renal pelvis that obstruct the urinary flow and give rise to severe spasms. The pain is often referred to the back or it may travel from the loin to the groin. Surgical removal of urinary stones is often the only solution available.

Uraemia – is a clinical syndrome due to renal failure characterized by gross biochemical disturbance in the body, including retention of urea and other nitrogenous substances in the blood. There is polyuria, headache, vomiting, dimness of vision, convulsions and coma. Depending on the cause, the condition may or may not be reversible.

Pyelitis – inflammation of the renal pelvis due to bacterial infection. If the infection spreads outwards from the pelvis to the cortex, the more precise term is pyelonephritis. The condition is either acute or chronic. The acute form of rightsided pyelonephritis, characterized by signs ranging from vague illness to severe pains and febrile states, can often mimic appendicitis.

Nephritis – the term embraces a group of inflammatory conditions or inflammatory-like reactions, focal or diffuse. There may be simple nephritis (usually the result of streptococcal infection), nephrotic nephritis (of unspecified aetiology and characterized by massive oedema and heavy albuminuria), and chronic nephritis (with generalized fibrous replacement of renal tissue, renal failure, arteria hypertension and uraemia often terminating in death).

Glomerulonephritis – bilateral, non-suppurative inflammation of the glomeruli. The more severe cases of this form of arteritis may give rise to optic neuritis and result in loss of sight.

Cystitis – may be acute or chronic, primary or secondary as a result of mechanical irritation from crystalline deposits in the urine. The condition is more frequent in females as the urethra is short.

Enlargement of the prostate – a common complaint in middle-aged and old males. Swelling (benign or malignant) of the glandular tissue may obstruct the flow of urine and in time make it impossible to empty the bladder completely thus adding excessive load on the kidneys. Prostatectomy is either retro-pubic, transurethral or transvesical.

5. Answer the following questions

1. Describe the appearance and location of the kidneys. 2. What is the anatomical composition of the kidney? 3. How is micturition effected? 4. What is the difference between the male and the female urethras? 5. What happens with blood entering and leaving the kidneys? 6. What is the principle of selective reabsorption? 7. How is the urinary system affected by the pituitary gland? 8. What is the matter with a patient who complains of frequency? 9. What is the anatomy of a nephron? 10. Why are urine specimens examined to test renal function? 11. What is the urine tested for in the laboratory? 12. How is the urine tested for specific gravity and why? 13. What diagnostic data are obtained by testing the urine for colour? 14. What complaint is given out by a sweetish odour of the urine? 15. What kinds of deposits and casts do you recognize? 16. How is the presence of protein in albuminuria brought out? 17. What is the difference between intravenous and retrograde pyelographies? 18. How is cystoscopy performed and why? 19. What is the Addis count performed for? 20. What is renal oedema due to? 21. What complaints are often accompanied by renal colic? 22. What are the clinical manifestations of renal colic? 23. Why is uraemia so grave a condition? 24. Why may pyelitis or pyelonephritis be mistaken for appendicitis? 25. What are the clinical manifestations of nephritis? 26. What types of nephritis do you recognize? 27. What are the implicit dangers of glomerulonephritis? 28. What are the usual causes of cystitis? 29. Why is cystitis more frequent in females than in males? 30. What kinds of surgical treatment are used to cope with an enlargement of the prostate?

III. Word study

6. Make up plural forms

Glomerulus, apex, papilla, urethra, cystitis, ketone, cystoscopy, calculus, medium, focus.

7. Make up English-Russian pairs of words

Voiding, column, frequency, retention, cortex, tubule, trace, dilution, adrenals, puffiness, pelvis, pallor, specimen, pubis, opacity, medulla, output, intake, dribble, indicator, cast.

Поглощение, каналец, столб, отечность, опорожнение, показатель, лобок, цилиндр, кора, задержка, разведение, костный мозг,

выделение, частота, бледность, след, помутнение, лоханка, проба, струйка, надпочечник.

8. Make up adjectives, using one of the suffixes from the list below

Urethra, papilla, nitrogen, urine, prostate, apex, glomerulus, calculus, bile, cystoscope, ureter, pyelography, polyuria, pyramid, oedema, nephron, ketone.

-ary, -al, -ic, -ous, -ar

9. Make up synonyms

Embed, reveal, make up, guard, receive, deliver, occur, inject, achieve, adjust, establish, excrete, obstruct, embrace, empty.

Introduce, adapt, place, compose, include, supply, void, show, define, get, reach, release, regulate, present, occlude.

10. Fill in the blanks with the words from the list below

1. ... is a capillary tuft that performs the first step in filtering blood to form urine. 2. Glomerulus is surrounded by ... in nephrons of the vertebrate kidney. 3. A glomerulus and its surrounding Bowman's capsule constitute a ..., the basic filtration unit of the kidney. 4. The ... is a part of the male anatomy of many vertebrates; they transport sperm from the epididymis in anticipation of ejaculation. 5. In the kidney, ... is a portion of the nephron that leads from the proximal straight tubule to the distal convoluted tubule. 6. In mammals, the ... are the triangular-shaped endocrine glands that sit on top of the kidneys. 7. Situated along the perimeter of the adrenal gland, the ... mediates the stress response through the production of mineralocorticoids and glucocorticoids, including aldosterone and cortisol, respectively. It is also a secondary site of androgen synthesis. 8. The ... are the veins that drain the kidney. 9. The ... is the funnel-like dilated proximal part of the ureter in the kidney.

Glomerulus, vas deference, Henle's loop, Bowman's capsule, adrenal glands, adrenal cortex, renal veins, renal pelvis, renal corpuscle.

11. Fill in the blanks with the necessary prepositions from the list below

1. ... anatomy, the urethra is a tube that connects the urinary bladder to the genitals for removal out of the body. 2. In males, the urethra travels ... the penis, and carries semen as well as urine. 3. The integrity of the urethra can be determined ... a procedure known as retrograde urethrogram. 4. There are small mucus-secreting urethral glands, that help protect the epithelium ... the corrosive urine. 5. The external urethral orifice is lined ... stratified squamous epithelium. 6. Kidneys are located near the middle of the back, just ... the rib cage, one on each

side of the spine. 7. In the nephron, a glomerulus — which is a tiny blood vessel, or capillary—intertwines ... a tiny urine-collecting tube called a tubule. 8. ... first, the tubules receive a combination of waste materials and chemicals the body can still use. 9. Every year, thousands of people donate one of their kidneys ... transplantation to a family member or friend. 10. Damage ... the nephrons can happen quickly, often as the result of injury or poisoning. 11. Diabetes is a disease that keeps the body ... using glucose, a form of sugar, as it should. 12. The damaged vessels cannot filter wastes ... the blood as they are supposed to. 13. Several types of kidney disease are grouped together ... this category, including autoimmune diseases, infection-related diseases, and sclerotic diseases. 14. As the name indicates, glomerular diseases attack the tiny blood vessels, or glomeruli, ... the kidney. 15. Blood pressure control is important ... any kidney disease. 16. Some hereditary kidney diseases may not be detected ... adulthood. 17. Poisons and trauma, such as a direct and forceful blow ... the kidneys, can lead to kidney disease. 18. Acute kidney injury may lead ... permanent loss of kidney function. 19. A person may have «silent» kidney disease ... years. 20. People ... the early stages of chronic kidney disease usually do not feel sick at all. 21. Because a person can have kidney disease ... any symptoms, a doctor may first detect the condition through routine blood and urine tests. 22. At first, only small amounts of albumin may leak ... the urine, a condition known as microalbuminuria, a sign of deteriorating kidney function. 23. A doctor may test ... protein using a dipstick in a small sample of a person's urine taken in the doctor's office. 24. Creatinine is a waste product in the blood created ... the normal breakdown of muscle cells during activity. 25. Blood carries protein to cells ... the body.

Into, in, through, to, throughout, below, from, with, within, at, for, under, with, until, by.

12. Give Russian equivalent to the italicized words

1. *It is* pelvic pain syndrome, the micturition urgency, the premature ejaculation, the infertility, the impotence, the incontinence *that* serve the differential symptoms of prostatitis. 2. *As much as* 30.7% of patients with diabetes mellitus (27 patients) had bacteremia. 3. *As far as* practically all cases of pyelonephritis are due to bacterial infections, antibiotics are the mainstay of treatment. 4. It often affects young males *as soon as* 24—48hrs after an upper respiratory tract or gastrointestinal infection. 5. It is usually diagnosed in kidney dialysis patients when the glomerular filtration rate, a measure of kidney function, is *as low as* 50% of normal. 6. *It was* in 1827 *that* these common symptoms of kidney disease were first described by the English physician Richard Bright. 7. *It was* this finding *that* allowed us to make a diffe-

rential diagnosis. 8. The results showed that this therapy was *no more* effective *than* that used by Japanese group. 9. *It was* sir William Bowman *who* in 1842 presented his paper «*On the Structure and Use of the Malpighian Bodies of the Kidney*» to the Royal Society and was awarded the Royal Medal. 10. In the control group of patient placebo was *no less* effective *than* the suggested drug therapy. 11. The results of the treatment were so poor since the patient was hospitalized *as late as* the changes became irreversible. 12. *It was* Dr. Kurasava's article *that* prompted us to perform this experiment. 13. *It was not until* the advent of this method of treatment *that* the sufferings of patients were reduced nearly to minimum. 14. The death rate was *as high as* 20 % of all the patients admitted. 15. The follow up period was *as long as* 1,5 years, which was not enough to make reliable conclusion concerning the efficiency of the therapy used. 16. There were *as many as* 60 % of patients in whom the remission was registered.

13. Fill in the blanks with appropriate words from the list below

1. Inflammation of the renal pelvis due to bacterial infection is known as ….. 2. Calculi, mineral deposits, severe pain often referred to the back or travelling from the loins to the groin are often associated with ….. 3. Swelling of the glandular tissue obstructing the flow of urine and making it impossible to empty the bladder completely is a symptom of ….. 4. The condition characterized by signs ranging from vague illness to severe pains and febrile states, often mimicking appendicitis is knows as ….. 5. Mechanical irritation from crystalline deposits in the urine is characteristic for ….. 6. Generalized fibrous replacement of renal tissue, renal failure, arterial hypertension and uremia are indicative of ….. 7. Puffiness under the eyes, swelling of the ankles, pallor, and albuminuria may be the signs of ….. 8. Streptococcal infections may result in ….. 9. … is characterized by massive oedema and heavy albuminurea. 10. In … there is polyuria, headache, vomiting, dimness of vision, convulsions and coma. 11. The disease manifested by isolated hematuria and/or proteinuria; or as a nephrotic syndrome, a nephritic syndrome, acute renal failure, or chronic renal failure is termed as … . 12. Presence of red blood cells (erythrocytes) in the urine is a first sign of …..

Renal colic, chronic nephritis, uremia, pyelonephritis, simple nephritis, glomerulonephritis, cystitis, prostatitis, haematouria, renal oedema, pyelitis, nephrotic nephritis.

IV. Learn to speak professional medical English

14. Finish the sentences

1. Renal oedema is ….
2. Renal colic is ….
3. Uraemia is ….

4. Pyelitis is ….
5. Nephritis is ….
6. Glomerulonephritis is ….
7. Cystitis is ….

15. Read the text and retell it

Acute pyelonephritis

Acute pyelonephritis is a potentially organ- and/or life-threatening infection that characteristically causes some scarring of the kidney with each infection and may lead to significant damage to the kidney (any given episode), kidney failure, abscess formation (e.g., nephric, perinephric), sepsis, or sepsis syndrome/shock/multiorgan system failure. More than 250,000 cases occur in the United States each year (1995 estimate), and approximately 200,000 patients require hospitalization (1997 data). Wide variation exists in the clinical presentation, severity, options, and disposition of acute pyelonephritis.

Diagnosing and managing acute pyelonephritis is not always straightforward. In the age range of 5—65 years, it typically presents in the context of a symptomatic (e.g., dysuria, frequency, urgency, gross hematuria, suprapubic pain) urinary tract infection (UTI) with classic upper urinary tract symptoms (e.g., flank pain, back pain) with or without systemic symptoms (e.g., fever, chills, abdominal pain, nausea, vomiting) and signs (e.g., fever, costovertebral angle tenderness) with or without leukocytosis. However, it can present with nonspecific symptoms.

16. Read the text and make short account in English

Гематурия

Патогенез гематурии при различных заболеваниях почек и мочевых путей неодинаков. Так, у больных гломерулонефритом появление микрогематурии связано с повышением проницаемости базальных мембран клубочковых капилляров, увеличением диаметра пор в них, в результате эритроциты свободнее и в превышающем норму количестве проходят через клубочковый фильтр. При тяжелом и бурном течении острого и обострении хронического гломерулонефрита выраженная гематурия (иногда в виде макрогематурии) может быть обусловлена разрывом в отдельных участках стенок клубочковых капилляров и поступлением из них крови в полость капсулы Шумлянского—Боумена, а затем в просвет канальцев, где эритроциты не реабсорбируются и выделяются в большом количестве с мочой. При мочекаменной болезни появление гематурии связано с повреждением слизистой оболочки мочеточника или мочевого пузыря конкрементом, особенно если он имеет неровную

поверхность и острые края. У больных туберкулезом почек, с опухолями почек и мочевого пузыря, она возникает вследствие разрушения ткани почки и повреждения расположенных в ней сосудов. Развитие ее при капилляротоксикозе обусловлено повышением ломкости и проницаемости стенок клубочковых капилляров.

Гематурия бывает кратковременной и преходящей, может появляться периодически и иметь перемежающееся течение (интермиттирующая гематурия). Она может быть и стойкой, упорной, сохраняться в течение многих месяцев и лет. Эти особенности гематурии представляют большое диагностическое значение и должны оцениваться в комплексе с другими клиническими и лабораторными признаками при постановке диагноза.

V. Learn to translate medical articles

17. Translate the text into Russian

Interstitial cystitis

Interstitial cystitis (IC) is a clinical syndrome characterized by daytime and nighttime urinary frequency, urgency, and pelvic pain of unknown etiology. Interstitial cystitis has no clear etiology or pathophysiology and undefined diagnostic criteria. Despite considerable research, universally effective treatments do not exist for interstitial cystitis, and therapy usually consists of various supportive, behavioral, and pharmacological measures. Surgical intervention is very rarely indicated.

LESSON 24

GYNAECOLOGY AND OBSTETRICS

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

a) [vʌlvə], [vədʒ**ai**nə], [perim**i:**triəm], [m**ai**əm**i:**triəm], [h**i:**mətɔuk**ɔ**lpəs], [**i:**strədʒən], [**ei**menər**i:**ə], [m**e**nər**ei**dʒə], [s**æ**lpiŋgɔụ ɔuɔfər**ai**tis], [s**i**stædin**ɔu**mə], [f**i:**təs], [pjuəp**e**riəm] [**e**ndɔum**i**tri**ɔu**sis], [ikl**æ**mpsiə], [pləs**e**ntə].

b) [m**ə**nz v**i:**nəris], [l**ei**biə min**ɔ:**rə], [l**ei**biə mædʒ**ɔ:**rə], [fæl**ɔu**piən tj**u:**b], [gr**ei**fiən f**ə**liklz], [k**ɔ**:pəs lj**u:**tiəm].

2. Write in transcription

Chromosome, perinium, clitoris, hymen, uterus, endometrium, introitus, vulvovaginitis, adhesion, dysmenorrhoea, endometritis, fibromyoma, menopause, ovum.

3. Read the following medical terms

Fundus, cervix, hydrocolpos, puberty, menstruation, salpingitis, vaginitis, endometritis, adenosis, cervicitis, eclampsia, placenta, infertility.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Normal or abnormal development of the genital organs depends initially on the arrangement of the sex chromosomes (XY in men and XX in women). Intersexuality may occur because of abnormality in the sex chromosomes, because of gonadal defects or absence of gonads. The child born with such abnormality should be assigned to the sex for which it can by surgery be made adequate.

The **female reproductive organs** are divided into the external and internal genitals. The external genitals are known as the vulva and include the mons veneris, labia majora, labia minora, perineum, clitoris and hymen. The internal reproductive organs are the ovaries, Fallopian tubes, uterus and vagina. The ovaries are covered with a layer of germinal epithelium consisting of primary follicles and stoma. The primary follicles develop into Graafian follicles which rupture and become filled with blood clots, developing into the corpus luteum. The **uterus** consists of a body with a fundus and the cervix with its internal and external ora. The walls of the uterus are made up of three layers, the perimetrium, myometrium and endometrium.

Several genital tract **malformations** may be found. The presence of a septum extending over some or all of the uterine cavity may come to light as a case of repeated unsuccessful pregnancy.

The uterus may be absent or of such rudimentary development as to be incapable of function. This type of anomaly is usually found when the vagina is also absent. Secondary sexual characteristics should be present, since the ovaries are normally developed. Vulval development should be normal apart from the absence of vaginal introitus. Once the diagnosis is certain, consideration must be given to the construction of an artificial vagina.

In haematocolpos an imperforate membrane may be referred to as an imperforate hymen. Incision of the membrane and release of the retained blood is all that is required. **Hydrocolpos** is treated similarly.

The commonest gynaecological disorder of childhood — vulvovaginitis is presented with a vaginal discharge and vulval soreness. Labial adhesion is a simple condition not uncommon in young girls. Oestrogen cream may be applied, the adhesions usually separate spontaneously in some 10—14 days.

In puberty hormonal, ovarian and uterine changes appear. Sexual development must be considered precocious if there is breast and pubic

hair growth before the age of 8 years or menstrual periods before the age of 10 years. Disorders in **menstruation** include primary and secondary amenorrhoea, menorrhagia, metrorrhagia and dysmenorrhoea.

In adult women the genital organs may be affected by acute or chronic **infections,** particularly salpingitis, salpingo-oophoritis, vaginitis of various aetiologies, endometritis, endometriosis. A number of vulval lesions may be encountered in everyday gynaecological practice — ulcerations, cysts, vaginal adenosis, cervicitis.

The female genital tract is the site of a large number of **tumours** of considerable diversity. The tumour occurring with the greatest frequency is undoubtedly the benign fibromyoma or uterine fibroid and non-malignant fibroid cysts. Malignant tumours include carcinoma of the body of the uterus and cervix and malignant papillomatous cystadenoma.

The fertility of a woman ends with the menopause and climacteric, i.e. the cessation of the menstrual periods and the period of a series of changes in the genital organs as well as in the body as a whole.

The development of the human foetus is realized in utero after fertilization and implantation of the ovum. Suspicion of pregnancy will arise from amenorrhoea and perhaps from some of the symptoms of early pregnancy, such as nausea, vomiting, breast tenderness, frequency of micturition. If there is doubt, a pregnancy test may be appropriate.

The future mother regularly attends the antenatal clinic, where pelvic measurements, blood pressure recording, weighing, blood examinations to detect anaemia, urine testing for sugar and examinations for peripheral oedema are performed in order to avoid eclampsia or other complications.

Maturity of the foetus is often in question late in pregnancy: is a patient overdue, or is she still not at term? Attention must be also focused upon the foetus and its relationship to the mother's pelvis. The **lie** is the relationship of the long axis of the foetus to the long axis of the uterus. The **presentation** is the part of the foetus which occupies the lower pole of the uterus. The **position** of the foetus is the relation of the presenting part to the pelvis of the mother; this part is called the denominator; it is usually the occiput. Six positions are normally described. The **attitude** of the foetus is the relation of the different parts of the foetus to each other. It is usually one of flexion. Engagement of the head refers to the relation of the widest diameter of the head to the pelvic brim.

Labour starts at the end of gestation. Commonly, it commences with contraction pains and a small «show» of blood and mucus. In this first stage artificial rupture of the membranes may be necessary in order to improve contractility and dilatation.

The second stage is characterized by «bearing down» pains and ends with the expulsion of the child. During the third stage the placenta

and membranes are delivered. The main complication of the third stage is blood loss.

The **puerperium** is the period of 6—8 weeks following delivery during which the body tissues, especially the pelvic organs, are returning to their previous state.

Delivery depends on three factors: the powers of the muscles, the passages and the passenger, i.e. the foetus. A series of disorders may complicate pregnancy: rubella, other infections, respiratory and nervous disorders, renal disease, jaundice. The labour may be made difficult by malpositions of the occiput, malpresentations or contracted outlet.

A very important question at the present time is **family planning** which includes contraception as well as research into normal reproduction, infertility and habitual abortion and genetic counseling.

5. Answer the following questions

1. What does the development of the genital organs depend on? 2. What is the cause of intersexuality? 3. What is the name of the external genitals? 4. What parts do they include? 5. Describe the internal reproductive organs. 6. Do genital tract malformations often occur? 7. What are they? 8. Are secondary sexual characteristics present in the case of an absent or undeveloped uterus or vagina? 9. How is an imperforate membrane or hymen treated? 10. What is the commonest gynaecological disorder in childhood? 11. How is labial adhesion treated? 12. What changes appear in puberty? 13. What disorders in menstruation appear at the age? 14. What infections affect the genital organs of adult women? 15. What vulval lesions are very frequent? 16. Do tumours occur in the female genital tract? 17. Which are they? 18. Where is the development of the human foetus realized? 19. What are the symptoms of early pregnancy? 20. What are the absolute signs of pregnancy? 21. What care is the future mother given? 22. When does labor start? 23. What should be done if the patient is overdue? 24. When is artificial rupture of the membrane necessary? 27. What is the second stage characterized by? 25. What happens during the third stage? 26. What is the main complication of the third stage? 27. What is puerperium? 28. How long does puerperium usually last? 29. What may complicate pregnancy? 30. When does the fertility of a woman come to an end? 31. What changes occur at that period of age?

III. Word study

6. Make up English-Russian pairs of words

Release, arrangement, diversity, engagement, contractility, rupture, suspicion, expulsion, defect, cessation, relationship, dilatation, clot, maturity, adhesion, flexion, gestation.

Прекращение, сращение, сокращаемость, расположение, отношение, удаление, расширение, сгусток, выталкивание, изгибание, подозрение, разнообразие, нарушение, зрелость, беременность, становление (плода при родах), разрыв.

7. From the list below find synonyms to the given words

Perhaps, rudimentary, appropriate, lie, initially, labour, consideration, retain, introitus, micturition, assign, overdue, soreness, certain, discharge, particularly, previous.

Position, primarily, keep, especially, discussion, entrance, release, urination, clear, probably, earlier, delivery, late, attribute, tenderness, adequate, undeveloped.

8. Make plurals

Ovum, labium, os, uterus, vulva, cervix.

9. Make up adjectives with the opposite meaning, using one of the prefixes from the list below

Normal, sexual, successful, capable, usual, common, acute, considerable, malignant, necessary, complicated, important, mature, fertilized, appropriate.

a-/ab-, in-, non-, un-, sub-

10. Form adjectives

Sex, gonad, vulva, ovum, uterus, vagina, follicle, stoma, fundus, cervix, labium, pubis, menstruation, papilloma, menopause, climax, foetus, placenta, occiput.

11. Make up English-Russian pairs of words

Sacroposterior presentation, foot presentation, mentoposterior presentation, cephalic presentation, parietal presentation, scapuloanterior presentation, occipitoanterior presentation, breech presentation, face presentation, occipitoposterior presentation, parietoanterior presentation, occipital presentation, pelvic presentation, parietoposterior presentation, knee presentation, scapuloposterior presentation, brow presentation.

Лопаточно-переднее предлежание, крестцово-заднее предлежание, головное предлежание, подбородочно-заднее предлежание, лицевое предлежание, теменное предлежание, переднезатылочное предлежание, заднетеменное предлежание, ножное предлежание, затылочное предлежание, переднетеменное предлежание, ягодичное предлежание, лобное предлежание, тазовое предлежание, коленное предлежание, заднезатылочное предлежание, лопаточно-заднее предлежание.

12. Translate the italicized words

1. Surgical procedures, breaking the cervical barrier *apart from* cervix opening during menstruation allows the infection to reach the

fallopian tubes. 2. Infection and inflammation in the fallopian tubes is *referred to* as salpingitis. 3. Vaginitis, discharge, itching and pain are *not uncommon* in case of irritation or infection of the vulva. 4. Diagnosis is made with microscopy *as well as* culture of the discharge after a careful history and physical examination have been completed. 5. The diagnosis was *in question* since no signs definitely confirmed the presence of a foreign body in the cavity. 6. We asked the patient to undergo some additional analyses *in order* to be aware of the diagnosis and treatment we were going to suggest.

13. Finish definitions by translating the words in brackets

1. Haematocolpos is... (скопление менструальной крови во влагалище вследствие слишком маленького отверстия в девственной плеве, через которое она не может выйти).

2. Hydrocolpos is... (скопление патологической жидкости во влагалище, врожденное или в результате его стеноза).

3. Amenorrhea is... (симптом, указывающий на анатомические, биохимические, генетические, физиологические или психические нарушения).

4. Menorrhagia is... **(**чрезмерные (более 80 мл) или длительные менструации (более 7 дней) с регулярным интервалом в 21—35 дней**)**.

5. Metrorrhagia is... (маточные кровотечения, не связанные с менструальным циклом, имеющие различную интенсивность и отличающиеся нерегулярностью).

6. Dysmenorrhea is... (расстройство менструального цикла, которое развивается в результате воспалительных процессов придатков матки или при общих нервно-эндокринных нарушениях).

7. Salpingitis is... (воспаление маточных труб, вызванное попаданием инфекции, нередко приводящее к их заращению).

8. Salpingo-oophoritis is ... (воспаление придатков матки — одно из самых часто встречающихся воспалительных заболеваний органов малого таза).

9. Vaginitis is... (воспаление слизистой оболочки влагалища).

10. Endometritisis... (заболевание, которое вызывается воспалительным процессом в поверхностном слое эндометрия, внутренней слизистой оболочки тела матки).

11. Endometriosis is... **(**распространенное гинекологическое заболевание, при котором клетки эндометрия (внутреннего слоя стенки матки) разрастаются за пределами этого слоя**)**.

12. Cervicitis is... (воспалительное заболевание шейки матки, часто сочетающееся с воспалением влагалища или являющееся его последствием).

IV. Learn to speak professional medical English

14. Read the text and speak about sapingitis in English

Сальпингит

Сальпингит — воспаление маточных труб. Чаще всего сопровождается одновременным воспалением яичников. Возникает при распространении инфекции из матки (например, при септической микробной флоре, гонорее) или из других органов через кровь (например, при туберкулезе). Процесс начинается со слизистой оболочки трубы (эндосальпингит), затем переходит на мышечную оболочку и серозный покров ее. В результате слипчивого процесса складки внутренней оболочки маточных труб спаиваются, возникает их непроходимость. Заболевание чаще имеет хроническое течение. Изолированное поражение маточных труб наблюдается редко.

Симптомы воспалительного процесса весьма разнообразны и не всегда ярко выражены. Возникновение необъяснимой боли внизу живота, легкой и быстро исчезающей или колющей и сильной, должно насторожить женщину и заставить ее обратиться к врачу.

Сальпингит протекает в острой, подострой и хронической форме (при туберкулезе половых органов).

Острая стадия характеризуется высокой температурой, болью в животе и поясничной области. Возможна рвота.

В хронической стадии выражен болевой синдром с образованием спаек в трубах, нарушением менструального цикла.

Лечение проводится только по назначению врача. Назначаются противовоспалительные средства и антибиотики. Если возбудитель инфекции точно не определен, назначают антибиотики широкого спектра действия. Если консервативное лечение не приносит результатов, иногда прибегают к операции удаления пораженной трубы — сальпингэктомии (или тубэктомии) или сальпингопластики восстановления проходимости трубы.

V. Learn to translate medical articles

15. Translate the text into Russian

Vaginal cancer

Primary cancers of the vagina are rare, representing approximately 3% of gynecologic cancers. Approximately 85% are squamous cell cancers, and the remainder, in decreasing order of frequency, are adenocarcinomas, sarcomas, and melanomas. A tumor should not be considered a primary vaginal cancer unless the cervix is uninvolved or only minimally involved by a tumor obviously arising in the vagina. By convention, any malignancy involving both cervix and vagina that is histologically compatible with an origin in either organ is classified as cervical cancer.

Secondary carcinoma of the vagina is seen more frequently than primary vaginal cancers. Secondary, or metastatic, tumors may arise from cervical, endometrial, or ovarian cancer, breast cancer, gestational trophoblastic disease, colorectal cancer, or urogenital or vulvar cancer. Extension of cervical cancer to the vagina is probably the most common malignancy involving the vagina. HPV, early hysterectomy, and prior radiation are possible risk factors for vaginal cancer, but no specific etiologic agent has been identified.

LESSON 25

CHILDREN'S DISEASES – PAEDIATRICS

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[dismətj**u**ə], [kəndʒ**e**nitl], [h**ai**pɔusp**ei**diəs], [h**ai**drɔuk**e**fələs], [ətr**i:**ziə], [mj**u:**kɔuvisid**ɔu**sis], [h**i:**mɔuf**i**liə], [f**e**nilk**i:**tɔunj**u**əriə], [f**e**nil**ei**lənin], [gəlæktɔus**i:**miə], [p**i:**diətriʃən], [mɔ:b**i**lai], [p**e**nis**i**lin], [vær**i**s**e**lə], [difθ**i**əriə], [petʌsis], [kət**a:**].

2. Write in transcription

a) Care, premature, anaemia, palate, fibrocystic, hypertrophy, marasmus, cysteine, glycogen, leukemia, diarrhea, rheumatic, tracheostomy, salivary.

b) Erythroblastosis foetalis, spina bifida, whooping cough, herpes zoster.

3. Read the following medical terms

Palsy, incompatibility, neonate, hereditary, hare-lip, embryo, fissure, gluten, coeliac, jejunal, pneumonia, otitis, deafness, shingles, pseudomembrane, routine.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Children require specialized medical care as they respond to illness and treatment in a way rather different to that of adults. Recognition of this resulted in the establishment of paediatrics as a relatively independent branch of medical science and practice in the latter half of the 19th century. Its real beginnings, though, date back to 1765, the year Nils Rosen von Rosenstein of Uppsala, Sweden, published his original work on children's diseases and their treatment.

Paediatrics covers a wide range of medical problems from genetic disorders down to infectious diseases predominantly associated with childhood.

Some conditions related to childbirth are of concern to both the paediatrician and the obstetrician. The premature infant (as opposed to a full-term infant), also referred to as low-weight or dysmature baby, is by definition one with birth weight less than 2,5 kg and, as a rule, born before the normal 280th day of pregnancy. The cause usually is placental insufficiency. The symptoms include: lack of subcutaneous fat, increased heat loss, poor temperature regulation, difficulties in sucking and swallowing. Premature babies invariably have to be nursed in incubators. Some newborns, though not really premature, are referred to as small for dates.

Birth injuries sustained in some cases of complicated labour may affect the head (intracranial injuries) or the peripheral nerves. Erb's palsy, affecting the shoulder and arm muscles, results from a lesion of the 5th and 6th cervical nerve roots.

Rh-incompatibility affects about one baby in two hundred. If an Rh-negative expectant mother develops antibodies against her baby's Rh-positive blood cells, the neonate may suffer from erythroblastosis foetalis, heart failure, anaemia or jaundice. A complete exchange of the baby's blood may be necessary to prevent this specific type of immunisation reaction from being fatal.

Congenital (not necessarily hereditary) **malformations** include hare-lip, cleft palate (often combined), club foot, hypospadias, congenital heart disease, congenital hydrocephalus, spina bifida, imperforate anus, atresia of the bowel etc. A number of them can be removed surgically.

Genetic disorders are largely due to defective or mutant genes. The most common of these are caused by recessive gene mutation, e.g. **fibrocystic disease** of the pancreas or mucoviscidosis affecting about one child per 2500 live births, **sickle-cell anaemia** (commonest in Africa), **haemophilia** etc. Some of them are relatively easy to cure. **Pyloric stenosis** — a congenital hypertrophy of the pyloric sphincter muscle is routinely treated by means of Ramstead's operation to relieve constriction and fatal vomiting. **Phenylketonuria,** an inborn error of metabolism often resulting in mental deficiency, can be relieved by keeping the child on a diet with as little phenylalanine as possible. Impaired metabolism with failure to thrive (marasmus may be caused by other recessive gene conditions — **galactosaemia, cystine storage disease, glycogen storage disease etc.**

Faulty allocation of whole chromosomes is usually lethal to the embryo, but the most frequent case of survival is mongolism or Down's syndrome due to an autosomal anomaly. The child is mentally subnormal with characteristic features such as oval tilted eyes, squint, flattened

occiput, prominent and deeply fissured tongue, the muscles poorly developed. There is increased susceptibility to leukaemia and congenital heart disease.

Intolerance to gluten (in oats and wheat) as well as failure to assimilate fats are supposed to be the cause of coeliac disease in early childhood. The wasting disorder is marked by flat jejunal mucosa, distended abdomen, anaemia induced by iron deficiency, bulky stools with an excess of fat and general emaciation. Complete recovery is the rule but it requires a gluten-free diet and may take several years.

A number of infectious diseases, though not necessarily contracted in childhood only, are so frequent among children that they are of a major concern to paediatricians.

Infants tend to be often affected by gastroenteritis caused by specific sero-types of microbes. The condition is particularly dangerous in small babies as they have limited reserves of water and get quickly dehydrated by severe diarrhoea and vomiting. Treatment is more or less limited to a sloppy and bland diet.

The most frequent notifiable infectious fevers, often described as children's ailments, are:

Measles (morbilli) caused by virus and characterized by fever, blotchy rash (Koplik's spots), severe catarrh of mucous membranes and increased susceptibility to secondary bacterial infection (pneumonia, otitis media etc.).

Scarlet fever — an acute contagious disease characterized by sore throat, strawberry tongue, fever and scarlet rash. Antibiotics, most often penicillin, are generally used to combat it and prevent subsequent complications such as rheumatic fever and acute glomerulonephritis.

German measles (rubella) — milder than true measles but dangerous when contracted during the first three months of pregnancy as it may produce foetal malformation (congenital deafness or defective vision).

Chickenpox (varicella) — a specific infection caused by a filter-passing virus, characterised by vesicular eruption which scales and heals well flaking off without scarring. The same virus is known to be the cause of herpes zoster (shingles).

The insidious danger of diphtheria is twofold: the pseudomembrane that develops around the entrance to the trachea may seriously obstruct breathing and tracheostomy may be necessary; the toxins by the diphtheria-causing microbe (Klebs — Leffler bacillus) attack the heart muscle, the kidneys or the nerves and may lead to myocardial degeneration, localised paralysis etc. Antitoxins are produced spontaneously or by routine immunisation of children following the Schick test.

Pertussis or whooping cough is basically an infectious respiratory catarrh caused by Haemophilus pertussis; mumps or infectious parotitis is an acute inflammation and swelling of the parotid salivary glands.

Nowadays many countries combat most of these diseases by vaccination which confers life-long immunity.

Rickets or **scurvy**, now rare in developed countries, are basically conditions of vitamin deficiency — a disorder of calcium and phosphorus metabolism associated with vitamin D deficiency in the former, a lack of vitamin C in the latter. Rickets in particular used to be common among children in poor, working-class districts.

5. Answer the following questions

1. Why do children require specialized medical care? 2. What do you know about paediatrics as a fairly separate branch of medicine? 3. What is meant by the term «premature infant»? 4. What is the difference between premature infants and babies described as «small for dates»? 5. What are the usual results of birth injuries? 6. Give an explanation of Rh-incompatibility. 7. What is the difference between congenital and hereditary malformations? 8. Which are the most common congenital anomalies? 9. What is the cause of genetic disorders? 10. Describe the usual course of treatment for pyloric stenosis. 11. How would you treat a baby suffering from phenylketonuria? 12. What is the cause of Down's syndrome? 13. What are the clinical features and prognosis of mongolism? 14. Why is coeliac disease classed among wasting disorders? 15. Why is gastroenteritis particularly dangerous in small babies? 16. Which are the commonest infectious fevers contracted in childhood? 17. What are the complications of measles? 18. In what way is rubella dangerous to foetal development? 19. What is the link between chickenpox and shingles? 20. What is the usual clinical course of varicella? 21. Why was tracheostomy often called for in diphtheria? 22. In what two directions is diphtheria dangerous? 23. Which infectious diseases of childhood normally confer permanent immunity? 24. Is infectious parotitis limited to the tender age? 25. Why was rickets so often associated with working class districts?

III. Word study

6. Make up adjectives using one of the suffixes: -al, -ive, -y, -ible, -ant, -able, -ar

Predomination, fault, eruption, blotch, filter, vesicle, constriction, autosome, mutation, assimilation, recession, contraction, susceptibility, catarrh, distension.

7. Make up English-Russian pairs of words

Insufficiency, feature, lesion, cure, constriction, emaciation, care, allocation, sucking, illness, disorder, survival, intolerance, concern, susceptibility, root, loss, range, eruption.

Повреждение, высыпание, уход, недостаточность, расположение, сосание, проблема, восприимчивость, болезнь, корешок, нарушение,

непереносимость, черта, истощение, потеря, предел, сужение, выживаемость, лечение.

8. From the list below find two synonyms to each word

Labour, problem, treatment, constriction, disorder, range, danger, newborn, reaction, insufficiency, injury, anomaly, malformation, emaciation, disease.

Illness, delivery, abnormality, area, exhaustion, lesion, disturbance, question, defect, neonate, deficiency, risk, narrowing, cure, response, failure, parturition, therapy, hazard, peculiarity, infant, stricture, depletion, concern, field, ailment, answer, damage, wound, deformity.

9. Translate the italicized parts of the sentences

1. The Charité (a hospital founded in 1710) in Berlin established a *relatively independent* Paediatric Pavilion in 1830, followed by similar institutions at Saint Petersburg in 1834, and at Vienna and Breslau (now Wroclaw), both in 1837. 2. The Division of Pediatric Cardiology is responsible for the diagnosis of congenital heart defects *by means of* echocardiograms, cardiac catheterizations, and electrophysiology studies. 3. For patients with eating disorders or other medical/psychiatric illness, care is provided *not necessarily* at El Camino Hospital in Mountain View but *also* in outpatient departments of Lucile Salter Packard Children's Hospital. 4. Pediatrics differs *in a way* from adult medicine in many respects. 5. The mission of the Division of Pediatrics Infectious Diseases is to provide care to children with suspected or known infections and to treat infectious complications when they occur *as effectively as possible*. 6. Although individuals vary widely, on average, pre-term infants are markedly slower at processing information — including understanding what they see — than *full-term infants*. 7. Paediatric speciality training typically takes 8 years and includes a *wide range* of subjects, namely, acute paediatrics, neonatology and community paediatrics, general paediatrics and specific training in one of the sub-specialities such as paediatric gastroenterology or paediatric neurology. 8. The principal problems of *small-for-dates* infants are hypoglycaemia (due to inadequate stores of fat and glycogen), hypocalcaemia, meconium aspiration, respiratory problems due to meconium aspiration, polycythaemia with or without increased viscosity of the blood and tendency to bleeding. 9. Neonatologists or general pediatricians in hospital practice are often on call at unsociable times for perinatal problems *in particular* — such as for Cesarean section or other high risk births, and for the care of ill newborn infants. 10. The *major concern* in premature babies is immaturity of the respiration function, which results in difficulties in establishing regular respiration at birth, idiopathic respiratory distress syndrome, apnoenic attacks and periodic respiration.

10. From the list below choose the proper English equivalent of the italicized words

1. В контрольной группе, получавшей плацебо, улучшение было отмечено *всего* у 3 человек. 2. Педиатрия (от греч. παιδίον — ребенок и греч. ιατρεία — лечение) по определению основоположника русской педиатрии С. Ф. Хотовицкого, данному *еще* в 1847 году в первом отечественном руководстве «Педиятрика»: «Есть наука об отличительных особенностях, отправлениях и болезнях детского организма и основанном на тех особенностях сохранении здоровья и лечении болезней у детей». 3. Применявшаяся доза составляла *всего* 0,5 мг/день. 4. Смертность от дифтерии в слаборазвитых странах *достигает* 10 %. 5. Ментоловый спирт в концентрации *до* 2 % применяли для обработки пузырьков на теле пациента с целью успокоения зуда. 6. Нами было зафиксировано *всего* три случая возникновения осложнений. 7. В результате проведенного эксперимента было получено *целых* 3 грамма чистого вещества. 8. В начале XIX века в России *все еще* не было специальных педиатрических клиник, и *только* в 1837 году первая такая клиника была открыта в Санкт-Петербурге. 9. Лихорадочное состояние держится *в течение* 2—3, иногда 5 дней. 10. *Уже* на 3-й день у мальчика было отмечено существенное улучшение общего состояния.

As early as, up to, as long as, as many as, as high as, as soon as, as far as, as late as, as much as, as few as, as low as.

11. Translate the part of the sentence in brackets

1. Mucoviscidosis is... (системное наследственное заболевание, при котором поражаются экзокринные железы. Причиной муковисцидоза является генная мутация, передающаяся по аутосомно-рецессивному типу).

2. Sickle-cell anaema is... (наследственная гемоглобинопатия, связанная с таким нарушением строения белка гемоглобина, при котором он приобретает особое кристаллическое строение — так называемый гемоглобин S).

3. Haemophilia is... (наследственное заболевание, которым страдают только мужчины, хотя носителями дефектного гена являются женщины, и которое связано с нарушением коагуляции (процессом свертывания крови); при этом заболевании возникают кровоизлияния в суставы, мышцы и внутренние органы, как спонтанные, так и в результате травмы или хирургического вмешательства).

4. Pyloric stenosis is... (врожденная патология — порок развития всех слоев пилорического отдела желудка с избыточным разрастанием соединительной ткани).

5. Phenylketonuria is... (врожденное, передающееся по наследству нарушение обмена веществ. Его причиной служит недостаточ-

ность определенного фермента, а именно фенилаланингидроксилазы, необходимой для нормального метаболизма аминокислот, из которых состоят белки).

6. Galactosaemia is... (наследственное нарушение углеводного обмена, передающееся аутосомно-рецессивным путем. Патогенез галактоземии обусловлен блоком превращения галактозы в глюкозу).

7. Cystine storage disease is... (наследственная болезнь, обусловленная нарушением транспорта цистина из лизосом с отложением его кристаллов в ретикулярных клетках костного мозга, печени, селезенки и лимфатической системы, а также в клетках роговицы и конъюнктивы).

8. Glycogen storage disease is... (общее название синдромов, обусловленных наследственными дефектами ферментов, участвующих в синтезе или расщеплении гликогена).

9. Down's syndrome is... (врожденное нарушение развития, проявляющееся умственной отсталостью, нарушением роста костей и другими физическими аномалиями. Это одна из наиболее распространенных форм умственной отсталости; ею страдает примерно 10% больных, поступающих в психиатрические лечебницы).

10. Coeliac disease is... (наследственное заболевание, нарушение пищеварения, вызванное повреждением ворсинок тонкой кишки некоторыми пищевыми продуктами, содержащими определенные белки — глютен (он же глиадин) и близкими к нему белками злаков (авенин, гордеин и др.) — в таких продуктах, как пшеница, рожь, солод, ячмень и овес. Имеет смешанный аутоиммунный, аллергический, наследственный генез, наследуется по аутосомно-доминантному типу).

12. Translate the part of the sentence in brackets

1. Заячья губа — это (congenital malformation, frequently hereditary, occurring chiefly in the upper lip and having one fissure only; if there are two it is called a double harelip. Harelip, besides being a deformity, is attended with a defect of speech and often a cleft of the upper jaw and palate bones, converting the mouth and nose practically into one cavity. In ordinary cases it is easily corrected by an operation).

2. Расщелина нёба — это (the most common facial birth defect and the second most common birth defect overall. The word «cleft» literally means a split or separation, while the word «palate» means roof of the mouth. So, a cleft palate is a split in the roof of the mouth, and a cleft lip is a split in the lip).

3. Косолапость — это (a congenital deformity involving one foot or both. The affected foot appears rotated internally at the ankle).

4. Врожденный порок сердца — это (a defect in the structure of the heart and great vessels which is present at birth. Many types of

heart defects exist, most of which either obstruct blood flow in the heart or vessels near it, or cause blood to flow through the heart in an abnormal pattern).

5. Гидроцефалия — это (a medical condition in which there is an abnormal accumulation of cerebrospinal fluid in the ventricles, or cavities, of the brain. This may cause increased intracranial pressure inside the skull and progressive enlargement of the head, convulsion, and mental disability. Hydrocephalus can also cause death).

6. Спина бифида — это (a developmental birth defect caused by the incomplete closure of the embryonic neural tube. Some vertebrae overlying the spinal cord are not fully formed and remain unfused and open).

7. Атрезия — это (the absence of a normal body opening, duct, or canal, such as of the anus, vagina, or external ear canal).

IV. Learn to speak professional medical English

13. Read the text below and speak about mononucleosis

Epstein — Barr virus, frequently referred to as EBV, is a member of the herpes virus family and one of the most common human viruses. The virus occurs worldwide, and most people become infected with EBV sometime during their lives. Many children become infected with EBV, and these infections usually cause no symptoms or are indistinguishable from the other mild, brief illnesses of childhood. When infection with EBV occurs during adolescence or young adulthood, it causes infectious mononucleosis 35% to 50% of the time.

Symptoms of infectious mononucleosis are fever, sore throat, and swollen lymph glands. Sometimes, a swollen spleen or liver involvement may develop. Heart problems or involvement of the central nervous system occurs only rarely, and infectious mononucleosis is almost never fatal. There are no known associations between active EBV infection and problems during pregnancy, such as miscarriages or birth defects. Although the symptoms of infectious mononucleosis usually resolve in 1 or 2 months, EBV remains dormant or latent in a few cells in the throat and blood for the rest of the person's life. Periodically, the virus can reactivate and is commonly found in the saliva of infected persons. This reactivation usually occurs without symptoms of illness.

Most individuals exposed to people with infectious mononucleosis have previously been infected with EBV and are not at risk for infectious mononucleosis. In addition, transmission of EBV requires intimate contact with the saliva (found in the mouth) of an infected person. Transmission of this virus through the air or blood does not normally occur. The incubation period, or the time from infection to appearance of symptoms, ranges from 4 to 6 weeks. Persons with infectious mononucleosis may be able to spread the infection to others for a period of

weeks. However, no special precautions or isolation procedures are recommended, since the virus is also found frequently in the saliva of healthy people. In fact, many healthy people can carry and spread the virus intermittently for life. These people are usually the primary reservoir for person-to-person transmission. For this reason, transmission of the virus is almost impossible to prevent.

The clinical diagnosis of infectious mononucleosis is suggested on the basis of the symptoms of fever, sore throat, swollen lymph glands, and the age of the patient. Usually, laboratory tests are needed for confirmation. Serologic results for persons with infectious mononucleosis include an elevated white blood cell count, an increased percentage of certain atypical white blood cells, and a positive reaction to a «mono spot» test.

There is no specific treatment for infectious mononucleosis, other than treating the symptoms. No antiviral drugs or vaccines are available. Some physicians have prescribed a 5-day course of steroids to control the swelling of the throat and tonsils. The use of steroids has also been reported to decrease the overall length and severity of illness, but these reports have not been published.

It is important to note that symptoms related to infectious mononucleosis caused by EBV infection seldom last for more than 4 months. When such an illness lasts more than 6 months, it is frequently called chronic EBV infection. However, valid laboratory evidence for continued active EBV infection is seldom found in these patients. The illness should be investigated further to determine if it meets the criteria for chronic fatigue syndrome, or CFS. This process includes ruling out other causes of chronic illness or fatigue.

14. Speak about one of the children diseases (in a form of presentation)

V. Learn to translate medical articles

15. Translate the text in a written form

Chickenpox

Chickenpox is an infectious disease caused by the varicella-zoster virus, which results in a blister-like rash, itching, tiredness, and fever.

The rash appears first on the trunk and face, but can spread over the entire body causing between 250 to 500 itchy blisters in unvaccinated persons.

Chickenpox is highly infectious and spreads from person to person by direct contact or through the air from an infected person's coughing or sneezing or from aerosolization of virus from skin lesions. A person with chickenpox is contagious 1—2 days before the rash appears and

until all blisters have formed scabs. It takes from 10—21 days after exposure for someone to develop chickenpox.

In unvaccinated children, chickenpox most commonly causes an illness that lasts about 5—10 days. Children usually miss 5 or 6 days of school or childcare due to their chickenpox and have symptoms such as high fever, severe itching, an uncomfortable rash, and dehydration or headache. In addition, about 1 in 10 children who get the disease will have a complication from chickenpox serious enough to visit a doctor. These complications include bacterial infections which can involve many sites of the body including the skin, tissues under the skin, bone, lungs (pneumonia), joints, and blood. Other serious complications are due directly to infection with the varicella-zoster virus and include viral pneumonia, bleeding problems, and infection of the brain (encephalitis).

Certain groups of people are more likely to have more severe illness with serious complications. These include adults, infants, adolescents, and people whose immune systems have been weakened because of illness or medications such as long-term use of steroids.

LESSON 26

MOTHER AND CHILD CARE

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[tjub**ɔ:**kjul**ɔu**sis], [saik**ɔu**prɔfilæksis], [ə**lau**ənz], [le**dʒ**isl**ei**ʃən], [br**e**st], [puəp**i**ərɪəm], [mɔ:b**i**diti], [pærənhud], [ink**ʌ**ridʒ], [epizi**ɔ**təmi], [mɔ:tæliti], [əw**ɔ:**d], [pa:tj**u**ərɪənt], [ip**i**si**ɔ**təmi].

2. Write in transcription

Diphtheria, relief, tetanus, poliomyelitis, welfare, convalescent, hygienic, preference, perineal, neonatal, encourage.

3. Read the following medical terms

Strenuous, amniotic, antenatal, compulsory, motherhood, perinatal, parturition, puberty, conceive, maternal, booster, discontinuation.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Thanks to the systematic preference given to mother and child care under the provisions of the health care legislation, there have been some extremely favourable results. Stillbirth rate, perinatal mortality rate, neonatal mortality rate, infant mortality rate and maternal mortality rate have all dropped sharply and so has the morbidity rate.

There is a dense network of infant welfare centres staffed by the local paediatric practitioner and his children's nurse. In addition to this there are many maternity hospitals, children's hospitals, infants' homes, children's convalescent homes.

Normally developing healthy children of working mothers are looked after in day or residential nurseries. At the age of three these children are transferred to nursery schools.

The school health service provides systematic care for school children up to the age of 16. Inoculation of children against tuberculosis, diphtheria, tetanus, whooping cough, smallpox and other infections is compulsory. Extensive vaccination with the Sabin live virus antipolio vaccine has for all practical purposes eradicated poliomyelitis.

The prevention and treatment of gynaecological diseases in expectant mothers and parturient women is the responsibility of gynaecological and obstetric institutions. All pregnant women are registered and examined several times at antenatal clinics of different types. Every health community has a midwife to assist the local gynaecologist in priority follow-up care of expectant mothers and during puerperium, to prepare women for painless childbirth and, if necessary, to assist in confinement at home. However, almost all confinements now take place under hygienic conditions in health institutions with medical assistance. This, in particular, accounts for the sharp reduction in maternal and infant mortality rates. Part of the paid maternity leave is supposed to be taken before the child is born to relieve women during the last weeks of pregnancy. Up to that point, women are entitled to ask for a transfer to a less strenuous job. Psychoprophylaxis includes special instruction on the course of labour to ensure painless childbirth.

To prevent criminal abortions, medical indications for the artificial termination of pregnancy have been extended and social indications introduced. The operation is carried out in hospital after an objective assessment has been made by a special commission. In general, abortions are discouraged and healthy planned motherhood and parenthood is encouraged and supported. Families with children pay lower taxes, receive family allowances, mothers of many children receive special awards the so called «mother's capital».

New paediatricians are trained at higher medical schools, particularly their paediatric faculties. Practicing paediatricians receive extra training and booster courses provided on a regular basis by the Institute for Postgraduate Medical Training.

Pregnancy, a period from conception until labour, is normally suspected after a woman has missed a period. The booking for hospital delivery is made after she has been examined, her blood pressure and pelvic measurements taken, her urine tested and pregnancy confirmed.

Pregnancy is absolutely proved when the heart-beat of the foetus is heard or foetal movements felt.

Complications in normal delivery may make the use of obstetric forceps or vacuum extractor necessary. Successful induction of labour by means of warm bath, enema, injections of a pituitary hormone to stimulate the uterus or releasing a little fluid from the amniotic sac may avoid Caesarian section if there has been undue delay or if foetal distress has developed. Episiotomy, a perineal incision, is sometimes necessary when the vaginal orifice fails to stretch sufficiently.

The two most urgent functions that must be established for the newborn infant are the supply of oxygen (breathing) and the maintenance of body temperature; the stomach is in full working order within a day. Breast feeding may be complicated by engorgement of the breasts, flat, inverted, sore or cracked nipples, when the baby sucks badly or is underfed because the mother has too little milk. The discontinuation of breast feeding is called weaning and artificial feeding may be introduced.

Age groups:

newborn,	a baby up to the age of 1 month;
neonate infant,	a child up to the age of one year;
baby toddler	a child learning to walk, from 1 to 2 years of age;
preschool children	aged two to five years;
school children	from 7 (in Britain and in Russia) to 17 years;
adolescent, teenager	children at the time of puberty (teenager, boy or girl in his or her «teens», i.e. thirteen to nineteen years of age).

5. Answer the following questions

1. What position does mother and child care occupy? 2. Name some institutions looking after the welfare of children or mothers. 3. What is the purpose of antenatal clinics? 4. What particular measure has contributed to the reduction of maternal and infant mortality rate? 5. What does the term «psychoprophylaxis» mean in obstetrics? 6. What is the official policy toward planned parenthood on the one hand and abortions on the other hand? 7. How are pediatricians trained? 8. How is pregnancy defined? 9. What are the absolute signs of pregnancy? 10. When is a vacuum extractor or obstetrics forceps indicated? 11. What are the common ways of inducing labour in case of delay? 12. When is Caesarian section indicated? 13. When is episiotomy called for? 14. What are the two vital functions that must be established immediately to ensure the neonate's survival? 15. What are the usual complication of breast feeding? 16. When does weaning take place?

III. Word study

6. Make up adjectives, using one of the suffixes: -ine, -ic, -ive, -able, -ent, -ence, -ant, -ible, -al

Hygiene, response, provision, system, amnion, uterus, foetus, practice, perineum, neonate, maternity, pelvis, difference, favor, parent, abortion, convalescence, pregnancy, preference.

7. Make up English-Russian pairs of words

Stillbirth, nursery, assessment, conception, period, engorgement, morbidity, termination, feeding, inoculation, discontinuation, confinement, induction, vaccination, indication, mortality.

Вакцинация, показание, смертность, мертворождение, прерывание, вызывание, роды, определение, заболеваемость, прививка, зачатие, кормление, ясли, закупорка, прекращение, цикл.

8. From the list below choose synonyms to the following words

Responsibility, conception, care, adolescent, confinement, rate, reduction, distress, type, newborn, assessment, purpose, job.

Duty, decrease, childbirth, aim, teenager, fertilization, kind, aid, level, disturbance, neonate, evaluation, work.

9. Give Russian equivalents of the italicized prepositions

1. Необходимо обратить внимание *на* роль таких факторов, влияющих на формирование здоровья, как биологический возраст матери, состояние ее здоровья, длина тела, число родов, масса ребенка при рождении. 2. *У* детей 13 лет и старше истинные цифры артериального давления *при* измерении стандартной и возрастной манжетками не отличаются. 3. Все дети *со* следами белка в моче направляются *на* дополнительное обследование *для* выявления причин протеинурии. 4. Важно своевременно начать уход *за* полостью рта и зубами ребенка. 5. *С* раннего детства необходимо приучать ребенка обязательно пользоваться носовым платком. 6. *В* условиях мегаполиса на человека воздействует множество неблагоприятных факторов, которые могут привести *к* тем или иным нарушениям в состоянии здоровья, как среди детского, так и взрослого населения. 7. *В* пожилом возрасте *у* женщин и мужчин соблюдение правил личной гигиены приобретает особое значение. 8. Дети *до* 10 лет, соприкасавшиеся с больным, не болевшие свинкой (эпидемическим паротитом), подлежат разобщению *на* 21 день *от* начала контакта с больным. 9. *В* большинстве случаев свинки *на* 4—7-й день болезни появляется озноб. 10. *При* диабетической коме вводят инсулин *в* дозе 1—1,5 единицы *на* 1 кг массы тела. 11. Асфиксия — наиболее частая причина всевозможных осложнений *при* родах *со* стороны плода. 12. Сироп *от* кашля обычно применяется при лечении простуды у детей. 13. Румяные щечки *у* детей бывают,

к сожалению, не только *от* мороза. 14. *В* детском возрасте чаще всего встречаются редкие и атипично протекающие неврологические заболевания. 15. Причиной дефицита витамина D могут быть самые различные факторы: неправильное питание, редкие прогулки с ребенком *на* свежем воздухе, почечная или печеночная патология. 16. Тема сепсиса новорожденных не теряет своей актуальности *на* протяжении долгого времени. 17. Вопросы изучения детской аллергии вынесены *в* отдельный раздел аллергологии. 18. *Под* родовой травмой подразумевается повреждение тканей и органов ребенка, которое развивается *в* процессе родов. 19. *Об* этой болезни ходит масса суеверий, предрассудков и народных домыслов. 20. *Со* временем ДЦП не обостряется, поскольку это не прогрессирующее заболевание. 21. *С* начала 1990-х количество случаев СДВГ в США резко возросло — с 950 000 в 1990 до 2,4 миллиона в 1996-м. 22. Это состояние чаще всего формируется *у* детей в возрасте *до* 3 лет. 23. Однако другие заболевания, *против* которых проводится вакцинация, например, полиомиелит, все еще широко распространены в мире. 24. *В* возрасте 7 лет мальчик пошел в школу, нормально развивался и учился *до* 4 класса. 25. Накануне *около* 8 часов вечера пациент почувствовал острую боль в левом боку. 26. *В* этот момент медсестра находилась *в* палате, готовясь сделать внутривенную инъекцию. 27. Эксперимент продолжался *в течение* нескольких месяцев *с* интервалом *в* две недели. 28. Улучшение состояния отмечалось у всех пациентов *на* 4-й день после начала лечения. 29. *В* настоящее время лишь немногие антивирусные препараты широко применяются во всем мире. 30. Наиболее эффективно вирусные заболевания могут быть проконтролированы *с* помощью процедур иммунизации. 31. Важно понять, что именно подразумевается *под* самим понятием «причина» в медицине. 32. *После* небольших доз радиации происходит восстановление клеток, и они продолжают функционировать и делиться.

IV. Learn to speak professional medical English

10. Complete the sentences

1. At present there is a sharp drop in ….
2. There are many different children health institutions including ….
3. Children are inoculated against ….
4. Gynecological and obstetric institutions are responsible for ….
5. Midwives assist in ….
6. Pregnancy is a period ….
7. The most important functions of the newborn infant are ….
8. Complications of breast feeding include ….
9. Weaning is ….

11. Read the text and speak about child hygiene

Child Hygiene

Hygiene refers to the importance of cleanliness in maintaining health. Encouraging children's personal hygiene habits is a day to day issue that parents and carers need to reinforce and practise so they and the children in their care can stay healthy and avoid illnesses and infections.

Effective personal hygiene habits in childhood are likely to establish an attitude to personal cleanliness that will extend into adulthood and help avoid common illnesses, so encouraging behaviours such as covering the mouth when coughing and using a tissue when sneezing can avoid spreading colds and flu.

Taking a proactive approach towards child hygiene is important. With many different illnesses and infections around at various times of year, the best preventative measure you can take in looking after your own and your children's immune systems is to maintain high standards of personal and child hygiene.

Children's hygiene practices are everyday habits that need to be established and reinforced. Helping establish a child's personal hygiene routine can be a rewarding experience, as a child learns responsibility over that routine. Most children enjoy taking a bath or shower and helping children develop good personal hygiene habits can help them learn how important these habits are. Educating young children in children's hygiene helps them understand the links between cleanliness and staying healthy.

One important feature of children's hygiene is the need to get into a routine of brushing teeth. Taking care with this ritual should help the development of healthy adult teeth. Children need to brush their teeth at least twice a day and so become aware of the importance of this aspect of hygiene for children in helping to prevent teeth damage and decay.

Another simple precaution that assists in child hygiene includes getting children into the habit of washing their hands after using the toilet, and into a regular habit of washing their hands after playing with pets, coughing or sneezing, and before eating or handling food. Children's personal hygiene practices are simple and easy for young children to understand when they focus on things like washing hands.

The most important feature of child hygiene is to make sure that good habits in personal health are encouraged, and children's personal hygiene standards are met with approval. The habits formed in children's hygiene routines early in life should help them stay healthy in the future.

V. Learn to translate medical articles

12. Translate the text into English

Материнство и детство в России

Одним из стратегических направлений социальной политики государства является защита материнства и детства. Это предполагает охрану здоровья женщин и детей, в том числе оказание им доступной и квалифицированной акушерской и неонатологической помощи, снижение материнских и перинатальных потерь, профилактику инвалидности с детства.

В последнее десятилетие организация акушерской и неонатологической помощи в стране претерпела существенные изменения — реализуется федеральная программа «Безопасное материнство», получила развитие служба планирования семьи, с учетом профилактической направленности расширяются объемы амбулаторно-поликлинической помощи, внедряются ресурсосберегающие технологии. Большое внимание уделяется реализации системы перинатальной помощи; созданы специализированные родильные дома и детские больницы, перинатальные и неонатальные центры; проводится реструктуризация учреждений родовспоможения и детства, внедряются современные перинатальные технологии.

LESSON 27

HAEMATOLOGY

I. Learn to pronounce, write and read English words and medical terms

1. Write in letters

[ir**i**θrəsait], [lj**u**kəsait], [**æ**lbjumin], [faibr**i**nɔudʒən], [klɔ**:**ri:n], [h**i:**məgl**ɔu**bin], [h**i:**mɔupɔi**i:**sis], [f**ai**brin], [iri**θ**rəupɔi**i:**tin], [p**ɔ**lisaiθ**i:**miə], [nj**u**trəfil], [ljuk**i:**miə], [h**i:**mɔust**ei**sis], [pet**i:**kii:], [**e**kim**ɔu**sis], [kɔu**æ**gjul**ei**ʃn], [f**æ**gəsait], [eigrænjəlɔus**ai**t], [i:ɔus**i**nəfil], [h**i:**mɔust**ei**sis].

2. Write in transcription

Corpuscle, supernatant, haem, leukoplasm, eosin, basophil, methylene, agranulocytosis, heparin, purpura, haemophylia, serotonin, erythroblastosis, haemocytometer, agglutinin.

3. Read the following English words and terms

a) Nutrient, adult, plasma, platelet, vehicle, globulin, heparin, anaemia, granulocyte, leukopenia, agglutinogen, recipient, leukocyte.

b) Hodgkin's disease, Addisonian pernicious anaemia, haemolytic anaemia, macrocytic anaemia, haemorrhagic adenitis, Wassermann reaction, myelogenous leukaemia.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

The blood

Blood is a fluid tissue that circulates in the cardiovascular system. Its principal function is to carry nutrients and oxygen to all parts of the organism and to take away waste products for excretion. Blood makes up one twelfth to one fourteenth of the body weight, i.e. about five litres in adults.

The fluid fraction of blood is called plasma, the liquid medium for blood cells or corpuscles suspended in it: erythrocytes, leukocytes and platelets. Plasma is a sticky, pale amber liquid serving as a vehicle for a number of organic and inorganic substances: albumins (about 60% of all plasma proteins), globulins (of which the gamma type carries immunity to infectious diseases), fibrinogen (responsible for blood clotting), sodium and chlorine ions and minute quantities of potassium, calcium and iron. Plasma also carries dissolved nutrients and hormones. It should not be mistaken for serum, the supernatant fluid which forms when blood clots but which contains no fibrinogen or other components of coagulation. Plasma proteins are all formed in the liver from digested amino acids, except gamma-globulin which is formed in the lymphoid tissue of the spleen, lymph-nodes and elsewhere.

Blood corpuscles

Erythrocytes are round, biconcave discs, 7.2 microns in diameter. A cubic millimetre (c.mm.) of blood contains 5 million red blood cells. Haemoglobin, which represents about a third of the total mass of an erythrocyte, is the respiratory pigment designed to convey oxygen. It is composed of an iron-containing substance called haem combined with the globin moiety. It has the reversible function of combining with and releasing oxygen.

The life span of an erythrocyte is roughly 120 days. In an adult body, red blood cells are produced through a process known as haemopoiesis in the red marrow of some bones (ribs, sternum, vertebrae). The rate at which red cells are formed is governed by a hormone, erythropoietin.

Aged or damaged erythrocytes are taken up by special cells (phagocytes) of the reticulo-endothelial system. Bilirubin is a waste product from the breakdown of haemoglobin.

Clinically speaking, an excess of red cells is polycythaemia, their deficiency is one of the many types of anaemia (iron deficiency anaemia, Addisonian pernicious anaemia, haemolytic anaemia, macrocytic anaemia, hereditary sickle-cell anaemia, etc.). The clinical features of anaemia include pallor, easy fatigue and breathlessness on exertion, giddiness, palpitation and loss of appetite. Anaemia is often a symptom of some other disorder.

Leukocytes. Unlike erythrocytes, leukocytes are nucleated cells, larger than the former, and numbering about 10,000 in a c.mm. or less. The distinguishing feature is the presence or absence of granules in the leukoplasm. Granulocytes (polymorphonuclear leukocytes) are in turn subdivided according to the stainability of granules into: neutrophils, eosinophils (stained red by the acidic dye eosin) and basophils, with granules stained by the basic alkaline dye methylene blue. Agranulocytes are either lymphocytes or monocytes. Practically all white blood cells have an important role to play in combatting infection by engulfing and destroying bacteria and other invaders. Eosinophils are involved in allergy and in the response to certain parasites.

Disorders of white blood cell formation of proliferation include leukaemia (to be distinguished from glandular fever), leukopenia, Hodgkin's disease and agranulocytosis. Leukaemia, the most common of them all, is generally classified according to the kind of leukocyte found and according to the acuteness or chronicity of the disease into acute, chronic, chronic lymphatic, monocytic, chronic myelogenous leukaemia. Anaemia, haemorrhagic adenitis, and ulcerative lesions in the mouth are among the characteristic signs.

Thrombocytes (blood platelets), the smallest among blood corpuscles, are important agents of haemostasis. When a vessel is damaged, platelets stick to each other and to the site of the injury and plug the breach. Coagulation is essentially a chemical change in which the plasma fibrinogen is converted into threads of insoluble fibrin. Thrombocytes also release a hormone, serotonin, which makes blood vessels contract. Anticoagulants, such as heparin, are used to slow down and prevent the process of clotting.

Haemorrhagic (bleeding) disorders include defects of small blood vessels (petechiae, purpura, ecchymoses) due to infective, toxic, allergic and other conditions such as lack of vitamin C; defects of thrombocytes themselves (e.g. thrombocytopenic purpura) due to severely reduced platelet count; or defects of the clotting mechanism (e.g. vitamin K deficiency, haemophilia — a congenital, hereditary absence of a protein which haemophiliacs are unable to synthesize).

Blood groups

The most important of the blood groups is the ABO system. The principle of erythrocyte-plasma agglutination (clumping together) was explained by Czech psychiatrist Jan Jansky in 1907. The clumping of red cells is effected by specific globuline-type immune antibodies, agglutinins, in a foreign plasma. The erythrocyte substances which stimulate the production of agglutinins are agglutinogens. The former are anti-A and anti-B; the latter: A and B. Consequently, there are four groups in the system: 0 (neutral). A, B and AB. A donor's blood can be transfused only to a recipient of the same ABO group.

Incompatibility can also be caused by differences in the rhesus-factor, which is either positive or negative. Rhesus-positive blood groups are antigenic, and can, under suitable conditions, produce the corresponding antibody in the serum. Rhesus incompatibility may lead to erythroblastosis during pregnancy.

Precise knowledge of blood group compatibility is essential for a successful blood transfusion. This is the intravenous (cubital vein) replacement of lost or destroyed blood by compatible citrated human blood. Fresh blood from a donor or stored blood from a blood bank may be used as whole blood, blood with some plasma removed («packed-cell» transfusion) or plasma only. The donor's and the recipient's blood must be carefully, cross-matched by means of the slide agglutination test.

Blood tests

Blood tests are routinely used to diagnose a number of diseases. Doing the blood count means calculating the number of red or white cells per c.mm of blood, using a haemocytometer.

The differential blood count aims at ascertaining the relative proportions of different leukocytes. Packed-cell volume (PCV) gives the relative volume of cells in the blood (in per cent) after it has been prevented from clotting. Haemoglobin content is quoted in g/100 ml; haemoglobin examination includes the percentile determination of mean corpuscular haemoglobin concentration (MCHC).

Tissue destruction and inflammatory conditions are characterized by an increase in E.S.R. (also B.S.R.), i.e. erythrocyte (blood) sedimentation rate, which is given in mm per hour. While examining the blood, the doctor is interested also in the patient's bleeding time, clotting time, red cell fragility, capillary fragility etc.

In terms of blood chemistry, the levels of bicarbonate (alkali reserve), serum bilirubin, uric acid, plasma protein, glucose, cholesterol, phosphatase, serum glutamic-pyruvic transaminase, and other biochemical substances have to be established.

Microbiologically speaking, blood may be tested for the presence of actual germ (malaria, typhoid etc.) or of antibodies as evidence of past

or present infection. The Wassermann reaction (WR or BWB) is an example of such a kind of blood test.

5. Answer the following questions

1. What is the general characteristic of blood? 2. What role is blood designed to play in the body? 3. What are the main constituents of blood? 4. What is the composition and the principal function of haemoglobin? 5. What is the difference between plasma and serum? 6. What are the main features of haemopoiesis? 7. What are the general characteristic of polycythaemia on the one hand and anaemia on the other hand? 8. How is a blood count and a differential blood count made? 9. What are the many types of anaemia? 10. What are the general clinical manifestations of anaemia? 11. What are the two main kinds of leukocytes? 12. What distinguishing sign is the classification of leukocytes based on? 13. What is the principal function of white blood cells in the body? 14. What are the commonest disorders of white blood cell formation? 15. What are the clinical manifestations and prognosis of Hodgkin's disease? 16. What are thrombocytes and what role do they play in haemostatis? 17. What are some of the bleeding disorders due to? 18. What is the aetiology of haemophilia? 19. What is the ABO system? 20. What is «rhesus-incompatibility»? 21. What does the term «packed-cell» transfusion mean? 22. What is the use of B.S.R.? 23. What is the difference between bleeding time and clotting time? 24. What is the Wasserman reaction and how is it accomplished? 25. What is haemocytometer used for?

III. Word study

6. Make up adjectives using one of the suffixes: -ar, -al, -ic, -ous, -y, -inc

Corpuscle, function, erythrocytes, organ, albumin, fibrinogen, pigment, haemopoiesis, blood, bone, hormone, phagocyte, cell, granule, alkali, allergy, anaemia, hemorrhage, character, haemostasis, fibrin, plasma, antigen, acid.

7. Make English-Russian pairs of words

Amber, breach, giddiness, incompatibility, moiety, pallor, fatigue, breathlessness, palpitation, stainability, dye, acuteness, ecchymosis.

Несовместимость, сердцебиение, кровоподтек, усталость, янтарь, острота, разрыв, бледность, окрашиваемость, головокружение, часть, краска, одышка.

8. From the list below find synonyms to the given words

Fraction, clotting, defect, fluid, evidence, replacement, lack, germ, excretion, ascertaining, medium, bleeding, lesion, concentration, condition.

Coagulation, state, substitution, discharge, haemorrhage, part, injury, microbe, liquid, proof, level, deficiency, environment, disorder, establish.

9. Fill in the blanks with the necessary terms

1. Small (1—2 mm) red or purple spot on the body, caused by a minor hemorrhage (broken capillary blood vessels) is known as ….
2. Red or purple discolorations on the skin that do not blanch on applying pressure are called ….
3. A livid or black and blue spot, produced by the extravasation or effusion of blood into the areolar tissue from a contusion is ….
4. An antigen, or more specifically a protein, that exists on the surface of red blood cells is a ….
5. Blood clotting disorder caused by a mutation of the Factor IX gene, leading to a deficiency of Factor IX is known as ….
6. Cancer of the blood or bone marrow characterized by an abnormal increase of blood cells, usually leukocytes (white blood cells) is termed ….
7. A medical test done on someone to assess their platelet function is known as ….
8. A blood test which measures the time it takes for a clot to form in the plasma from a blood sample in anticoagulant is called ….

Haemophilia, leukemia, clotting time, petechiae, purpura, rhesus-factor, bleeding time, ecchymosis.

10. Translate part of the sentence in brackets

1. Anaemia is… **(**состояние, при котором в крови снижено содержание функционально полноценных красных клеток (эритроцитов)**)**.
2. Iron deficiency anaemia is… (гематологический синдром, характеризующийся нарушением синтеза гемоглобина вследствие дефицита железа и проявляющийся анемией и сидеропенией).
3. Addisonian pernicious anaemia is… (злокачественная анемия, возникающая вследствие прекращения секреции желудком вещества, называемого наследственным фактором).
4. Haemolytic anaemia is… (групповое название достаточно редко встречающихся заболеваний, общим признаком которых является усиленное разрушение эритроцитов, обусловливающее, с одной стороны, анемию и повышенное образование продуктов распада эритроцитов, с другой стороны — реактивно усиленный эритропоэз).
5. Macrocytic anaemia is… (наследственная анемия, обусловленная образованием неполноценных эритроцитов-макроцитов и их повышенным распадом).
6. Sickle-cell anaemia is… (наследственная гемоглобинопатия, связанная с таким нарушением строения белка гемоглобина, при

котором он приобретает особое кристаллическое строение — так называемый гемоглобин S).

7. Leukemia is... (группа опухолей, которая характеризуется бесконтрольной пролиферацией и разной степенью дифференцировки кроветворных клеток).

8. Leukopenia is... **(**снижение количества лейкоцитов в крови (менее $4{,}0 \cdot 10^9$), которое, как правило, характеризуется уменьшением в крови числа нейтрофилов, реже других форм лейкоцитов, например лимфоцитов, эозинофилов**)**.

9. Hodgkin's disease is... (злокачественное заболевание лимфоидной ткани, характерным признаком которого является наличие гигантских клеток Рид — Березовского — Штернберга, обнаруживаемых при микроскопическом исследовании пораженных лимфатических узлов).

10. Aggranulocytosis is... **(**патологическое состояние, характеризующееся снижением содержания в крови (менее 750 в 1 мкл) нейтрофильных гранулоцитов — лейкоцитов с зернистой цитоплазмой, при котором повышается восприимчивость к бактериальным и грибковым инфекциям**)**.

11. From the list below choose the proper English equivalent of the italicized words

1. Кровь *выводит* из организма углекислый газ и продукты отхода. 2. Проанализированные к настоящему времени данные *составляют* только одну третью часть всех результатов, которые предстоит изучить. 3. Кровь *служит* переносчиком кислорода ко всем органам тела. 4. Эти симптомы не следует *путать* с симптомами, наблюдающимися при истинной анемии. 5. Плазма *состоит из* 91% воды; 6,5—8% белков (около 70 г/л), около 2% низкомолекулярных соединений. 6. Эти вещества *вырабатываются в ходе* процесса, известного как гемопоэз. 7. Во время этой операции ритм сердца *контролируется* специальным прибором — кардиометром. 8. Поступающие в организм органические вещества *поглощаются* кровью и доставляются к соответствующим органам. 9. Анемия — общий термин и *подразделяется на* железодефицитную анемию, пернициозную анемию, гемолитическую анемию и т.д. 10. Многие факторы *вовлекаются* в развитие этого заболевания. 11. В результате метаболизма поступившие питательные вещества *преобразуются* в энергию. 12. Витамины и минеральные вещества *необходимы* для правильного функционирования организма. 13. Кровь была *проанализирована на* наличие микробов.

Composed of, mistaken for, governed by, produced in, takes away, tested for, make up, involved in, essential for, taken up, converted into, serve as, make up, subdivided into

IV. Learn to speak professional medical English

12. Read the text below and speak about ABO system in man

ABO system

Humans have the following blood types along with their respective antigens and antibodies:

• Individuals with type A blood have red blood cells with antigen A on their surface, and produce antibodies against antigen B in their blood serum. Therefore an A-negative person can only receive blood from another A-negative person or from an O-negative person.

• Individuals with type B blood have the opposite arrangement: antigen B is on their cells, and antibodies against antigen A are produced in their serum. Therefore, a B-negative person can only receive blood from another B-negative person or from an O-negative person.

• Individuals with type AB blood have red blood cells with both antigens A and B, and do not produce antibodies against either antigen in their serum. Therefore, a person with type AB-positive blood can safely receive any ABO type blood and is called a «universal receiver». However an AB-positive person cannot donate blood except to another AB-positive person.

• Individuals with type O blood have red blood cells with neither antigen, but produce antibodies against both types of antigens. Therefore, a person with type O-negative blood can safely donate to a person with any ABO blood type and is called a «universal donor». However, an O-negative person can only receive blood from another O-negative person.

Overall, the O blood type is the most common blood type in the world, although in some areas, such as Sweden and Norway, the A group dominates. The A antigen is overall more common than the B antigen. Since the AB blood type requires the presence of both A and B antigens, the AB blood type is the rarest of the ABO blood types. There are known racial and geographic distributions of the ABO blood types. According to Benes it can be partly attributed to the relation among blood types and particular illnesses: apparently, certain blood types give greater (or lesser) resistance to various diseases. For instance, type-O people have lessened resistance to the Black Plague, and therefore type O is less common in European populations.

V. Learn to translate medical articles

13. Translate the text below into English

Гематология — раздел клиники внутренних болезней, изучающий причины, механизмы развития, проявления заболеваний системы крови и разрабатывающий методы их диагностики, лечения и профилактики. Теоретической основой Г. является учение о кро-

ветворении. Изучая закономерности происхождения, развития и функционирования элементов крови и их опухолевой трансформации, свойства плазмы и сыворотки крови, Г. развивается в тесном взаимодействии с трансфузиологией, разрабатывающей проблемы переливания крови и кровезамещающих жидкостей, иммунологией, иммуногематологией и онкологией (лейкозологией). Самостоятельными разделами гематологии являются радиационная гематология, изучающая изменения кроветворения при воздействии на организм ионизирующего излучения (лучевая болезнь и др.), и коагулология, разрабатывающая проблемы свертывания крови.

LESSON 28

PHARMACOLOGY

I. Learn to pronounce, write and read English words and medical terms

1. Write in letters

[æntip**ai**əri:n], [væksi:n], [k**a:**bəh**ai**dreit], [gl**ai**kɔus**ai**d], [mj**u:**silidʒ], [gl**i**sərin], [l**æ**nəlin], [p**e**nis**i**lin], [p**ai**ərədʒin], [n**i**kəti:n], [kɔuk**ei**n], [hælj**u:**sinɔudʒin], [æmf**i**təmin], [vəl**i**əriə], [mæriw**a:**nə].

2. Write in transcription

Phenacetin, tannin, alkaloid, balsam, ether, ointment, quinine, mescaline, narcotic, herbaceous, foliferous, floriferous, rhizome, strophanthus, centaury.

Aerosol, ampoule, powder, potion, purge, ointment, suppository.

3. Read the following words and medical terms

Antibiotic, wax, chloroform, suppository, petrolatum, opium, barbiturate, marihuana, discover, abstinence, sparingly, wormwood, nux-vomica, coriander, trituration, pubescence, porcelain, susceptible.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

History

It was the achievements of chemistry in about the middle of the last century that were to presage the scientific approach to drug therapy — the reasoned administration of a single compound with a view to producing a specific effect. The road to modern pharmacology is marked by such milestones as the isolation of potent active principles from medicinal plants, the appearance of synthetic drugs (antipyrine, phenacetin, aspirin), the discovery of vaccination and inoculation, the establishment

of chemotherapeutical agents, the breakthrough achieved by antibiotics and the most up-to-date methods of laboratory testing and clinical trials that go into the screening, production, distribution and promotion of new drugs.

Drug constituents

Plant constituents of medical importance form an extremely diverse group of chemical compounds showing great variation in solubility and stability. The problems involved in the drying, storage, and extraction of plant materials make for the following classification of plant constituents: fatty acids, fixed oils, fats and waxes, phenols, tannins, proteins, alkaloids, carbohydrates, glycosides, gums, mucilages and pectins, volatile oils, resins and colouring matters. The term «balsam» is used for such substances as balsam of Peru, balsam of Tolu, and storax, which contain a high proportion of aromatic acids.

Drug assessment

In testing these substances for identity and purity, and assortment of established reagents, solvents and solutions are employed. Thus, for instance, most alkaloids are precipitated from neutral or slightly acid solution by Mayor's reagent, by Wagner's reagent, by Hager's reagent (a saturated solution of picric acid), and other compounds. An assay is to be made afterwards, stating among other things the appearance of the constituent or complete drug, its colour, odour and taste, whether sparingly or readily soluble in water, alcohol, ether, chloroform, glycerine etc., its rate of decomposition, absorption index and activity, mode of dispensation, period of validity (by which date it will have expired), conditions of storage (whether it is to be kept in well-stoppered jars, in a cool and dry place, protected from light, remote from fire) etc.

Medical herbs

Even in the age of synthetic drugs, herbs have been able to keep their place in pharmacy. Under «herbs» are meant the dried overground parts of herbaceous plants consisting of foliferous and floriferous stems, seeds, rhizomes and/or roots. Among the most common herbs gathered for medicinal use are: rhizome and roots of valerian, herbs of lily-of-the-valley, thyme, centaury, wormwood, seeds of strophantus, seeds of strychnos nux-vomica, leaves of foxglove (Digitalis folium), flowers of Arnica montana, fruits of coriander, and many others.

Determined in dry herbs is the colour, odour at trituration, character of leaf venation, and pubescence of various parts of the plant. Quantitative data to be determined in herbs include: moisture content, total ash and ash insoluble in 10 per cent hydrochloric acid, size and admissible admixtures, and amount of active constituents.

Drug forms

Drugs are ingested or applied in the shape of pills, tablets, capsules, powder, potions, purges, ointments, sprays, suppositories or injections — which again may be hypodermic, intravenous or intramuscular.

The tablet is the most common form of medication for the administering of drugs in a dry state. A tablet meant for making solutions will be required to dissolve as quickly as possible; tablets which are to be dissolved slowly in the mouth should be flat for the user's convenience and thick enough to have a lasting effect. Similarly, tablets which have to be coated after compression must have a deep convex shape and be harder than other tablets.

Ointments are soft, semisolid preparations intended to be applied externally to the body or to mucous membranes. Judged on the merit of their penetration rate, ointment bases have been placed into three classes: epidermic (petrolatum, waxes, and their combinations), endodermic (vegetable oils, wool fat — lanolin), and diadermic (emulsions and water soluble bases). Until recently, ointments were packaged in glass, stoneware, porcelain, polyethylene or plastic, wide-mouth jars, and collapsible metal tubes. Of late, however, the use of aerosol containers has been preferred.

Suppositories have been defined as conveniently shaped medicated solids intended for insertion into one of the body orifices other than the oral cavity (rectum, vagina, or urethra). Suppositories can be classified according to the method of manufacture: tableted or compressed powder suppositories and moulded suppositories.

Drugs intended for use by way of injection are dispensed in **ampoules.** Thus for instance the aqueous solution of sodium penicillin is freeze-dried and reduced to fine powder which is subjected to routine tests for potency, toxicity, pyrogen content, sterility and moisture content. After filling, the ampoules are closed with sterilized rubber caps or stoppers. The more usual way on an industrial scale is for the concentrated solution of penicillin to be put into the ampoules in the desired amounts, generally by using an automatic filling machine, frozen in them and evaporated to dryness in the frozen state.

Extraction

Although many of the active constituents of plants may now be prepared synthetically, e.g. quinine, isolation from natural sources often remains an easier and cheaper method of preparation. In many cases, separation from the inert tissue of the plant is effected by the simple process of draining or expressing the juice or oil from the fresh plant material, followed by evaporation to dryness. Extract of alkaloids are usually prepared by maceration or percolation of the powdered drug with aqueous alcohol. To obtain fixed oils, fats and waxes from oily

seeds, the method of decortication is used first. All volatile oils are extracted by distillation, sometimes, if necessary, followed by the process of rectification.

Drug addiction

A number of drugs, some of them as old as alcohol, opium or nicotine, some of them later arrivals (barbiturates, cocaine, marihuana, or hallucinogens such as mescaline, LDS etc.), have the adverse effect of being habit-forming, i.e. leading to addiction. Habitual drug-takers are referred to as addicts. Addiction itself — as opposed to habit — is defined as uncontrollable craving for the drug characterized by increasing tolerance to it, physical dependence on the drug and harmful effects on the taker's personality as well as on society. Physical dependence implies that the drug (mainly narcotics derived from opium) has become an integral part of some modified chemical process in the nervous system. This altered chemical balance is disturbed when the drug is stopped, with unpleasant and even dangerous withdrawal symptoms. This kind of physical illness is called abstinence syndrome. Cocaine, Indian hemp, amphetamine and LSD all lead to psychic rather than physical dependence in susceptible subjects, but are dangerous all the same in that they do cause various degrees of mental derangement.

***5.* Answer the following questions**

1. How is modern drug therapy defined? 2. What made scientific approach to drug-making possible and when? 3. What are the major achievements of modern pharmacology? 4. Why was the appearance of synthetic drugs so important? 5. What is the idea of clinical trials of drugs? 6. What does the term «chemotherapy» imply? 7. What is a drug constituent? 8. Name at least six common drug constituents. 9. What is the characteristic constituent of balsams? 10. What substances are used to test the quality of drug constituents? 11. How are alkaloids precipitated? 12. What is the aim of a pharmacological assay? 13. What is meant by the term «mode of dispensation»? 14. What is the term used to indicate the date by which a drug will have expired and become unusable? 15. What are medicinal herbs by definition? 16. Why have herbs been able to keep their place in pharmacy even after the discovery of synthetic drugs? 17. Name at least six common medicinal herbs and which particular part they are gathered for? 18. What are the two different meanings of trituration? 19. What are some of the quantitative data concerning herbs? 20. What does the term «total ash» stand for? 21. How are drugs employed? 22. In what ways are injections given? 23. What is the most common form of medication? 24. What requirements must a tablet meet? 25. How are ointments applied? 26. How is the penetration rate defined? 27. What is

the traditional way of putting up and individual packaging of ointments? 28. What is the principle of aerosol ointment containers? 29. How are suppositories classified and applied to the body? 30. What drug form is dispensed in ampoules? 31. What are the two ways of packaging penicillin? 32. How are active constituents isolated from medicinal herbs? 33. What is the difference between fixed and volatile oils? 34. What is the idea of maceration? 35. What is the difference between narcotics and hallucinogens? 36. How is drug-addiction defined? 37. What does the term «abstinence syndrome» mean in clinical practice? 38. What is the difference between physical and psychic dependence on drugs and why are both dangerous?

III. Word study

6. Form nouns using one of the suffixes: -tion, -ment, -y, -sion, -ness, -ent, -ence, -ative, - ance, -ity, -age

Achieve, administer, produce, appear, discover, vaccinate, inoculate, constitute, stabilize, involve, store, extract, identify, purify, decompose, admit, intent, dry, evaporate, depend, imply, derive, disturb.

7. Make up English-Russian pairs of words

Venation, constituent, solvent, moisture, rectification, insertion, solution, dispensation, powder, derangement, assay, milestone, validity, admixture, solubility, evaporation, assessment, expressing, addiction, herb, maceration, trituration, percolation, purity, extraction.

Трава, веха, порошок, расстройство, анализ, влага, выпаривание, растворитель, вымачивание, примесь, размельчение, раствор, привыкание, освобождение, растворимость, внедрение, оценка, выжимание, жилкование, извлечение, очистка, срок годности, фильтрация, чистота, компонент.

8. From the list below chose synonyms to the given words

Drug, theriac, principle, pubescence, withdrawal, addict, assay, dispensation, administration, trial, medication, abstinence, herb, precipitate, constituent, mucilage, expire, potency, sterility, admixture, antitoxin.

Compound, discontinuation, drug abuser, treatment, ointment, distribution, introduction, medicine, element, ripening, analysis, grass, antitoxin, sediment, test, purity, refusal, mucus, antidote, foreign substance, constituent, end, power.

9. From the list below choose the proper equivalents of the italicized words

1. We decided to use just this approach judging *on the merit of* it's quick positive results we observed in previous cases. 2. In spite of a

small number of experiments performed the *breakthrough* was inevitable in this field of medicine. 3. This drug was intended for the use *by way of* intramuscular injection. 4. These data *make for* the explanation of this phenomenon. 5. *Among other things* clinical trials showed the way to avoid side effects of the drug under study. 6. Methods developed by I. I. Mechnikov *keep* their *place* in modern epidemiological researches. 7. In this case we used higher dose of the drug *with a view* to reaching as quick remission as possible. 8. There was no effective treatment for this condition *until recently*. 9. The outcome was not encouraging *all the same in* that all the patients showed relapses in less than eight months. 10. The use of methods *other than* traditional ones allows to alleviate the state of such patients quicker than we observed in our previous observations. 11. Considering the fact the clinic was equipped with the most *up-to-date* equipment the results were quite predictable. 12. Our use of this therapy *of late* was substantiated by the high level of remissions.

Intention, besides, recently, by the value, in addition to, promote, advance, by means, nevertheless, modern, remain, up to now.

10. Translate the italicized parts of the sentences

1. Фитотерапия — самая древняя часть *традиционной медицины*. 2. *Лекарственные* растения содержат активные вещества: *гликозиды, алкалоиды, эфирные масла* и т. д. 3. Все это со временем научились синтезировать, очищать и применять уже как *синтетические медикаменты*. 4. Конечно, фитотерапия бессильна в случаях *острых заболеваний*, когда требуется *первая неотложная помощь* и речь идет о жизни и смерти, но совершенно необходима при лечении *затяжных, упорных, рецидивирующих состояний*. 5. Именно *хронические заболевания* хорошо поддаются курсовому лечению отварами *лекарственных трав*. 6. Назначение индивидуального *травяного сбора* врачом-фитотерапевтом оказывает на организм *общеоздоравливающее воздействие*. 7. *Комплексное влияние* активных веществ, содержащихся в лекарственных растениях, способно наладить *обмен веществ*, восстановить нарушенные тонкие *гормональные и ферментные* связи в организме, от чего в первую очередь и зависит *хорошее самочувствие* человека и *предупреждение возникновения* новых заболеваний.

IV. Learn to speak professional medical English

11. Finish the sentences consulting the text if necessary

1. Among others synthetic drugs include ….
2. Plant constituents may be classified as ….
3. Alcoholic tinctures such as … contain high proportion of aromatic acids.

4. Solvents and solutions are used for ….
5. … are used to precipitate alkaloids from neutral or slightly acid solutions.
6. Drugs are assayed for ….
7. The following herbs and their parts are used in pharmacy ….
8. Dry herbs are tested for ….
9. Parameters to be determined in dry herbs include ….
10. Drugs may be of the following form ….
11. Tablets are taken ….
12. Ointments are applied ….
13. There are three classes of ointments ….
14. Suppositories are intended for ….
15. Drugs leading to addiction include ….
16. Addiction is defined as ….
17. Abstinence syndrome is ….

12. Read the text below and speak about the history of pharmacology

Looking back, the use of herbal and animal extracts and minerals has been with us for thousands of years as a very early form of therapeutics. Indeed, Claudius Galen could be considered as one of the first practitioners of pharmacology as early as 150 AD when he recognised the importance of experimentation and theory in the rational use of medicines. The Swiss physician, Paracelsus, provided the early momentum for pharmacology by investigating the active principles/ingredients of many medieval preparations. It was he who recognised that all drugs can be poisons and acknowledged that the dose alone determines whether or not a compound is therapeutically useful or toxic, possibly the earliest recognition of the therapeutic window, a feature that will be familiar to today's health care practitioners. In essence though, the science of pharmacology that is broadly recognized now emerged in the mid-19th century with Oswald Schmiedeberg who also founded the very first journal of pharmacology (see also Cuthbert, this issue). The fundamental concepts of pharmacology arrived during this formative time with others developing the concepts of «the drug receptor», structure–function relationships for drug molecules, and A.J. Clark (one of our (T.G.S.) predecessors at UCL) was the first to apply the Law of Mass Action to drug receptor operation (see also Rang, this issue). The driving force in pharmacology was to understand, quantitate and document the effects of substances on whole-body physiology. Never just what does extract X do, but also how does it do it and what is the active ingredient. The two strands of this approach subsequently developed in academia and industry. The concept of the concentration–response relationship has been central to pharmacology and of course

remains central to the practice of medicine. Within the pharmaceutical industry the partnership of chemist and pharmacologist has been key. Within academia the role of the chemist has often been less evident and the links between pharmacology and physiology have been key — the pharmacologist using small molecular probes to perturb physiology and thereby elucidate mechanisms. Through careful identification of mechanisms and the development of chemicals that interfere with specific pathways, the introduction of powerful new medicines over the past 50 or so years has meant that doctors can now offer specific and effective treatments across a wide range of diseases.

V. Learn to translate medical articles

13. Translate the text

Пенициллин (penicillin) — антибиотик, получаемый из плесени *Penicillium rubrum* (пенициллин открыл в 1928 году А. Флеминг, удостоенный за это Нобелевской премии в 1945 году); впервые его использовали для лечения бактериальных инфекций в 1941 году. После этого был получен ряд естественно образующихся пенициллинов, которые могут применяться для лечения различных инфекций. Основными среди них являются пенициллин G (penicillin G), или бензилпенициллин (benzylpenicillin), который обычно назначается в инъекциях или принимается внутрь для лечения дентальных абсцессов, пенициллин V (penicillin V), или феноксиметилпенициллин (phenoxymethylpenicillin), который назначается внутрь. Данные лекарственные вещества практически не имеют серьезных побочных эффектов, однако у некоторых больных на пенициллин могут развиться аллергические реакции, которые проявляются в виде кожных высыпаний, отека гортани и повышения температуры. К аналогичным лекарственным веществам, также получаемым из плесени *Penicillium*, относятся бенстамин пенициллин и бензатин пенициллин. Все эти пенициллины являются бета-лактамовыми антибиотиками, чувствительными к пенициллиназе. Существует множество антибиотиков пенициллинового ряда; к ним относятся амоксициллин, ампициллин, клоксациллин натрия и флюклоксациллин. Все они относятся к полусинтетическим пенициллинам (semisynthetic penicillins).

LESSON 29

STOMATOLOGY

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[prɔpriɔd**ɔ**ntl], [in**æ**ml], [dʒindʒ**i**və], [ælv**i**ələs], [b**ai**fid], [m**i:**zjəl], [ænɔd**ɔ**nʃiə], [dis**i**djuəs], [ins**ai**zə], [mæks**i**ləri], [ɔ:θɔud**ɔ**ntik], [klenz], [k**e**əri**i**:z], [f**au**l], [dʒindʒiv**e**ktəmi], [pla:k], [vest**i**bjulɔupl**æ**sti], [k**i**ret], [d**e**bri:], [pr**e**mətj**u**ə], [fr**i:**nəm], [m**ei**triks], [kraun].

2. Write in transcription

Periodontal, coronal, lingual, canine, gingival, palatal, frenectomy, cementum, adjunct, veneer, curettage, attrition, premolar, mucogingival, dentin, trifid, labial.

3. Read the following medical terms

Periosteum, buccal, palatal, bicuspid, gingivoplasty, mandibular, supernumerary, malocclusion, amalgam, gingivitis, exfoliation, frenotomy, exudate, suprabony, insufflate, endodental, odontoblast.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

The human tooth consists of a number of specialized structures which may be classified into three groups: 1. The **propriodontal** structures (enamel and dentin) which are peculiar to the tooth, similar tissues not being found elsewhere in the body. 2. The **endodental** structure (the pulp) — the formative organ of the dentin. 3. The **periodontal** structures (cementum, alveolar bone, periodontal membrane, and gingivae) — the supporting and investing structures of the teeth.

The main part of the tooth is formed by **dentin** (or «ivory») which surrounds a pulp cavity containing the dental pulp. The **pulp** consists of connective tissue containing a dense network of capillaries, lymph vessels and nerve fibres. A layer of odontoblasts lies adjacent to the dentin. The coronal portion of the tooth is covered with enamel, the hardest substance in the body. Stomatologists distinguish an anatomical and a clinical **crown,** the latter being the portion protruding from the gum. The third portion — the **root,** is embedded in a socket (alveolus) and may be single, bifid or trifid: it is covered by bone called cementum. The cervical portion — the **neck,** which is slightly constricted and covered by the gum, forms a junction between the neck and root. The soft parts include the pulp and the periodontal membrane. This covers the root and lines the alveolus, where it serves as the periosteum. The periodontal membrane holds the tooth firm in its socket.

The tooth presents **several surfaces:** the buccal or labial, the palatal and lingual surfaces. The contact surfaces are either mesial or distal.

Each tooth undergoes the following periods of development during its life cycle: 1. **Growth,** which consists of initiation, proliferation,

histodifferentiation, morphodifferentiation, and apposition. 2. **Calcification** — hardening of the matrix by the precipitation of calcium salts. 3. **Eruption** — migration of the tooth into the oral cavity. 4. **Attrition** — normal wearing of the teeth during function.

Deficient number of teeth is called anodontia, which may be complete or partial. Supernumerary teeth usually result from the continued budding of the enamel organ of the preceding teeth. Supernumerary primary teeth are much less common than supernumerary permanent teeth.

The **primary teeth** are also called deciduous or temporary or milk teeth — this is the first dentition; the second dentition includes 32 **permanent teeth:** 8 incisors (4 central and 4 lateral), 4 cuspids (or canines, the upper canine is also called the eye-tooth), 8 bicuspids (or premolars) and 12 molars (including the «wisdom teeth»). The teeth of the upper jaw are called **maxillary,** those of the lower jaw **mandibular.** The opposite tooth in the other jaw is called antagonist.

Normal **occlusion** is the result of harmony in size of the maxillary and mandibular dental arches, muscular pressure, proximal contact, relation of inclined planes of the tooth cusps and cell metabolism. These factors are interdependent.

Aetiologic factors for **malocclusion** may be general or local. General aetiologic factors include heredity, congenital defects, disease and general metabolic disorder, endocrine disturbances. From the local factors it is early loss or prolonged retention of primary teeth, tardy eruption of permanent teeth, in-harmony in size of teeth and jaws, some pernicious habits (sucking of the thumb, oral breathing). This results in various defects such as supernumerary teeth, malformed teeth, impacted teeth, locked teeth, close bite, open bite and cross bite. They all require orthodontic treatment.

Dental caries is a disease which progressively destroys the tooth, resulting from the solution of the inorganic and the decomposition of the organic tooth structures. Enamel or dentin once destroyed by dental decay cannot repair or regenerate themselves. The most vulnerable parts of the tooth to dental decay are those areas which cannot be cleansed readily through the process of mastication or by personal prophylactic measures: the pits and fissures of the posterior teeth, then the interproximal surfaces of the teeth adjacent to the contact points. Dental caries may be typed as rapid or acute, intermittent in progress, slow, senile and arrested.

It is believed that dental caries is the result of chemico-bacterial activity; heredity, metabolism and the local environment of the oral cavity all play significant roles in the cause, prevention, or control of dental caries.

A decayed tooth is treated by amalgam or inlay restoration, by overlays, capping, extraction, or construction of a prosthetic appliance. The need for these operations is based upon the biologic function as well as mechanical findings.

In any **cavity preparation** the size as well as the position of the pulp and its horns are important factors. It is necessary to maintain the operative field dry. This is done by the use of cotton rolls or a suction apparatus. The initial approach to the pit or fissure cavity is done by a small round bur with which all the defects are traced to the desired depth just beneath the dentino-enamel junction. Then an inverted cone bur is inserted into the cavity to square the base as well as to provide for a slight undercut. The cavity having been prepared by burs, a sharp chisel or a stone is employed to smooth the outline of the enamel walls and to eliminate any loose enamel rods. All the overhanging enamel should be removed with a chisel spoon, the largest that will accommodate the cavity. The pulpal wall of the cavity is checked minutely with an explorer to be sure that the pulp has not been exposed, before the filling is inserted.

The soft parts of the tooth are very often affected by **periodontal disease.** The most common form of gingival disease is gingivitis, inflammation of the gingiva. It may be acute — painful, comes on suddenly and is of short duration, or subacute — a less severe phase: recurrent or chronic gingivitis. It is either localized, generalized or marginal, papillary or diffuse. Colour change is a very important clinical sign. Temporary correction is obtained by topical application of concentrated peroxide or by insufflating the gingiva with oxygen.

A periodontal pocket is a pathologically deepened gingival sulcus. Progressive pocket formation leads to destruction of the supporting periodontal tissues, and loosening and exfoliation of the teeth. It is accompanied with gingival bleeding, purulent exudate at the gingival margin, looseness, extrusion and migration of teeth. Localized pain or a sensation of pressure after eating, which gradually diminishes, gnawing, a foul taste in localized areas are other symptoms. The periodontal pockets may be infrabony or suprabony.

Mucogingival surgery is performed as an adjunct to regular pocket elimination procedures in order to relocate frena and muscle attachments which encroach upon periodontal pockets and pull them away from the tooth surface, to create a new zone of attached gingiva, to cover denuded root surfaces. Various surgical interventions are used — frenectomy or frenotomy, vestibuloplasty by means of flaps or grafts.

Chronic inflammatory enlargements of the gingiva are treated by scaling and curettage (with a chisel sealer, hoe sealer, a curette), or gingivectomy or gingivoplasty.

An integral part of periodontal treatment is **plaque control.** Oral hygiene procedures performed by the patient to prevent accumulation of dental plaque and food debris in the course of periodontal treatment are commonly referred to as «oral physiotherapy».

5. Answer the following questions

1. What structures does the human tooth consist of? 2. What is the main part of the tooth formed by? 3. What is the pulp composed of? 4. In what part of the tooth is the enamel? 5. Is the enamel as hard as bone? 6. What is the difference between the anatomical and clinical crowns? 7. What are the names of the tooth surfaces? 8. What periods of development does the tooth undergo? 9. What is anodontia? 10. What is the cause of supernumerary teeth? 11. What are the different types of teeth? 12. How many teeth of each type has man? 13. What is dentition? 14. When is the occlusion normal? 15. What factors play an important role in malocclusion? 16. Can malocclusion be corrected? 17. What disease affects the tooth itself? 18. How does dental caries progress? 19. What are the most vulnerable parts of the tooth? 20. What types of dental caries are there? 21. What may influence the origin of dental caries? 22. How is a decayed tooth treated? 23. What instruments are used for operation on a tooth? 24. What are burs used for? 25. When is a chisel spoon employed? 26. What disease may affect the soft parts of the tooth? 27. What is the most common disease of the gums? 28. What different types of gingivitis are there? 29. In what way may gingivitis be corrected? 30. What is a periodontal pocket? 31. What associated signs are there? 32. Is the treatment conservative or surgical? 33. How are chronic inflammatory enlargements treated? 34. In what way is periodontal disease preventable?

III. Word study

6. Make up adjectives

a) Mouth, cheek, lip, tongue, jaw.

b) Periodont, gingiva, dentin, palate, frenum, deficiency, alveolus, periosteum, papilla, pulp.

7. Make up English-Russian pairs of words

a) Coronal, vulnerable, buccal, locked, peculiar, mandibular, lingual, tardy, formative, firm, maxillary, impacked, mesial.

Щечный, запоздалый, верхнечелюстной, уязвимый, формирующий, прочный, срединный, заблокированный, нижнечелюстной, специфичный, язычный, ретинированный, коронковый.

b) Extrusion, gum, overlay, occlusion, eruption, cuspid, retention, attrition, initiation, crown, inlay, socket, exfoliation.

Коронка, лунка, десна, образование, прорезывание, клык, стирание, прикус, задержка, пломба, наслоение, выпадение, вытеснение.

8. From the list below choose synonyms to the given words

Gingiva, dentin, socket, initiation, precipitation, eruption, attrition, occlusion, caries, repair, mastication, inlay.

Dentition, bite, filling, gum, origination, decay, alveolus, restore, ivory, chewing, deposition, wearing.

9. Give English equivalents to the italicized Russian words

1. The boy's mother was worried the (*коренные зубы*) would be too far back but they appear to have shifted forward on their own. 2. Arnold, the dentist who diagnosed our son, has not seen a lot of (*лишний зуб*) in his eight-year practice. 3. (*Резец*) is a chisel-edged tooth at the front of the mouth. In man there are four in each jaw. 4. In mammalian oral anatomy, (*клыки*) are relatively long, pointed teeth. 5. (*Премоляр*) is a tooth having two cusps or points, located between the incisors and the molars. 6. (*Молочные зубы*) are the first set of teeth in the growth development of humans and many other mammals. 7. (*Большие коренные зубы*) are the rearmost and most complicated kind of tooth in most mammals. In many mammals they grind food. 8. A face looks most beautiful when a person smiles. In this case, the heights of the (*верхнечелюстные зубы*) appearing beneath the upper lip has a large factor in the beauty of the face. 9. The other frontal permanent (*нижнечелюстные зубы*) were evident, confirming that it was a case of fusion with supernumerary tooth and not gemination. 10. (*Врожденное отсутствие зубов*) is usually part of ectodermal dysplasia and seldom occurs as an isolated entity.

10. Provide the words in brackets with appropriate negative prefix

1. It was a clear case of dental (occlusion).
2. One of the factors leading to malocclusion (harmony) is size of teeth and jaws.
3. Many factors may lead to (formation) of teeth.
4. Dental caries is a result of solution of (organic) tooth structures.
5. The opposite tooth is called (agonist).
6. Two of the patients had (proper) bites.
7. (correct) position of the upper teeth was improved by a special dental appliance.
8. He had teeth (vulnerable) to caries.
9. The mentioned factors were quite (important) for this case.
10. The presented data were (significant) to explain the poor condition of the patient's oral cavity.

11. Translate part of the sentence in brackets

1. The pulp consists of... (рыхлой соединительной ткани с большим количеством кровеносных и лимфатических сосудов, нервов).
2. The periodont is... (плотная фиброзная соединительная ткань, обусловливает соединение корней зубов с лунками).
3. The dentin is... (твердая ткань зуба, состоящая из основного вещества, пропитанного солями кальция и пронизанного дентинными канальцами и коллагеновыми волокнами).
4. The crown includes... (полость зуба, которая переходит в зубной канал).
5. The root attaches... (зуб к челюсти с помощью мощного связочного аппарата).
6. The neck separates... (корень от коронки и у здорового зуба находится под десневым краем).
7. Milk teeth appears... (у детей с первых месяцев жизни).
8. Permanent teeth are... (задние зубы млекопитающих, отличающиеся сложностью строения и часто не подвергающиеся смене).
9. Occlusion is... (взаимоотношение зубных рядов при плотном и полном смыкании зубов верхней и нижней челюстей).
10. Caries is... (одно из наиболее распространенных заболеваний, встречающееся в стоматологической практике).
11. Gingivitis is characterized by... (покраснением, воспалением, опухолью и отеком тканей десен).

IV. Learn to speak professional medical English

12. Make up general questions

Example: — if caries a serious teeth disease. — Is caries a serious teeth disease?

1) — if dentin forms the main part of the tooth.
2) — if a layer of odotoblasts lies adjacent to the dentin.
3) — if the art of dentistry was known to ancient people.
4) — if stomatologists began to distinguish between an anatomical and a clinical crown in the 18thcentury.
5) — if anadontia means a deficient number of teeth.
6) — if supernumerary teeth result from the enamel of the preceding teeth.
7) — whether malformed teeth require orthodontic treatment.
8) — whether all overhanging enamel ought to be removed with a chisel spoon.
9) — if the extraction will be painful.
10) — if colour change is a very important clinical sign in gingivitis.

11) — whether progressive pocket formation leads to the destruction of periodontal tissue.

12) — if the denuded root surfaces have all been covered.

13) — if dental plaque will be removed while it is still time.

13. Find in the Internet site www.emedi.ru/dental/caries.html **read the text and make a written summary of it**

14. Read the text and speak about gingivitis and its treatment

Воспаление десен. Гингивит

Гингивит — это воспаление тканей десен. Гингивит может привести к пародонтиту — более серьезному заболеванию десен, способному поражать костную ткань и приводить в конечном итоге к потере зуба. Около 80 % взрослых людей и подростков имеют различные заболевания тканей десен.

Гингивит характеризуется наличием покраснений, воспалений, опухолей и отеков тканей десен. Десны могут часто кровоточить даже при легких движениях зубной щетки. На ранних стадиях заболевания поражена незначительная часть слизистой полости рта. Распространение заболевания поражает, как правило, всю полость рта, вызывает болевые ощущения при дотрагивании и спонтанную кровоточивость десен.

Главная причина гингивита — это зубной налет. Он представляет собой невидимую липкую пленку, которая образуется бактериями. Чистка зубов удаляет эту пленку, а если не поддерживать гигиену, то зубной налет быстро образуется вокруг и между зубов, а также под линией десны. Быстрому распространению зубного налета способствуют также курение и сахарный диабет.

Зубной налет быстро поражает десны, приводит к воспалению полости рта и вызывает запах изо рта. Если не чистить зубы и не удалять пленку зубного налета, то она затвердевает и образуется зубной камень, удалить который можно только с помощью профессиональной чистки в кабинете стоматолога.

Поскольку главной причиной воспаления десен является плохая гигиена полости рта, то лечение гингивита заключается в ежедневном удалении зубного налета.

V. Learn to translate medical articles

15. Open the website www.medhelp-dent.ru/karies.php **and write down a summary of the text КАРИЕС of not more than 200 signs**

GENETICS

I. Learn to pronounce, write and read English words and medical terms and memorise their Russian equivalents

1. Write in letters

[**e**nzaim], [sp**i:**ʃi:z], [v**eə**ri], [s**i:**kwens], [s**ai**tɔusi:n], [gw**æ**ni:n], [**æ**dinain], [θ**ai**mi:n], [hir**e**diti], [[h**e**tər**ɔu**g**i:**nəs], [ək**ɔ**ndrɔupl**ei**ʒiə], [f**e**nilk**i:**tɔunj**u:**riə], [f**i:**təs], [**æ**mniɔsənt**i:**sis], [əs**e**mbli], [h**i:**məf**i**liək], [h**e**tərɔuz**ai**gəs], [əl**i:**l].

2. Write in transcription

Ribonucleic, messenger, nucleotide, mitosis, pair, chromosome, allele, fibrosis, hermaphroditism, counseling, mutation, gene.

3. Read the following medical term

a) Genetics, homozygous, incompatible, haemophilia, coagulation, chromosomal, inheritance, dystrophy, hereditary, geneticist.

b) Down's syndrome, Mendelian rules, Cooley's anaemia, Tay-Sack disease.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

All living processes depend on a class of proteins, **the enzymes,** because every process represents chemical changes promoted by particular enzymes. The difference between different species of animal or vegetable life, indeed, the difference between two individuals of the same species, is the difference between the proteins that they can make. The purpose of genetics is to study how the pattern of interacting proteins, enzymes, nucleic acids, genes, chromosomes etc. is passed, and to explain how it comes to vary in its finer details.

Genetic information in all forms of life on the earth is stored in **nucleic acids** – RNA (ribonucleic acid) and DNA (deoxyribonucleic acid). The molecules of the two acids act as libraries of information; in man, for example, the information carried by the DNA is copied on to molecules of messenger RNA and used as the basis of action for the workings of the cell and the whole body.

The DNA genetic material contains information in the form of a sequence of four nucleotide bases; cytosine (C), guanine (G), adenine (A) and thymine (T). Sequences of three bases constitute a code for the amino acids which make up proteins. DNA can make an exact copy of itself during mitosis. Before a cell divides, its DNA is organized into paired structures called chromosomes, assemblies of hundreds of genes.

A gene is not only a basic unit of DNA but also a basic unit of heredity. Genes are self-producing, ultramicroscopic particles capable, under certain circumstances, of giving rise to a new character in a process called mutation. Heredity traits are controlled by pairs of genes, in the same position on a pair of chromosomes. These gene pairs, or alleles may both be dominant or both be recessive. In either of those cases the individual is said to be true-bred or **homozygous.** If the alleles consist of one dominant and one recessive gene the individual is **heterozygous** for the trait controlled by that gene pair.

Since many human disorders are due to defective genes, genetics in its narrower, clinical sense is concerned with the study of hereditary defects. These consist of a variety of conditions, some of them incompatible with life, others offering varying chances of survival; cystic fibrosis, achondroplasia, phenylketonuria, Cooley's anaemia, sickle-cell anaemia, haemophilia, pyloric stenosis, hermaphroditism, Down's syndrome (due to faulty allocation of whole chromosomes) etc. If undisturbed, the number of disease-carrying genes in the population is kept constant by the deaths in infancy of affected individuals being equaled by the number of genetic mutations producing new cases. About one in three cases of haemophilia, a condition marked by greatly prolonged coagulation time, occurs in families with no background of the disease, and were it not for the relatively high mutation rate the disease would have died out long ago.

Genetic and chromosomal defects affect about one child in 200. The effect on future generation of these children surviving and reproducing depends on the mode of inheritance of the disorder, which may be recessive, sex-linked (i.e. affecting the 23rd pair of sex chromosomes — X and Y), or dominant.

In **recessive disorders** a child is affected only if both parents, though seemingly normal, carry the defective gene. The rules of Mendelian inheritance show that even then only one child in four born to the couple will develop the disease: two will be carriers, like their parents, and one will be normal. This is, typically, the case of cystic fibrosis, one of the commonest recessive disorders.

When inheritance is **sex-linked,** as in haemophilia and muscular dystrophy, half the boys born to women carrying the gene are affected. Thus, the sister of a haemophiliac has a 50/50 chance of being a carrier. If she is one, the odds are that half of her sons will be haemophiliacs and half of her daughters carriers. Owing to its sex-linkage, the condition with clinical manifestations is practically confined to males.

In dominant disorders, which make up a tiny fraction of hereditary disorders, only one parent need have an abnormal gene for there to be a 50 per cent chance that a child will be afflicted. Survival of these children can have a profound effect on the frequency of the disorder.

If the reproduction rate of affected children is raised from zero to 100 per cent, then the incidence of the disease will double in one generation for dominant conditions, and in about four generations for sex-linked ones. The odds have been worked out for many genetic disorders, and the geneticist can help prospective parents to decide whether to have children of their own or to adopt.

Once a couple knows the odds they are facing they may be offered selective abortion. This is possible in a limited range of conditions where the diagnosis of an affected foetus may be made in early pregnancy by means of amniocentesis. A sample of the amniotic fluid surrounding the foetus in the uterus may be taken with reasonable safety at about the fourteenth week of pregnancy. The fluid contains cells from the foetus, and their examination allows the identification of chromosomal defects such as Down's syndrome or biochemical defects such as the Tay-Sachs disease. Naturally, the chances that a mother with normal chromosomes, who has had a child with Down's syndrome will have another vary greatly with age, but they may be only slightly greater than average.

The provision of advice on these vital matters is the main concern of **genetic counselling,** which involves planned parenthood and family planning.

5. Answer the following questions

1. Why do all living processes depend on the enzymes? 2. Why are proteins and protein-making so important to life? 3. What is the purpose of genetics? 4. Where is genetic information to be found? 5. What is the difference between RNA and DNA (what do the abbreviations stand for?)? 6. What is meant by messenger RNA? 7. What is the special genetic feature of DNA? 8. What happens to DNA in the initial phases of mitosis? 9. How are genes defined in terms of genetics? 10. What is mutation? 11. How are traits of heredity controlled? 12. What is the difference between dominant and recessive alleles? 13. When is an individual referred to as homozygous? 14. When is an individual described as heterozygous? 15. What is clinical genetics mainly concerned with? 16. What are the examples of genetic disorder? 17. What is the difference between hereditary and congenital defects? 18. What is mongolism due to? 19. Why is the number of disease-carrying genes in the population kept relatively constant? 20. What is the genetic explanation of haemophilia? 21. What are the three basic types of genetic disorder? 22. Why is Down's syndrome described as being sex-linked? 23. Why is cystic fibrosis classed as a recessive disorder? 24. What are the statistics of being born with a sex-linked disorder, such as haemophilia or muscular dystrophy? 25. What is the characteristic feature of dominant disorders? 26. What happens if the

reproduction rate of children affected by dominant disorders is raised from zero to 100 per cent? 27. How does the fact that the odds have been worked out for many genetic disorders affect the geneticists' work? 28. What is the link between selective abortion and genetics? 29. What is the idea of family planning? 30. What is the purpose of genetic counselling?

III. Word study

6. Form adjectives using appropriate suffixes

Enzyme, purpose, chromosome, acid, heredity, gene, defect, inheritance, allele, dystrophy, homozygote.

7. Form the comparison degrees from the adjectives below

Common, low, different, many, great, important, profound, possible, reasonable, early, safe, great, fine.

8. Make up English-Russian pairs of words

a) Represent, interact, constitute, occur, survive, promote, store, contain, affect, carry, pass, confine, face.

Обеспечивать, сталкиваться, переносить, происходить, составлять, представлять, ограничивать, содержать, передавать, поражать, хранить, выживать, взаимодействовать.

b) Purpose, workings, sequence, assembly, trait, survival, allocation, prospective, odds, vital.

Шанс, последовательность, выживание, будущий, цель, функция, набор, расположение, жизненно важный, черта.

9. Insert a necessary preposition from the list below

1. It is now possible ... doctors to tell whether a human embryo has inherited xeroderma pigmentosa, an incurable disease, which causes death ... an early age ... an accumulation ... skin cancers. 2. The disease is caused ... a double recessive genetic defect, ... which the individual must inherited a defective gene ... both parents ... the disease to appear. 3. The diagnostic test ... this rather rare disease has emerged ... researches ... cellular mechanisms that repair damage done ... chromosomal DNA ... ultraviolet irradiation. 4. The principle ... this mechanism is that several enzymes act ... co-ordination to remove the region ... damaged strand from the DNA double helix and the gap is filled in, using complimentary strand as a template. 5. Xeroderma pigmentosa cells lack the enzymes that initiate the whole process, although the cell ... heterozygous people contains enough enzymes to cope. 6. A new method consists ... adding bromouridine ... the affected cell in place of thymine, which is a component ... DNA and has similar structure ... bromouridine. 7. ... clinical terms, the test can easily distinguish ... the doomed

homozygotic embryos ... heterozygotic parents and their normal siblings and thus suggests which pregnancies ought to be terminated.

For, at, through, of, by, in, from, into, to, between.

10. Translate part of the sentences in brackets

1. Alleles are... (различные формы одного и того же гена, расположенные в одинаковых участках гомологичных хромосом и определяющие альтернативные варианты развития одного и того же признака).

2. Enzymes are... (органические вещества белковой природы, которые синтезируются в клетках и во много раз ускоряют протекающие в них реакции, не подвергаясь при этом химическим превращениям).

3. Nucleic acids are... (биополимеры, осуществляющие хранение и передачу генетической информации во всех живых организмах, а также участвующие в биосинтезе белков).

4. Gene is... (структурная и функциональная единица наследственности, контролирующая развитие определенного признака или свойства).

5. Heredity is... (совокупность природных свойств организма, получаемых от родителей или способных передаваться от поколения к поколению).

6. Genetics is... (наука о законах наследственности и изменчивости организмов и методах управления ими).

7. Mutation is... (генетические изменения в организме, которые передаются по наследству и сохраняются в роду).

8. Mitosis is... (вид клеточного деления, при котором из одной клетки образуются две генетически идентичные дочерние клетки).

9. Chromosome is... (структурный элемент ядра клетки, содержащий ДНК, в которой заключена наследственная информация организма).

11. From the list below choose a necessary word/word combination instead of blanks

1. ... is a sex development disorder in which a person is cursed with both male and female gene tails, also called intersex.

2. ... occurs as a sporadic mutation in approximately 85% of cases (associated with advanced paternal age) or may be inherited in an autosomal dominant genetic disorder that is a common cause of dwarfism.

3. ... is a hereditary disease that affects young children almost exclusively of eastern European Jewish descent, in which an enzyme deficiency leads to the accumulation of gangliosides in the brain and

nerve tissue, resulting in mental retardation, convulsions, blindness, and, ultimately, death.

4. ... is an autosomal recessive metabolic genetic disorder characterized by a deficiency in the hepatic enzyme phenylalanine hydroxylase.

5. ... is a usually fatal form of thalassemia in which normal hemoglobin is absent, characterized by severe anemia, enlargement of the heart, liver, and spleen, and skeletal deformation.

6. ... is a group of hereditary genetic disorders that impair the body's ability to control blood clotting or coagulation, which is used to stop bleeding when a blood vessel is broken.

7. ... is a common disease which affects the entire body, causing progressive disability and often early death.

8. ... is a chromosomal disorder caused by the presence of all or part of an extra 21st chromosome.

9. ... is an autosomal recessive genetic blood disorder characterized by red blood cells that assume an abnormal, rigid, sickle shape.

Cystic fibrosis, achondroplasia, sickle-cell anaemia, phenylketonuria, Cooley's anaemia, haemophilia, hermaphroditism, Down's syndrome, Tay-Sachs disease.

IV. Learn to speak professional medical English

12. Make definitions

1. Cystic fibrosis is ….
2. Achondroplasia is ….
3. Phenylketonuria is ….
4. Cooley's anaemia is ….
5. Sickle-cell anaemia is ….
6. Haemophilia is ….
7. Hermatophroditism is ….
8. Down's syndrome is ….
9. Tay-Sachs disease is ….

13. Read the text and speak about the laws of genetics

Законы генетики

Законы генетики, открытые Менделем, Морганом и плеядой их последователей, описывают передачу признаков от родителей к детям. Они утверждают, что все наследуемые признаки определяются генами. Каждый ген может быть представлен в одной или большем числе форм, названных аллелями. Все клетки организма, кроме половых, содержат по два аллеля каждого гена, т.е. являются диплоидными. Если два аллеля идентичны, организм называют гомозиготным по этому гену. Если аллели разные, организм называют гетерозиготным. Клетки, участвующие в половом размножении (га-

меты), содержат только один аллель каждого гена, т.е. они гаплоидны. Половина гамет, производимых особью, несет один аллель, а половина — другой. Объединение двух гаплоидных гамет при оплодотворении приводит к образованию диплоидной зиготы, которая развивается во взрослый организм.

Гены — это определенные фрагменты ДНК; они организованы в хромосомы, находящиеся в ядре клетки. Каждый вид растений или животных имеет определенное число хромосом. У диплоидных организмов число хромосом парное, две хромосомы каждой пары называются гомологичными. Скажем, человек имеет 23 пары хромосом, при этом один гомолог каждой хромосомы получен от матери, а другой — от отца. Имеются и внеядерные гены (в митохондриях, а у растений — еще и в хлоропластах).

Особенности передачи наследственной информации определяются внутриклеточными процессами: митозом и мейозом. Митоз — это процесс распределения хромосом по дочерним клеткам в ходе клеточного деления. В результате митоза каждая хромосома родительской клетки удваивается, и идентичные копии расходятся по дочерним клеткам; при этом наследственная информация полностью передается от одной клетки к двум дочерним. Так происходит деление клеток в онтогенезе, т.е. процессе индивидуального развития. Мейоз — это специфическая форма клеточного деления, которая имеет место только при образовании половых клеток, или гамет (сперматозоидов и яйцеклеток). В отличие от митоза, число хромосом в ходе мейоза уменьшается вдвое; в каждую дочернюю клетку попадает лишь одна из двух гомологичных хромосом каждой пары, так что в половине дочерних клеток присутствует один гомолог, в другой половине — другой; при этом хромосомы распределяются в гаметах независимо друг от друга. (Гены митохондрий и хлоропластов не следуют закону равного распределения при делении.) При слиянии двух гаплоидных гамет (оплодотворении) вновь восстанавливается число хромосом — образуется диплоидная зигота, которая от каждого из родителей получила по одинарному набору хромосом.

14. Make up a report about one of the hereditary diseases.

V. Learn to translate medical articles

15. Translate the following summary

Molecular Genetic Approaches Toward Understanding of Multiple System Atrophy (MSA)

Multiple system atrophy (MSA) is a sporadic neurodegenerative disorder characterized by various combinations of parkinsonism, cere-

bellar ataxia and autonomic failure. The discovery of a characteristic pathological hallmark, glial cytoplasmic inclusions (GCIs), established MSA as a distinct neurodegenerative disorder. MSA comprises the most frequent form of sporadic spinocerebellar degenerations in the Japanese population. Although the discovery of α-synuclein as a major component of the GCIs may provide clues as to the pathogenesis, the etiologies of MSA remain to be elucidated. Although MSA has been regarded as a sporadic disease, we have recently experienced families in which multiple siblings are affected with MSA, suggesting involvement of genetic component in the pathogenesis of MSA. Based on this experience, we have started molecular genetic approaches to identify genes involved in MSA. We are focusing on the two approaches: 1) non-parametric and parametric linkage analyses on multiplex families with MSA, and 2) large-scale genome-wide association studies on sporadic MSA patients and controls. To accomplish this aim, we have established a consortium focusing on multiple system atrophy (Japan Multiple System Atrophy Research Consortium, JAMSAC). Based on JAMSAC, collection of large-scale cases and controls, as well as familial cases is in progress. Non-parametric linkage analyses on the MSA families conducted so far indicate loci suggesting linkage, but we need further collection of MSA families to obtain any conclusive results.

LESSON 31

OLD AGE AND AGING

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[dʒ**e**rɔntə**l**ədʒist], [ə**p**e**i**k], [**ɔu**vəri], [t**e**stis], [æθərɔuskliər**ɔu**sis], [kɔŋkwest], [wiðdr**ɔ:**əl], [kr**ɔu**məsɔum], [lɔŋdʒ**e**viti], [h**ɔ:**lt], [bijɔnd], [n**ɔ:**rədr**e**nəlin], [saik**ɔu**sis], [f**ɔ:**lti], [ər**au**zəl], [f**ai**nait], [l**i:**θəl], [vʌlnərəbl], [kɔŋkwest], [im**ɔ:**təl], [t**æ**li].

2. Write in transcription

Swollen, limber, pituitary, vulnerable, diabetes, psychological, doubling, species, cease, hypothesis, transaction, fusion, target, hypothalamus, senile, envisage, awareness, retirement, imbalance.

3. Read the following words and medical terms

Wasting, deterioration, steadily, dwindle, cumulative, affliction, intolerable, institutionalized, cytoplasm, nucleus, pacemaker, coincide, impairment, conceptualization, pronounced.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

There does not seem to be any dispute about the general manifestations of old age. Gerontologists describe the process of growing old as **a wasting disease,** with the skin beginning to dry out, the hair starting to turn gray, the lenses of the eyes thickening and slowly becoming opaque, the muscles shrinking and joints becoming stiff and sometimes swollen. Apart from these visible signs, deterioration goes on within the body as well. The heart pumps blood with steadily diminishing efficiency and the blood vessels grow less limber. The lungs take in less and less oxygen. Kidney function is reduced by half. The bladder's capacity is diminished. The flow of hormones from the ovaries, testes, adrenals and pituitary dwindles. The brain shrinks as 100,000 of its cells die each day. The body becomes increasingly vulnerable to infections and such «degenerative» diseases as cancer, arteriosclerosis and diabetes. Should none of these profound changes prove fatal, death comes finally from that cumulative group of afflictions known simply as old age.

There is some argument, though, as to the value of extending the life span without removing the disabilities of old age, a situation which, most experts agree, would place an intolerable burden on the social and economic structure of society. Statistically speaking, life expectancy for today's adults has not increased all that dramatically. The extra years of life have not really been achieved through control of the aging process, but by the conquest of the major fatal diseases of early infancy and childhood.

Gerontologists are, therefore, increasingly worried about the influence of **psychological forces** on the aging process. One reason for the concern is that growing old has become too much institutionalized in contemporary society. In earlier days, when the extended family was the rule rather than the exception, the elderly remained a functional part of the family. Today, the older person may have to spend his last years alone, cut off from friends and family, and suffering increasingly from emotional instability, forgetfulness, depression and withdrawal.

There is, on the other hand, ample scope for speculation and theorizing about the clues to the aging riddle. A number of researchers look for them in the **genes and chromosomes.** It has long been axiomatic that longevity — or the lack of it — runs in families. Since most species seem to have a finite life span — 40 days for fruit flies, three years for mice, 110 for man — some doctors think there is a **genetic clock** built into the body's cells that determines when old age sets in. Until about 1960, most biologists assumed that human cells

growing in tissue cultures were essentially immortal, dividing indefinitely so long as there were conditions of adequate nutrient supply. The new discovery was that each cell population doubled only about 50 times and then stopped. Not only that; cell colonies that had been put in the deep freeze after, say, twenty doublings were found to «remember» how many they had left when thawed, and stop after 30 more. Cells cultured from adult lung tissue are known to undergo an average of only twenty doublings.

The explosion of knowledge in the field of molecular biology in the past two decades or so, has afforded many new clues about how genes affect the aging process. There are **two main theories:** the first is that the programme spelled out at conception in DNA simply runs out and that cell function then ceases. The second hypothesis is that errors occur in repeated copying of the genetic message. An accumulation of such errors could ultimately bring the cell's function to a halt.

Experiments designed to see whether the finite doubling of cells is determined by DNA in the nucleus or by RNA, the nucleic acid that carries out **DNA's genetic instructions,** or other chemical transactions in the cytoplasm outside the nucleus, have a direct bearing on possible control of the aging process. One such experiment involved combining cells of long-lived species with those of shorter-lived ones, and young cells with old. If an old cell continues to double beyond its normal limit after fusion with young cytoplasm, it would suggest that a part of the control important for division resides outside the nucleus. If such is the case, it would have significant implications, since the cytoplasm would be a far easier target for drugs and chemicals for the control of aging than would the nucleus.

Some experts think that aging is controlled by **specific pacemakers** in the body, and not necessarily within each individual cell. According to them, there is a suspicion that the major aging agent may be in the hypothalamus. In mice, for instance, changes in levels of such nerve hormones as noradrenaline have been found to coincide notably with age. Such changes could then affect the nearby pituitary gland, affecting, in turn, the other endocrine glands throughout the body, including adrenals, ovaries and testes. The pacemaker theory implies that in the future, an elderly person could be given a mixture of deficient or missing hormones to remedy some of the imbalances involved in aging.

An outstanding symptom of aging is senile dementia, the impairment of reasoning and conceptualization that sometimes borders on psychosis. Some believe this is due to **faulty chemical transmissions** of nerve impulses within the brain, again envisaging specific drugs or chemicals to carry out the required biochemical housecleaning. Others attribute the condition to **diminished electrical** activity of the brain as recorded on the EEG. The changes appear to be particularly marked

with respect to alpha-waves that are normally associated with a state of relaxed awareness. Beta-waves, usually associated with arousal, are more pronounced among women than among men, a fact that may be linked with the longer female life span.

There is, however, almost complete unanimity on the **psychological and social factors** affecting the process of aging. Gerontologists were fascinated by discoveries made in Abkhazia and Georgia and other places where living well beyond the age of 100 is commonplace. Predictably, the diets of the residents are low in saturated fats, which in itself should delay the onset of atherosclerosis. Perhaps even more important, however, is the attitude the local people themselves take toward old age. The elderly are held in high esteem and even those over 100 still perform such essential duties as tending flocks, cleaning houses or caring for grandchildren. There is no such thing as retirement, and the old people themselves stress the importance of maintaining a calm, worry-free state of mind.

These findings tally with those about long-lived persons elsewhere in the world. **Remaining** active in some meaningful social role affects people's longevity on all three major levels — physical, psychological and social. Also, a great deal may depend on the attitude the individual forms about the prospect of old age during his early years. Those who lived longest were found to be the ones who refused to give in. If widowed, they remarried. If retired, they took up hobbies, they took long walks and watched what they ate. Above all, they took old age in their stride.

5. Answer the following questions

1. How do gerontologists define the process of aging? 2. Which are some of the visible manifestations of old age? 3. What happens to the cardiovascular system when the body grows old? 4. How are the lungs and kidneys affected by aging? 5. What changes take place in the nervous system? 6. What is the main social problem of extending the life span? 7. Has life expectancy changed substantially over the past 50 years? 8. In what way has the process of aging become institutionalized? 9. In what way does alienation affect old people today? 10. What is the idea of explaining longevity on a genetic basis? 11. What does the term «genetic clock» mean? 12. Are cells immortal? 13. Which are the two main theories based on findings of molecular biology? 14. What does the «error» theory imply? 15. In what way can the transmission of genetic instruction be thought to affect the process of aging? 16. What would happen if an old cell continued to double after fusion with young cytoplasm? 17. What are the clinical implications of such possibility? 18. What is the idea of the life-span pacemaker theory? 19. How is the secretion of noradrenaline and other nerve hormones involved? 20. How

do some gerontologists explain senile dementia? 21. What role is the brain's electrical activity assumed to play? 22. What is the difference between alpha- and beta-waves in terms of gerontology? 23. What attitude do specialists take to the psychological and social factors of aging? 24. In what parts of the world is longevity the rule rather than exception? 25. What is the characteristic feature of the local people's diet? 26. What is the social position the elderly enjoy in Abkhazia? 27. How is the problem of retirement solved? 28. Which are the three major levels on which people's longevity is affected? 29. What particular traits of character are found among those who live longest? 30. Is the institution of old people's homes an ideal solution?

III. Word study

6. Make up English-Russian pairs of words

Value, visible, cease, fascinate, disability, manifestation, dwindle, suffer, stiff, associate, extend, coincide, limber, profound, remove, remain, assume.

Страдать, удлинять, оставаться, совпадать, восхищать, эластичный, уменьшаться, негибкий, значение, устранять, предполагать, проявление, прекращать, связывать, кардинальный, видимый, нетрудоспособность.

7. From the list below find all the synonyms to the given words

Stiff, manifestation, visible, limber, dwindle, profound, value, extend, remove, remain, suffer, remedy, assume, cease, coincide, shrink, associate, fatal.

Significant, diminish, appearance, undergo, treat, suppose, deadly, correlate, rigid, obvious, decline, eliminate, terminate, increase, reduce, importance, radical, flexible, persist, connect, think, inflexible, cure, prolong, symptom, stay, decrease, stop, link, evident, eradicate, lethal, experience, correspond, significance, elastic.

8. Form adjectives from the nouns below

Efficiency, testis, ovary, value, intolerance, gerontology, gene, chromosome, molecule, experiment, cytoplasm, cell, deficiency, symptom, biochemistry.

9. Provide the words in brackets with appropriate negative prefix

1. There were some (visible) signs of changes which took place within the body of our elderly patients. 2. The work of the patient's heart was found to be (efficient). 3. The intestinal (function) was the result of serious disorders which were caused by advanced liver (sufficiency). 4. The elderly members of the family were (vulnerable) to the infection as a result of hardening of their bodies from early childhood. 5. Mental (ability) developed slowly with aging. 6. As for gluten the

patient was quite (tolerable) to it. 7. Many of the participants showed emotional (stability), depression, and senile tremor. 8. For a long time these facts were considered to be (mortal), since all the studies performed invariably confirmed them. 9. The disease was promoted by (adequate) nutrition. 10. The diagnosis was confirmed by some (direct) signs. 11. The additional information was quite (important) for the final conclusion. 12. Introduction of strict diet played (significant) role in prevention of the disease development. 13. (balance) of main nutritional substances in the body resulted in severe gastrointestinal disorder. 14. The results of clinical analyses were (complete), since biochemical blood analysis was not made. 15. We can reduce the fat and (saturated) fats in our diets by using less fat, oil, and margarine. 16. Plant proteins alone can provide enough of the essential and (essential) amino acids, as long as sources of dietary protein are varied. 17. Most of the people become (active) after their retirement.

10. Give English equivalents to the Russian words in brackets

1. There were no (разногласий) as to the necessity of the operation. 2. Emotional instability, forgetfulness, depression all were the (проявления) of metal disorder. 3. Despite the age he had the (способность) to take care of himself. 4. The patient was quite normal with the (исключение) of her constantly being depressed. 5. The results of our examinations had significant (последствия), since the patient considered himself to be absolutely healthy. 6. Liver served the (мишень) organ for the drug. 7. He performed his everyday (обязанности) without any outside assistance.

11. From the list below choose the proper English equivalents of the italicized words

1. *Apart from* subjective explanations all objective signs confirmed the words of the relatives. 2. As a rule for the first two-three days the process *goes on* without any complications. 3. The compounds under the study *take in* as much nutrients as was previously described in our early publications. 4. *As to* the last two patients they were excluded from the study due to high blood sugar level. 5. In experimental group high blood pressure was the rule *rather than* the exception. 6. The eldest patient from the experimental group was *cut off* from the outer world for more than two years. 7. Many scientists *look for* the factors which would allow to prolong human life span. 8. The dog continued to be active *so long as* there were sufficient vitamins and minerals in its diet. 9. The nutritional status was one of the reasons to delay the required treatment *and not only that*, since the patient's high blood pressure did not allow surgical intervention. 10. Patient's complaints of acute stomach ache had no *direct bearing* on the underlying intestinal pathology. 11. It was *not necessarily* the result of untimely application

for medical aid. 12. In this case *great deal* depends on the time the essential treatment begins.

Многое, непосредственное отношение, искать, продолжаться, что касается, а не, изолировать, до тех пор пока, кроме, и не только это, поглощать, не обязательно.

IV. Learn to speak professional medical English

12. Complete definitions

1. Gerontology is ....
2. Senile dementia is ....
3. Degenerative disease is ....
4. Wasting disease is ....
5. Life span is ....
6. Gerontologist is ....
7. Longevity is ....

13. Read the text below and speak about gerontology and its problems

Gerontology

Gerontology is the study of the social, psychological and biological aspects of aging. It is distinguished from geriatrics, which is the branch of medicine that studies the disease of the elderly.

Gerontology encompasses the following:

— studying physical, mental, and social changes in people as they age;

— investigating the aging process itself (biogerontology);

— investigating the interface of normal ageing and age-related disease (geroscience);

— investigating the effects of our aging population on society, including the fiscal effects of pensions, entitlements, life and health insurance, and retirement planning;

— applying this knowledge to policies and programs, including a macroscopic (i.e. government planning) and microscopic (i.e. running a nursing home) perspective.

The multidisciplinary focus of gerontology means that there are a number of sub-fields, as well as associated fields such as psychology and sociology that also cross over into gerontology. However, that there is an overlap should not imply that they are the same. For example, a psychologist may specialize in early adults (and not be a gerontologist) or specialize in older adults (and be a gerontologist).

The field of gerontology was developed relatively late, and as such often lacks the structural and institutional support needed. (For example, relatively few universities offer a Ph.D. in gerontology.) How-

ever, the huge increase in the elderly population in the post-industrial Western nations has led to this becoming one of the most rapidly growing fields. Gerontology is currently a well-paying field for many in the West.

V. Learn to translate medical articles

14. Read the text and make a short summary in a written form

Болезнь Альцгеймера

Это первичная дегенеративная деменция, сопровождающаяся неуклонным прогрессированием нарушения памяти, интеллектуальной деятельности и других высших корковых функций и приводящая к тотальному слабоумию. Начинается после 50 лет. Стадии:

Инициальная стадия. Когнитивные нарушения. Мнестико-интеллектуальное снижение: забывчивость, затруднение в определении времени, ухудшение социальной, в том числе профессиональной, деятельности; нарастают явления фиксационной амнезии, нарушения ориентировки во времени и месте; нейропсихологические симптомы, в том числе афазия, апраксия, агнозия. Эмоционально-личностные нарушения: эгоцентризм, субдепрессивные реакции на собственную несостоятельность, бредовые расстройства. На этом этапе болезни Альцгеймера пациенты критически оценивают свое состояние и пытаются скорректировать нарастающую собственную несостоятельность.

Стадия умеренной деменции. Височно-теменной нейропсихологический синдром; нарастает амнезия; количественно прогрессирует дезориентировка в месте и времени. Особенно грубо нарушаются функции интеллекта (выражено снижение уровня суждений, трудности в аналитико-синтетической деятельности), а также инструментальных его функций (речи, праксиса, гнозиса, оптико-пространственной деятельности). Интересы больных крайне ограничены, нужна постоянная поддержка, уход; не справляются с профессиональными обязанностями. Тем не менее, на этом этапе больные сохраняют основные личностные особенности, чувство собственной неполноценности и адекватное эмоциональное реагирование на болезнь.

Стадия тяжелой деменции. Происходит полный распад памяти, фрагментарные представления о собственной личности. Теперь уже необходима тотальная поддержка (больные не могут соблюдать правила личной гигиены и т. п.). Агнозия достигает крайней степени (по затылочному и лобному типу одновременно). Распад речи чаще по типу тотальной сенсорной афазии.

ENVIRONMENTAL CONTROL

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[f**au**l], [inv**ai**ərəment], [ɔm**i**nəs], [s**ɔ:**fis], [səpl**ai**], [[sj**u**idʒ], [hæzəd], [θret], [ədsɔ:bə], [igz**ɔ:**st], [fj**u:**əl], [j**i:**ld], [**e**ərəsɔl], [sʌlfj**u**ərik], [v**i:**ikl], [led], [f**ei**ljə], [m**i:**diən], [str**ɔ**ntiəm], [**æ**dikwət].

2. Write in transcription

Waste, surroundings, curse, urban, garbage, contaminant, insecticide, aeration, vapour, effluent, noxious, combustion, particulate, exposure, reject, deposit, ensure.

3. Read the following words and medical terms

Connotation, pollution, contamination, municipal, watercourse, herbicide, sludge, injurious, eject, trioxide, inversion, abatement, dispersion, radioactivity, emergency, lethal, scintillation.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Modern civilization's capacity for fouling not only land, but also water in rivers and in the high seas as well as the atmosphere with increasing quantities of industrial waste is becoming the cause of deep concern on an international scale. The very term «environment», originally almost synonymous with such expressions as «surroundings» or «setting», now has a highly specialized ecological meaning. Loaded with rather ominous connotations, it is invariably used in such unpleasant and disturbing associations as those of water and air or atmospheric pollution, contamination by industrial waste disposal, radioactive fallout, smog and other curses of modern, mainly urban living. As such, environment in its broadest sense has become the concern of no longer just medical officers, sanitary inspectors and, indeed, medical services in general, but also that of whole governments and international bodies such as the UN World Health Organization. Environmental conferences on a world scale have been held to cope with the problem through joint effort.

Water pollution is the contamination of surface or ground water supplies by sewage, industrial wastes or garbage and other refuse. It has become a health hazard but also a critical economic problem — a threat to industries, agriculture and metropolitan areas. It destroys fish and wild life and spoils recreational areas. The volume of municipal and

industrial waste waters discharged into watercourses keeps increasing at an alarming rate. The combined waste waters contain mineral and organic contaminants (suspended, colloidal and dissolved substances) including, in varying degrees, many new chemical compounds used in homes, industrial processes and agriculture. Also some of the insecticides and weed-killers (herbicides) that drain off the ground into streams are toxic to fish. Water pollution control calls for an overall reduction in the quantities of contaminants discharged, adoption of better industrial and agricultural practices and waste water treatment by physical, chemical and biological processes (sedimentation, coagulation, filtration etc.). Modern methods include biological filters and activated sludge in which micro-organisms in aeration tanks are used as active adsorbers of organic matter.

Atmospheric pollution is the result of air contamination by liquid or solid particles (dust, grit), gases, vapours or exhaust fumes injurious to human health or comfort, to animals, plants or property, and introduced into the air artificially. Dusts from industrial processes, including ash and unburnt fuel, are generally ejected from chimneys and ventilating flues. Smaller liquid or solid particles in the effluents tend to remain suspended in the air for longer periods as aerosols. Noxious gases contribute to pollution by mixing uniformly with the air and not separating from it by settlement. Some of them are destroyed by reaction with other constituents only to yield other noxious or innocuous products. Sulphur dioxide, for instance, is oxidized by atmospheric oxygen to sulphur trioxide which combines with water vapour to form droplets of sulphuric acid which itself is a noxious pollutant.

Air pollution is a major cause of ill health or disease in human beings. The toxic effect of many industrial effluents is known, and legislation exists in most countries to prevent such pollutants from reaching toxic concentrations. Smog is one such example — the result of prolonged atmospheric inversion with little air movement, under an anticyclone, trapping smoke and sulphur dioxide. It is the cause of considerable cardiac and bronchial ailment rate.

The air in urban areas with high traffic density is also polluted by exhaust fumes from motor vehicles as a result of imperfect internal combustion. The gases include carbon monoxide, oxides of nitrogen, unburnt hydrocarbons and compounds of lead. Abatement of pollution involves measures to trap pollutants and minimize their emission by such methods as: removing particulate materials from effluent gas streams by settlement chambers, by passing the gases through filters, scrubbers and electrostatic precipitators. In town planning itself more attention must be paid to climatic and topographic conditions in allocation sites for industrial plants and residential and commercial development; in areas subject to inversion and failure of natural means

of dispersion, special administrative powers to enforce the shutting down of all operations emitting pollutants in emergencies can minimize the risk of major damage.

The latest environmental hazard is that caused by the harmful effects of **atomic radiation** such as X-rays, gamma rays and radioactive fall-out resulting from exploding nuclear devices in the air or from untreated nuclear reactor waste. Large radiation doses are known to produce somatic effects, while exposure to excessive doses will result in death.

The dose that will cause half the population to die is called the median lethal dose. For man this is between 300 and 450 rads. Distinction is made between the somatic effects, which affect only the individual, and the genetic effects involving the whole population, genetic mutations in particular. There are different residence times in the human body for different elements. Some radioactive elements are quickly rejected from the body whereas others such as strontium-90 are deposited in the bone structure and so always remain there. Special instruments have been developed to detect radioactivity such as the Geiger counter, ionization chambers and scintillation counters to measure the alpha-, beta-, gamma-, X-ray and neutron radiation. Health physicist can then assess the hazard and ensure that protection is adequate and that no one receives doses in excess of the recommended levels.

5. Answer the following questions

1. What has become the cause of modern man's deep concern? 2. In what way has the meaning of the term «environment» changed? 3. What are the main sources of water and air pollution? 4. How is the UN World Health Organization involved? 5. Why has water pollution become a threat to the human race? 6. Which are the principal pollutants discharged into watercourses? 7. What are the ways and means of dealing with water pollution? 8. In what way is the atmosphere contaminated? 9. Why are noxious gases so dangerous? 10. How does contamination by droplets of sulphuric acid arise? 11. Can you name an example of combating atmospheric pollution in Russia and other countries? 12. What is smog and how does it arise? 13. In what sense does smog represent a health hazard? 14. In what way are motor vehicle exhaust fumes dangerous? 15. Which are the already available technical means of air pollution abatement? 16. How can town planning help combat atmospheric pollution? 17. What are the sources of radioactive contamination? 18. What is the difference between somatic and genetic effects of radioactive contamination? 19. What are the technical means of measuring radioactivity?

III. Word study

6. Make up adjectives to the given nouns

Ecology, atmosphere, environment, chemistry, hazard, climate, agriculture, physics, particle, industry, injury, problem, sulfur, biology.

7. Make up English-Russian pairs of words

Scale, curse, supply, threat, density, treatment, residence, settlement, capacity, contamination, hazard, exposure, effluent, abatement, wastes, surroundings, fall-out, sewage, garbage, flue, alarm.

Воздействие, окружающая среда, загрязнение, воздухоотвод, способность, снабжение, осадки, угроза, проклятие, промышленные отходы, опасность, плотность, отходы, обработка, осаждение, тревога, масштаб, пребывание, мусор, удаление, сточные воды.

8. From the list below find synonyms to the given words

Disposal, threat, fouling, ailment, environment, danger, condition, residence, quantity, association, settlement, combustion, sense, abatement, hazard, matter, distinction, weed-killer, emergency.

Herbicide, surroundings, removal, existence, pollution, deposition, amount, burning, meaning, decrease, connection, substance, difference, danger, state, harm, accident, risk, disease.

9. Translate the italicized parts of the sentences

1. Air pollution increases *as well as* that of land and water. 2. Ecology includes the study of plant and animal populations *as those* of plant and animal communities and ecosystems. 3. *As such* ecology is not synonymous with environment, environmentalism, or environmental science. 4. The problems of ecology are now *no longer* the concern of one country, on the contrary it is a global problem. 5. Organisms are subject to environmental pressures, *but also* they are modifiers of their habitats. 6. Heat affects growth rates, activity, behavior and primary production *as well*. 7. All the elements of ecosystem are *well* balanced. 8. *Such* atmospheric events were not once registered in this area. 9. The influence of man's activity on the state of the environment was noted *long ago*. 10. It was a *long way* before the mankind realized the necessity to apply mutual efforts in order to make the environment safe for living. 11. In aquatic environments, anaerobic soil microorganisms use *such* organic elements *as* nitrate, manganic ions, ferric ions, sulfate, carbon dioxide and some organic compounds. 12. The results were just like *those* obtained by the Italian group of investigators.

10. From the list below choose synonyms to the italicized words

1. According to the American College Dictionary, pollution is defined as: to make *foul* or unclean; dirty. 2. Two types of water *pollutants* exist; point source and nonpoint source. 3. Point sources of pollution

occur when harmful substances are *emitted* directly into a body of water. 4. A nonpoint *source* delivers pollutants indirectly through environmental changes. 5. Many causes of pollution including *sewage* and fertilizers contain nutrients such as nitrates and phosphates. 6. Under natural conditions, lakes, rivers, and other water bodies undergo Eutrophication, an aging process that slowly fills in the water body with *sediment* and organic matter. 7. Though microscopic, these pollutants have a tremendous effect evidenced by their ability to cause different *ailments*. 8. Radioactive substances are produced in the form of *waste* from nuclear power plants, and from the industrial, medical, and scientific use of radioactive materials. 9. The major sources of water pollution can be classified as *municipal*, industrial, and agricultural. 10. The handling and *disposal* of solid residues can account for 25 to 50 per cent of the capital and operational costs of a treatment plant. 11. Wastes from commercial feeders are contained and disposed of on land; their main *threat* to natural waters, therefore, is from runoff and leaching. 12. These indicator bacteria suggest that a certain selection of water may be *contaminated* with untreated sewage and that other, more dangerous, organisms are present. 13. Raw *sewage*, garbage, and oil spills have begun to overwhelm the diluting capabilities of the oceans, and most coastal waters are now polluted. 14. In industrialized countries, bacterial *contamination* of surface water caused serious health problems in major cities throughout the mid 1800-s.

Загрязнитель, удаление, отходы, источник, загрязнять, осадок, недомогание, грязный, выбрасывать, городской, угроза, загрязнение, сточные воды.

IV. Learn to speak professional medical English

11. Read the text and retell it in English

Любое химическое загрязнение — это появление химического вещества в не предназначенном для него месте. Загрязнения, возникающие в процессе деятельности человека, являются главным фактором его вредного воздействия на природную среду.

Химические загрязнители могут вызывать острые отравления, хронические болезни, а также оказывать канцерогенное и мутагенное действие. Например, тяжелые металлы способны накапливаться в растительных и животных тканях, оказывая токсическое действие. Кроме тяжелых металлов, особо опасными загрязнителями являются хлордиоксины, которые образуются из хлорпроизводных ароматических углеводородов, используемых при производстве гербицидов. Источниками загрязнения окружающей среды диоксинами являются и побочные продукты целлюлозно-бумажной промышленности, отходы металлургической промышленности,

выхлопные газы двигателей внутреннего сгорания. Эти вещества очень токсичны для человека и животных даже при низких концентрациях и вызывают поражения печени, почек, иммунной системы.

Наряду с загрязнением окружающей среды новыми для нее синтетическими веществами, большой ущерб природе и здоровью людей может нанести вмешательство в природные круговороты веществ за счет активной производственной и сельскохозяйственной деятельности, а также образования бытовых отходов.

Загрязнению подвергаются атмосфера (воздушная среда), гидросфера (водная среда) и литосфера (твердая поверхность) Земли.

V. Learn to translate medical articles

12. Translate the text into Russian

Environmental pollution is contamination of air, water and land from man-made waste. Pollution leads to depletion of the ozone layer, global warming and climate change. Air pollution is the release of chemicals and particles into the atmosphere. Water pollution includes surface runoff, leakage into groundwater, liquid spills, wastewater discharge and littering. If toxins are spilled on the ground or if an underground storage tank leaks, soil can become contaminated. Well known contaminants include herbicides and pesticides. Toxic waste is waste material, often in chemical form, which pollutes the natural environment and contaminates groundwater.

Other types of pollution include ocean pollution and noise pollution. Environmental pollution can have a deadly effect on humans and ecosystems. For example, cigarette smoke, including second-hand smoke, causes cancer, emphysema, stroke and heart attack. Drinking water can become contaminated by untreated sewage, rashes and skin problems occur due to oil spills, while excessive noise can cause hearing loss. The U.S. Environmental Protection Agency (EPA) was established in 1970 to put a limit on the amount of pollutants in the air. Congress passed the Clean Air Act in 1963, the Noise Control Act in 1972 and the Clean Water Act in 1977. Pollution is a bigger concern in other parts of the world, especially developing countries. Time Magazine reported in 2007 that the most polluted spots in the world included China, India, Peru and Russia.

PREVENTION AND HYGIENE

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[ən**ɔ**fili:z], [**æ**təbrin], [k**æ**riə], [kənt**ei**dʒəs], [dib**i**liteitiŋ], [f**i**ltrəbl], [h**e**pət**ai**tis], [h**ai**dʒi:n], [ins**i**piənt], [influ**e**nzə], [ins**e**ktisaid], [mɔsk**i:**tɔu], [mjun**i**sipəl], [l**a**uz], [pæstəraiz**ei**ʃn], [prik**ɔ:**ʃn], [pr**ɔu**tɔuz**ɔu**ən], [rikj**u:**pəreit], [**ʌ**ltimit] [dred].

2. Write in transcription

Abundance, plague, communicable, toll, imperative, nasty, purification, ravage, vaccine, notifiable, sewage, particular.

3. Read the following words and medical terms

Ailment, contagious, disinfection, epidemiology, purify, scourge, supervision, virulent, severe, suspicious, supply, emphasis, abatement, vehicle.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

While prevention of disease through proper hygiene, sanitation and epidemiological control is the ultimate goal of all medical science, it is particularly imperative in the case of communicable (contagious, infectious) diseases.

Diseases such as typhoid fever, cholera, tuberculosis, smallpox, diphtheria, measles, whooping cough, rubella, infectious hepatitis, influenza, the common cold etc. are all caused by specific parasitic germs which poison the body by the toxins they produce. Some of these germs are plant microbes (bacteria), others are animal microbes (protozoa, streptococci, staphylococci, bacilli etc.), still others belong to a group of parasites known as filterable viruses.

A contagious disease is referred to as epidemic if after being only irregularly present in an area, it suddenly attacks large numbers and becomes widespread. Unusually severe epidemics are often called pandemics (such as the influenza pandemic in about 1918 with the resultant death toll of about 21 million people all over the world).

A large part in the spread of communicable disease is played by incipient cases and «carriers», i.e. persons who have recuperated from their illness or may never have themselves developed any clinical symptoms. The three principal vehicles of infection which commonly serve to effect a rather direct transfer of infectious material from one

person to another and which among them account for 99% of all cases of communicable disease are: articles of food and drink, flies and other insects and more or less direct personal contact (food, flies, and fingers). Rodents are vehicles for insects: bubonic plague which destroyed a quarter of the population of Europe in the Middle Ages, is primarily a disease of the rat, spread from rat to man by the bite of the flea. The once dreaded typhus fever was spread by the bite of the body louse.

The problem of malaria, one of the most serious debilitating ailments spread by the bite of the malarial mosquito (Anopheles), is tackled in two ways: by eliminating as far as practicable all breeding places of mosquitoes (using DDT and other insecticides) and by administering atabrine which in daily doses acts as a suppressive, preventing the development of clinical malaria.

In all communicable diseases, particularly those spread by contact, all known infected persons must be surrounded by special precautions. For this reason all communicable diseases are notifiable, i.e. the reporting of their incidence to the health authorities is required by law and special laboratories are maintained to assist in early diagnosis of suspicious cases of disease. In certain diseases (measles, whopping cough) it has been established that the virulent germs are discharged in greatest abundance in the early stages before the characteristic symptoms, which make a diagnosis possible have actually appeared.

Several diseases, which were once terrible scourges of civilization, can now be completely eliminated by a well-organized program of vaccination or inoculation. Thus, e.g. the Salk and Sabin vaccines have helped to eradicate the paralysing disease of poliomyelitis. For these and similar purposes inactivated toxins, immune serums or weakened strains of germ are employed.

The results of the application of such procedures — proper disposal of household wastes and municipal sewage, purification of water, pasteurization of milk, supervision of other food supplies, the control of insect carriers, the isolation of sick persons, the disinfection of infected discharges and the application of vaccine and serum therapy — have been manifested by impressive reductions in the death rate.

As a result of the emphasis on prevention, public sanitation occupies a particularly important place in the Russian system of public health care. It is linked with the control of infectious diseases to form the hygiene and epidemiological service. The Department of Hygiene and Epidemiology of the Ministry of Health is headed by the chief hygiene officer; regional and district hygiene officers are in charge of hygiene and epidemiological stations at regional and district levels respectively. Each of them in his particular area is then responsible for the prevention of communicable diseases, disinfection, disinfestation, rodent control,

smoke abatement, food inspection and — last but not least — environmental hygiene.

5. Answer the following questions

1. What is supposed to be the ultimate goal of medicine? 2. What would have happened if medicine had not scored success in combatting communicable diseases and which infections come under the heading of these diseases? 3. What is the definition of an epidemic? 4. What is the difference between epidemic and pandemic diseases? 5. Who is considered to be a carrier? 6. What sort of pandemic ravaged [rævidʒd] Europe after the 1st World War? 7. What would have happened had a powerful remedy been known then? 8. What does the term «food, flies and fingers» mean in terms of prevention and hygiene? 9. In what sense do we speak of rodents as of vehicles of infection? 10. What did the term «black death» refer to in medieval times? 11. What are the causes and clinical manifestations of malaria? 12. In what ways is the problem of malaria generally tackled? 13. What does the term «notifiable disease» imply? 14. What might happen if isolated cases of a notifiable disease failed to be notified? 15. In terms of prevention: what is the particular danger of such relatively common infectious diseases as measles? 16. Which is considered to be Russian biggest success in eradicating communicable diseases? 17. What is the principle of vaccination by inactivated toxins? 18. Which kind of vaccination and inoculation is compulsory in Russia? 19. How is the system of preventive vaccination and inoculation organized in Russia? 20. What is the purpose and principle of pasteurizing milk? 21. In what way is supervision of food supplies exercised? 22. What are the aims of the Russian hygiene and epidemiological services? 23. What responsibilities would you have if you were appointed a district hygiene officer? 24. What is the idea of disinfestation and smoke abatement? 25. How is environmental hygiene organized?

III. Word study

6. Make up adjectives

Filtrate, debilitate, communicate, notify, suppress, prevent, effect, transfer, discharge, paralyse, employ, apply, control.

7. Make up English-Russian pairs of words

a) Destroy, eliminate, cause, maintain, occupy, attack, manifest, tackle, belong, establish, employ, contain, administer, recuperate, eradicate, assist, require.

Выздоравливать, проявлять, устранять, устанавливать, вызывать, уничтожать, занимать, вводить, принадлежать, содержать, применять, искоренять, помогать, решать, поражать, требовать, поддерживать.

b) Ultimate, suppressive, impressive, certain, proper, practicable, suspicious, principle, similar, severe, incipient, imperative.

Подавляющий, обязательный, основной, соответствующий, подобный, тяжелый, некоторый, впечатляющий, конечный, подозрительный, осуществимый, ранний.

c) Germ, abundance, transfer, abatement, prevention, ailment, incidence, scourge, strain, goal, carrier, precaution, vehicle.

Перенос, возникновение, снижение, профилактика, множество, цель, штамм, микроб, носитель, переносчик, предосторожность, недомогание, бедствие.

8. From the list below choose synonyms to the given words

a) Prevention, reduction, goal, abundance, ailment, article, application, supervision, incidence.

Occurrence, thing, control, prophylaxis, decrease, disease, quantity, purpose, use.

b) Proper, imperative, principle, incipient, ultimate, practicable.

Final, main, appropriate, possible, beginning, obligatory.

c) Recuperate, tackle, cause, administer, attack, head, establish, effect, employ, assist.

Affect, influence, give, find, manage, induce, recover, solve, help, use.

9. Make up word combinations, using the list of words below

Proper, incipient, personal, weakened, debilitating, terrible, important, ultimate, principal, parasitic, infected, insect, filterable, direct, contagious, early.

Place, vehicle, stage, viruses, contact, hygiene, disease, ailment, goal, scourge, case, carrier, person, germ, transfer, strain.

IV. Learn to speak professional medical English

10. Complete the sentences

1. The ultimate goal of all medical sciences is ....
2. Infectious diseases are all caused by ....
3. Epidemic is ....
4. Incipient cases and carriers play a large part ....
5. Malaria is ....
6. Special precautions must be taken for ....
7. Virulent germs are discharged in greatest abundance in ....
8. Several diseases are now completely eliminated by ....
9. Vaccines help to eradicate ....
10. The impressive reduction of death rate was the result of ....

11. Read the text and make a short account in English

Home and everyday life hygiene

Home hygiene pertains to the hygiene practices that prevent or minimize disease and the spreading of disease in home (domestic) and in everyday life settings such as social settings, public transport, the work place, public places etc.

Hygiene in home and everyday life settings plays an important part in preventing spread of infectious diseases. It includes procedures used in a variety of domestic situations such as hand hygiene, respiratory hygiene, food and water hygiene, general home hygiene (hygiene of environmental sites and surfaces), care of domestic animals, and home healthcare (the care of those who are at greater risk of infection).

At present, these components of hygiene tend to be regarded as separate issues, although all are based on the same underlying microbiological principles. Preventing the spread of infectious diseases means breaking the chain of infection transmission. The simple principle is that, if the chain of infection is broken, infection cannot spread.

The main sources of infection in the home are people (who are carriers or are infected), foods (particularly raw foods) and water, and domestic animals (in western countries more than 50 % of homes have one or more pets). Additionally, sites that accumulate stagnant water — such as sinks, toilets, waste pipes, cleaning tools, face cloths — readily support microbial growth, and can become secondary reservoirs of infection. Germs (potentially infectious bacteria, viruses etc.) are constantly shed from these sources via mucous, faeces, vomit, skin scales, etc. Thus, when circumstances combine, people become exposed, either directly or via food or water, and can develop an infection. The main «highways» for spread of germs in the home are the hands, hand and food contact surfaces, and cleaning cloths and utensils. Germs can also spread via clothing and household linens such as towels. Utilities such as toilets and wash basins, for example, were invented for dealing safely with human waste, but still have risks associated with them, which may become critical at certain times, e.g., when someone has sickness or diarrhea. Safe disposal of human waste is a fundamental need; poor sanitation is a primary cause of diarrhoeal disease in low income communities. Respiratory viruses and fungal spores are also spread via the air.

Good home hygiene means targeting hygiene procedures at critical points, at appropriate times, to break the chain of infection i.e. to eliminate germs before they can spread further. Because the «infectious dose» for some pathogens can be very small (10—100 viable units, or even less for some viruses), and infection can result from direct

transfer from surfaces via hands or food to the mouth, nasal mucosa or the eye, «hygienic cleaning» procedures should be sufficient to eliminate pathogens from critical surfaces. Hygienic cleaning can be done by:

• Mechanical removal (i.e. cleaning) using a soap or detergent. To be effective as a hygiene measure, this process must be followed by thorough rinsing under running water to remove germs from the surface.

• Using a process or product that inactivates the pathogens in situ. Germ kill is achieved using a «micro-biocidal» product i.e. a disinfectant or antibacterial product or waterless hand sanitizer, or by application of heat.

• In some cases combined germ removal with kill is used, e.g. laundering of clothing and household linens such as towels and bed linen.

V. Learn to translate medical articles

12. Read the text and translate it into English

Инфекционные заболевания — это группа заболеваний, вызываемых проникновением в организм патогенных (болезнетворных) микроорганизмов. Для того чтобы патогенный микроб вызвал инфекционное заболевание, он должен обладать вирулентностью (ядовитостью; лат. *virus* — яд), то есть способностью преодолевать сопротивляемость организма и проявлять токсическое действие. Одни патогенные агенты вызывают отравление организма выделяемыми ими в процессе жизнедеятельности экзотоксинами (столбняк, дифтерия), другие — освобождают токсины (эндотоксины) при разрушении своих тел (холера, брюшной тиф).

Одной из особенностей инфекционных заболеваний является наличие инкубационного периода, то есть периода от времени заражения до появления первых признаков. Длительность этого периода зависит от способа заражения и вида возбудителя и может длиться от нескольких часов до нескольких лет (последнее бывает редко). Место проникновения микроорганизмов в организм называют входными воротами инфекции. Для каждого вида заболевания имеются свои входные ворота. Так, например, холерный вибрион проникает в организм через рот и не способен проникать через кожу.

HIGHLIGHTS OF THE HISTORY OF MODERN MEDICINE

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[ignɔ**:**], [ədv**a:**ns], [s**ai**əns], [**i:**kwəl], [æmb**i**ʃəs], [θɔ:ræsik], [pjuə**:**pərəl], [kæθitə], [ris**i:**v], [d**i**səplin], [dr**e**d], [gæstr**ɔ**skəpi], [p**e**nis**i**lin].

2. Write in transcription

Achievement, congenital, transplant, cornea, entirely, exploit, purpose, cystoscopy, thoracoscopy, bronchoscopy, follower, typhus, serology, sulphonamide, breakthrough.

3. Read the following words and medical terms

Transplantation, essentially, phenomenon, serious, device, visual, scope, anthrax, tuberculosis, syphilis, bacteriostatic, streptomycin, boost, collapse, catheterization, gradual, anaesthetize, reference.

4. Read and memorize the names of medical specialties

Surgery, anatomy, otolaryngology, serology, allergology, immunology, chemistry, psychiatry, ophthalmology, biology, gynaecology, paediatrics, microbiology, biochemistry, physiology, dermatology, bacteriology, obstetrics, pharmacology, medicine.

***5.* Learn to pronounce the names of the outstanding men of medicine**

Avicenna [**æ**vis**e**nə]
Barnard [b**a:**nəd]
Bergmann [bə:gmən]
Billroth [b**i**lrət]
Czermak [tʃ**e**əmək]
Domagk [d**ɔ:**mək]
Du Bois Reymond [dju bwa: reim**ɔ**ŋ]
Filatov [f**i**lətov]
Fleming [fl**e**miŋ]
Forel [fɔr**e**l]
Forssmann [f**ɔ:**smʌn]
Galen [g**ei**lən]
Hebra [h**e**brə]
Helmholtz [h**e**lmhɔlts]
Hippocrates [hip**ɔ**krəti:z]
Koch [k**ɔ:**kh]
Kocher[k**ɔ:**khə]
Landsteiner [lændstainə]
Lister [l**i**stə]
Muller [m**u**lə]
Paracelsus [pærəsəlsəs]
Pasteur [pæst**ə:**]
Pirquet [pirk**ei**]
Purkinje Jan Evangelista [pə**:**kindʒi: dʒæn ivændʒelistə]
Roentgen [r**e**ntgen]
Rokitansky [r**əu**kitænski]
Sauerbruch [s**au**əbruk]
Semmelweis [z**e**mlvais]
Waggner-Jauregg [v**a:**gnə j**au**reg]

II. Text study

6. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Although it would be wrong to underestimate the significance of such learned men of old as Hippocrates, Galen, Avicenna or Paracelsus, and although it would be foolish to ignore their contribution to the art of medicine or to disregard the achievements of Chinese and other traditional non-European medical procedures, the fact remains that a truly revolutionary advance in medicine as a science has only been made over the past century or so. This was made possible by equally amazing progress in other natural sciences, particularly chemistry, biochemistry, optics, electrotechnics etc. and by the gradual turning of medicine — once a subjective and individual art — into the modern collective biological science that it is, with the stress increasingly on planned medical research.

In surgery, such ambitious operations as those of the heart, within the thoracic cavity or inside the skull, would be unthinkable without the new methods of anaesthetising, general and local, or without Semmelweis's insistence on destroying pathogenic germs by chemical means, i.e. by disinfection — a discovery which led on to the now matter-of-fact idea of asepsis and sterilization. Men like Lister, Bergmann, Kocher, Billroth and others helped to put in everyday surgical practice Semmelweis's revolutionary idea of «keeping free from infection being far better than disinfecting», which helped him to combat puerperal sepsis or childbed fever.

Of equal importance for modern thoracic surgery was Sauerbruch's invention and construction of the negative pressure chamber known as Sauerbruch's cabinet, to prevent the collapse of the chest wall. The method was recently replaced by the so-called controlled respiration with air being artificially pumped in and out of the lungs.

Forssmann was the first to introduce cardiac catheterization after he had himself inserted a primitive catheter into his own cubital vein and passed it along as far as his own heart. The method soon became indispensable in the diagnosis of congenital heart defects.

The most spectacular achievements of modem surgery are tissue and organ transplant operations, of which Filatov's transplantations of the cornea and Barnard's heart transplant operations deserve particular reference. Modern surgery received a tremendous boost by progress made in seemingly unrelated disciplines of natural science. The discovery of X-rays by Roentgen — essentially a physical phenomenon — has been almost entirely exploited by medicine: not only for diagnostic, but — to a great extent — for therapeutic purposes, too.

Similarly, the discovery of blood groups by Landsteiner and Jansky made the performance of prolonged serious operations of the heart and

the lungs possible, and so did the newly discovered art of controlling the blood clotting mechanism. New knowledge of the role of the Rh factor proved to be of great importance in obstetrics.

Mechanical engineering greatly extended the surgeon's possibilities by developing and introducing a variety of diagnostic and therapeutic apparatus and devices. This paved the way to such modern methods as those of cystoscopy, thoracoscopy, gastroscopy, bronchoscopy etc. These enable the surgeon to work under direct visual control and often even to perform surgical operations without actually having to open the patient.

The almost sensational success that modern medicine has scored in combating infectious diseases would be unthinkable without bacteriology and microbiology, to which the foundations were laid by Pasteur, Koch, and others. Pasteur, a chemist and bacteriologist, not a physician, was the first to discover the cause of a number of communicable diseases: microscopic pathogenic organisms, as well as ways and means of combatting them. Thanks to Pasteur, Koch and their followers the germs of anthrax, rabies, cholera, diphtheria, spotted typhus, tuberculosis, syphilis, sleeping sickness and so on were discovered and isolated and drugs to fight them devised. This gave rise to new fields of medicine: serology and immunology and pharmacology recorded a remarkable advance with Domagk's planned and purposeful discovery of bacteriostatic agents, particularly the sulphonamide series, and Fleming's epoch-making discovery of penicillin. Fleming's breakthrough opened the way to the discovery of a whole series of antibacterial substances derived from fungi and bacteria-antibiotics. Of these, streptomycin, particularly when combined with chemo-therapeutic agents, helped to reduce the once dreaded tuberculosis to a place way down the list of principal killer-diseases.

The diagnosis and treatment of heart and circulatory diseases was greatly facilitated with the introduction of electrocardiography. This technical achievement is based on the discovery that any muscular activity (including that of the heart muscle) produces electric current strong enough to be recorded and made use of.

Specialization is another feature of modem medicine. Paediatrics inevitably broke away from classical internal medicine after it had been realized that children not only have their specific diseases and disorders but also their own specific biology. Similar reasoning led to the establishment of obstetrics and gynaecology as separate branches of medicine.

Ophthalmology owes its advances, among other things, to the discovery by Purkinje and Helmholtz of the ophthalmoscope which made a thorough study of the interior of the eye possible and opened up new ways of treating diseases of the retina and choroid thus leading to the

remarkable achievements of modern eye surgery (electric current welding of detached retina, cornea transplant operations etc.)

Otolaryngology has developed a system of its own with its own classification of diseases. Its achievements include the successful treatment of pustular otitis media, otosclerosis and deafness. The now indispensable laryngoscope was invented by physiologist J. Czermak.

Dermatology owes its separate development to Ferdinand Hebra, who postulated that many of the skin diseases are not just outer symptoms of inner conditions but independent affections of the skin as a separate organ. The foundations to allergology were laid by Pirquet.

Pioneering work in the field of psychiatry was done by August Forel, who based his approach on the recognition that mental diseases are always the result of anatomical or physiological disorders of the central nervous system. Waggner-Jauregg contributed by noticing that a number of mental diseases, particularly so general paralysis of the insane, caused by syphilitic infection, showed abatement or disappeared altogether as a result of overcoming a febrile condition.

The difficult, though inevitable, task of describing and classifying all the changes that are caused on the body organs by pathological processes was undertaken by Karel Rokitansky of Vienna, the founder of pathological anatomy. The recognition that diseases are clinical manifestations of not just morphological or cellular changes, but mainly those of changes in the normal functions of the body, is the result of work done by J. E. Purkinje, J. Muller and Du Bois-Reymond, the founders of modem physiology.

The name of J. E. Purkinje deserves particular reference. He is the most remarkable biologist to have appeared on the 19th century scientific scene. Not only did he make significant discoveries in the field of physiology, but he also proved to be an outstanding organizer of scientific life and he will forever be remembered for laying down the true principles and objectives of medicine in general: «Medical science — he wrote as early as in 1823 — will only achieve perfection in all its parts when it has begun to teach how to consolidate the fragility of the human body, how to prevent infection, how to protect from diseases to make human life last in bliss and beauty until its natural end — ... Medicine must be made a public affair, following as its objective the health and physical perfection of the whole nation and adopting the authority of public executive power in order to achieve what until now the uncoordinated individual efforts have been unable to achieve».

7. Answer the following questions

1. What do the names Hippocrates, Galen, and Avicenna have in common? 2. What lays behind the spectacular advance of scientific medicine beginning about a century ago? 3. What is the nature of mo-

dern medicine in general? 4. What is the significance of Semmelweis's contribution to clinical medicine? 5. What is the principle of Sauerbruch's cabinet? 6. Who was the first to introduce cardiac catheterization and how did he demonstrate the method? 7. What are the best known achievements of modern tissue and organ transplant operations? 8. Wherein is the importance of Roentgen's invention to be found? 9. To what extent are diagnostic and therapeutic procedures dependent on advances in mechanical engineering? 10. What do we owe to such men as Pasteur or Koch? 11. What are bacteriostatic agents and who was the first to study them in a planned and purposeful way? 12. What is the principle and subsequent importance of Fleming's breakthrough? 13. Why did paediatrics break away from classical internal medicine? 14. Why did obstetrics and gynaecology begin to be seen as separate branches of medicine? 15. What is the essence of Purkinje's contributions to: a) ophthalmology, b) neurology? 16. What discovery is modern dermatology based on? 17. What is the modern approach to mental diseases and who was the best known psychiatrist to pave the way to it? 18. Who are considered to be the founders of modern physiology?

8. Read the sentences and define whether they correspond to the text or not. Use the following words and expressions

for the agreement	for the disagreement
Yes, that's right	*Oh, you're wrong*
Certainly, you're right	*That's not so*

1. Such men of old as Hippocrates, Galen, Avicenna and Paracelsus made a great contribution to the art of medicine. 2. The discovery of Pasteur and Koch gave rise to new fields of medicine. 3. Catheterization is indispensable in the diagnosis of congenital heart defects. 4. Fleming's studies led to the discovery of antibiotics. 5. J.E. Purkinje, J. Muller and Du Bois-Reymond were the founders of pathological anatomy. 6. Otolaryngology uses general system of disease classification. 7. Disinfection is the basis of asepsis and sterilization. 8. Modern medicine is characterized by integration. 9. The process in different fields of natural sciences gave a tremendous boost to modern surgery. 10. Bacteriology and microbiology laid the foundation for combating infectious diseases. 11. Advances in ophthalmology are due to the works of Purkinje and Fleming. 12. A. Forel thought that mental diseases are the result of disorders of the central nervous system. 13. Sauerbruch's cabinet helps to prevent collapse of the chest wall. 14. F. Hebra thought that many skin diseases are just outer symptoms of inner conditions. 15. Sauerbruch was the first to introduce cardiac catheterization. 16. Summelweis put into practice his idea of «keeping free from infection is far better than disinfection».

9. Make the below sentences interrogative

1. A truly revolutionary advance in medicine has been made over the past century. 2. Forsmann was the first to introduce cardiac catheterization. 3. The discovery of X-ray by Roentgen is almost entirely exploited in medicine. 4. The discovery of blood groups made prolonged operations on the heart and lungs possible. 5. Foundations of bacteriology and microbiology were laid by Koch and Pasteur. 6. Specialization is a characteristic feature of modern medicine. 7. Ophthalmology owes its advances to the discovery of ophthalmoscope. 8. Achievements in otolaryngology include the successful treatment of pustular otitis media. 9. Dermatology owes its development to F. Hebra. 10. Pioneering work in the field of psychiatry was made by A. Forel. 11. Rokitansky was the father of pathologic anatomy.

10. Correct the below sentences using expressions

No, that's wrong as far as I know it was ... who ...
No, that's wrong, as far as I know it was ... that ...
No, as far as I know it was only in ... when (that)

Example: Avicenna was born in the 19th century. — No, that's wrong, as far as I know Avicenna was born in the 10th century.

1. Koch insisted on destroying pathogenic germs by chemical means. 2. Sauerbruch helped to introduce in everyday surgical practice Summelweis idea of «keeping free from infection is better than disinfection». 3. Billroth inserted himself a primitive catheter and passed it as far as his own heart. 4. Barnard transplanted cornea. 5. The invention of a catheter made the performance of prolonged operations of the heart and lungs possible. 6. New knowledge of blood groups proved to be of great importance in obstetrics. 7. Biology greatly extended the surgeon's possibilities by developing and introducing a variety of diagnostic and therapeutic apparatuses and devices. 8. Chemistry paved the way to such modern methods as those of cytology, thoracoscopy, gastroscopy and bronchoscopy. 9. Fleming laid the foundations for bacteriology and microbiology. 10. Thanks to Pasteur, Koch and their followers the germs of AIDS were discovered. 11. The diagnosis of heart and circulatory diseases was greatly facilitated with the introduction of X-rays by Roentgen. 12. Otolaryngoscope made a thorough study of the interior of the eye possible. 13. Dermatology owes its separate development to A. Forel. 14. Waggner-Jauregg was the founder of pathologic anatomy. 15. A truly revolutionary advance in medicine was made in antiquity.

III. Word study

11. Find in the text and write down the names of diseases

12. Write down specialists working in the following fields of medicine

Ophthalmology, gynaecology, allergology, biochemistry, psychiatry, otolaryngology, surgery, paediatrics, obstetrics, physiology.

13. Read the words and give their Russian equivalents

a) Diagnosis, patient, research, tissue, substance, science, physician, discipline, transplantation, procedure, medium.

b) Transplant, bacteriostatic, skull, retina, streptomycin, penicillin.

14. Make up adjectives:

Bacterium, thorax, circulation, muscle, vision, pustule, respiration, communication, purpose, puerperium, chemotherapy, pathogenicity.

15. Name the instrument used for the following procedures

Bronchoscopy, catheterization, thoracoscopy, gastroscopy, laryngoscopy, ophthalmoscopy.

16. Make up meaningful word combinations

normal ...	... medium
internal ...	... process
pathological ...	... respiration
infection ...	... surgery
pathogenic ...	... vein
general ...	... agent
muscular ...	... anatomy
specific ...	... fever
circulatory ...	... germ
surgical ...	... group

17. Provide the words in brackets with the appropriate negative suffix

1. Contribution of ancient scientists such as Avicenna, is difficult to (estimate). 2. The symptoms practically (appeared) after H.pylori eradication. 3. The state of being free from disease-causing contaminants is termed (sepsis). 4. With advances in medical chemistry most (bacterial) drugs are now semisynthetic – modified chemically from original compounds found in nature. 5. Pulpation, percussion and auscultation are (dispensable) parts in physical examination of any patient. 6. Now it is (thinkable) to perform any surgical operation without anaesthesia. 7. Despite the intensive therapy we were (able) to save the child as the parents brought him to our center too late. 8. The obtained in their laboratory facts were (related) to the problem we studied. 9. It is (possible) to make precise diagnosis without thorough physical and instrumental examinations. 10. All operative material should be (infected) before its use. 11. Later on the data were confirmed by two (dependent) groups in Austria and Canada. 12. There were some (di-

rect) evidences confirming our hypothesis. 13. The descrepancy was so (significant) that at first we considered it to be the expression of the same strain. 14. It is impossible to (regard) the achievements in adjacent sciences, namely, physics, chemistry, ecology, to make a further progress in disease prevention.

IV. Learn to speak professional medical English

18. Read the text about Avicenna and speak about his life and work

Avicenna

The summit of excellence in Arabian medicine was reached by Ibn Sina, whose name was changed by the medieval writers to Avicenna (A.D. 980—1037). He was a Persian, born near Bokhara, and he has been called the Prince of Physicians. He appears to have been something of an infant prodigy, as he knew the Koran by heart before he was ten years old. Soon afterwards, he began the study of law and studied in succession mathematics, physics and philosophy. Turning his attention to medicine at 16, he soon achieved a great reputation, as is evident from his appointment as a Court Physician at the age of eighteen years. After many wanderings, adventures and vicissitudes and spending much of his time in the service of various rulers, he returned to Ramadan, where he died at the age 58. His life was crowded with adventure and hard work, and yet he found time to read, write, lecture, and practice medicine. He wrote more than 20 books on theology, metaphysics, astronomy, philology and poetry, with an equal number on medicine. His greatest work is undoubtedly «Canon of Medicine». In this work Avicenna attempted to codify all existing medical knowledge. Avicenna attempted to write an all-embracing book on medicine following the exact rules of logic and attempting to fit each bit of anatomy, physiology, diagnosis and treatment into its proper niche, with mathematical accuracy. This final massive structure had many imperfections since its foundation of anatomy and physiology was faulty. Anatomy itself was largely a closed book to the Islamic physicians, who practiced no dissection, since it was forbidden by their religion. Avicenna's anatomy, like that of his Muslim colleagues, was based on the writings of the Greeks. These defects do not imply that the work possessed little merit, quite the contrary. No unworthy book could have dominated medicine for centuries, as the Canon did without possessing extraordinary merit.

19. Find in the Internet the site http://n-t.ru/nl/mf/mechnikov **and speak about I. I. Mechnikov**

MEDICINE IN THE COMPUTER AGE

I. Learn to pronounce, write and read English words and medical terms and memorize their Russian equivalents

1. Write in letters

[d**ai**næmiks], [d**i**səplin], [k**ɔ:**z], [məʃ**i:**n], [**ai**sət**ɔ**up], [**i**ntəvju:], [d**au**t], [pj**u**ə], [**ɔ:**ltə], [əpr**ɔ:u**tʃ], [tekn**i:**k], [g**ai**dəns], [p**i:**s], [trʌbl], [is**e**nʃl], [t**ʃu:**z], [sk**e**ptikl], [tʌtʃ], [sk**ɔ:**], [ju:n**i:**k], [kəmpj**u:**tə], [g**ai**dəns], [dʒʌdʒ], [kl**u:**].

2. Write in transcription

Account, properly, judgement, attitude, alternative, valuable, resonance, further, precision, apply, visualization, accurate, contribute, powerful, triumph, reliability, repugnant, hypothetical.

3. Read the following words and medical terms

Antibiotic, antiserum, bacillus, bacterium, bacteriology, beaker, biochemist, biochemistry, blood, cancer, chemistry, computer, diagnose, diagnostics, diphtheria, hemoglobin, immunity, immunology, infection, invasion, leukemia, microbiology, microscope, microscopy, patent, peptide, poliomyelitis, protein, radiology, surgery, tetanus, tomography, tuberculosis, virus.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Any prediction as to the possible uses of computers in medicine must be linked with the dynamics of the development of medicine as a modern science and with the art of diagnosis.

It should be borne in mind that post mortem examinations conducted with the unaided eye began only about 200 years ago. With the systematic use of the microscope in medical studies, which began about 1830, the new science was expanded. Only a century ago, the bacterial causes of disease began to be recognized, culminating in the demonstration of the bacillus of tuberculosis by Koch in 1882. Study of the immunity reactions to bacterial invasion quickly led to the discovery of antisera in the control of tetanus and diphtheria. By the turn of the 19th century, this growing knowledge was already transforming the practice of medicine into an increasingly science-based discipline.

Biochemists no longer work with burettes and beakers, but apply sophisticated automated machines. These can write out by computer a score of estimates of various important chemical substances in a single sample of blood. New agents used in treatment can be labelled with an

appropriate isotope and then distribution and disposal within the body traced and analysed.

The methods of X-ray diffraction analysis have given much detail on the structure and shape of such peptides and proteins as insulin and haemoglobin.

At the turn of the 19th century, doctors were still their own scientists. Younger physicians did their own post mortems and often such chemistry and bacteriology as were necessary for diagnosis. Now, as demands by the public grow for sophisticated medical analysis, the doctors have to be supported by paramedical scientists trained in microscopy, biochemistry or microbiology.

On these solid scientific supporting bases, modern medicine has been gradually transformed. Infectious diseases like tb and typhoid can be effectively treated by antibiotics; diphtheria, measles, poliomyelitis and other infections can be prevented as a result of studies in immunology. All these are examples of pure laboratory discoveries. The «invisible» viruses of a generation ago can now be seen with increasingly powerful electron microscopes. Viruses can alter the behaviour of cells which they invade and new questions are presented to those working in the field of cancer and leukaemia.

In addition to these pure laboratory approaches, scientific methods are now applied directly to the individual patient. These include the sophisticated techniques of modern radiology, computerized tomography (CT), nuclear magnetic resonance (NMR) visualization and a growing number of ingestive tests which provide guidance to diagnosis and management of the problems of disease in the sick man himself. Had it not been for these modern methods, such dramatic results as the triumphs of modern cardiac surgery or lifesaving by the artificial kidney would have been impossible.

The proper documentation of the information in hospital laboratories contributes further knowledge as well as meeting further demands for increasing precision of thought and understanding.

It will be seen that however advanced modern medical knowledge may be, the doctor's primary task remains what it has always been: namely to establish as accurate a diagnosis of the patient's condition as possible. The first piece of evidence is the patient's own statement of his troubles — the case-history. Here the physician's skill lies in getting the essential facts without putting ideas into the patient's head and in judging the patient's reliability as a witness. The patient's account of previous illness and family history often gives important clues.

However, the level of a diagnosis depends not only on how much is known of the patient's condition, but also on what is necessary or practicable in the particular case. In practice, a diagnosis is taken far

enough to show what has to be done in terms of clinical treatment; only in selected cases does it need elaboration.

It is in diagnostics in particular that modern computer methods have a significant role to play. Properly programmed, computers are known to have been taught to exercise virtually the same clinical judgement that a physician must use in choosing a form of treatment. The machine can be programmed to weigh the risks and benefits of various tests and treatments and even to consider such factors as the patient's attitude toward surgery. In a few hospitals computers have been experimentally employed to keep a round-the-clock watch on patients in intensive care units. Others, taking a more sceptical view of the computer, go no further than hoping that the technique may at least be used to refine the teaching of diagnostic and treatment skills to medical students.

So far, however, computers have never done better than any properly skilled physician. Thus, for instance, a computer was presented with the diagnoses of 33 hypothetical patients with 14 different serious kidney conditions. In all but two cases, the machine recommended the same treatment as did a pair of kidney specialists. In 14 of the 18 cases selected for further testing, the decisions reached by the computer were the same as those of the doctors. In each of the remaining cases, the computer's first choice was regarded by the doctors as a reasonable alternative.

A great many people find the idea of being examined or perhaps even treated by the computer thoroughly repugnant because of the apparent lack of human touch which has always been so important a part of the practice of medicine. But that is not the point. Modern methods have a place in modern medicine and no doctor can afford to ignore them on grounds of prejudice. It is the approach and the mode of application that matter.

As to the other possible extreme, in case it is thought that the practice of medicine will be transformed into automated and computerized applied physics and chemistry, it is important to remember that something like 80 per cent of accurate practical diagnosis can still be made by interview and bedside examination by the doctor. Personal contact is necessary and indispensable for sifting relevant information from the irrelevant, and for the adjustment of judgement on management in relation to the complex social background of the patient. Nobody has seriously suggested that computers could assume all the responsibilities of physicians, but there is no doubt that they can become most valuable tools as a sort of instant reference library.

To sum up the argument, the computer is unlikely ever to replace the doctor, but it offers a unique chance of speeding up his access to important information.

5. Answer the following questions

1. What does the future of computers in medicine depend on? 2. Since when have post mortem examinations been conducted? 3. How did the microscope contribute to the expansion of medicine as a science? 4. Why do biochemists no longer work with burettes and beakers alone? 5. What are the uses of isotopes in laboratory investigation? 6. What kind of information is yielded by X-ray diffraction analysis? 7. Why was the assistance of paramedical scientists seen as inevitable? 8. Why is the campaign against such diseases as TB, measles or polio seen as the result of pure laboratory discoveries? 9. Why were viruses thought to be invisible not so long ago? 10. What is meant by scientific methods being applied directly to the individual patient? 11. What remains the doctor's primary task? 12. What must the physician do in taking the patient's history? 13. What else does the level of a diagnosis depend on? 14. How far is a diagnosis taken in everyday practice? 15. In what field or fields can modern computer methods be put to good use? 16. What tasks are computers expected to perform in medical practice? 17. What is the opinion of those who take a sceptical view of computers in medicine? 18. Have computers been able to do better than skilled doctors? 19. Why should so many people dislike the idea of being examined or even treated by the computer? 20. What is the other extreme of the distrust of computers in medicine? 21. Why is personal contact between doctor and patient necessary and indispensable? 22. Why are computers highly unlikely ever to assume the responsibilities of physicians?

III. Word study

6. Make up English-Russian pairs of words

Link, conduct, expand, culminate, apply, label, trace, support, train, prevent, alter, invade, provide, contribute, remain, refine, afford, sift, assume.

Позволять (себе), проводить, завершать, применять, принимать, прослеживать, расширять, вторгаться, поддерживать, обучать, предотвращать, изменять, связывать, улучшать, обеспечивать, метить, способствовать, оставаться, отсеивать.

7. From the words below make up plurals:

Access, analysis, approach, argument, attitude, bacillus, bacterium, basis, machine, man, antiserum, body, cause, demand, doubt, triumph, family, history, guidance, illness, isotope, kidney, laboratory, view, study, example, sample, use, idea, discovery, practice.

8. Make up meaningful word combinations:

diffraction ...	... examination
unaided ...	... test

immunity ...	... personnel
reference ...	... history

9. Fill in the blanks with appropriate word combination from the list below

1. It should ... that powerful electron microscopes allow to reveal the previously invisible viruses. 2. Infectious diseases ... TB and typhoid fever can be effectively treated by antibiotics. 3. ... medicine was an actively developing discipline. 4. ... computers have not been able to substitute physicians in any field of their activity. 5. ... the use of computers in medicine they can help in making a correct diagnosis. 6. Correct diagnosis depends ... on subjective ... also on the objective data of examination. 7. Computers can be used in medicine ... in other fields of science. 8. X-ray examination was used ... a further specification of the diagnosis. 9. This method of treatment is effective for this disease ... . 10. In some cases computers are used ... for a round-the-clock watch on patients. 11. It is ... necessary to be afraid of such dreaded diseases of the past as smallpox, plague and some others. 12. The previous data are used as ... reference material for the newly obtained data. 13. ... two patients showed improvement in two days of the drug use.

So far, such as, for instance, at the turn of the century, no longer, in particular, all but, in terms of, a sort of, be born in mind, as to, as well as, not only ... but.

10. Fill in the blanks with appropriate prepositions

1. ... the systematic use ... the microscope ... medical studies the new science was expanded. 2. Recognition ... bacterial causes ... disease culminated ... the demonstration ... TB bacillus. 3. Studies ... the immunity reactions ... bacterial invasion led ... the discovery ... antisera ... the control of tetanus and diphtheria. 4. X-ray diffraction analysis has given much detail ... the structure and shape of some peptides. 5. The doctors are supported ... their work ... paramedical personnel. 6. Scientific methods are now applied directly ... the individual patients. 7. New methods and devices meet further demands ... increasing precision of thought and thinking. 8. The level of diagnosis depends not only ... how much is known ... the patient's condition. 9. Physician must know the diagnosis ... choosing a correct method ... treatment. 10. Computers were used to keep a watch ... patients ... intensive care units. 11. No doctor can afford to ignore modern methods ... the grounds of prejudice.

IV. Learn to speak professional medical English

11. Make the following sentences interrogative

1. Post mortem examination began only about 200 years ago. 2. In 1882 Koch demonstrated the bacillus of tuberculosis. 3. Biochemists

apply sophisticated automated machines instead of beakers and burettes. 4. X-ray diffraction analysis has given much detail on structure and shape of some peptides. 5. At the turn of the century doctors were still their own scientists. 6. Many infectious diseases are successfully treated now. 7. The doctor's primary task is to establish a diagnosis of patient's condition. 8. Computers will never completely substitute doctors in diagnostics and making a precise analysis.

12. Make the following sentences negative

Example: The doctor began to examine the patient at 10 o'clock. — The doctor did not begin to examine the patient at 10 o'clock, he began to examine him at 11 o'clock.

1. Post mortem examination began in ancient times. 2. Koch demonstrated TB bacillus in 1772. 3. Biochemists still work with beakers and burettes. 4. X-ray methods have given much information on chemical composition of certain peptides and proteins. 5. Doctors were always supported in their work by paramedical personnel. 6. The invisible viruses were seen one generation ago. 7. The level of diagnosis depends only on the knowledge of the patient's condition. 8. In the experiment computer in all cases recommended the same treatment as a specialist. 9. All people like the idea of being examined by the computer. 10. Many specialists have seriously suggested that computers could assume all the responsibilities of physicians.

13. Make the following sentences interrogative

Example: In 1999 I graduated from the institute. — Was it only in 1999 that I graduated from the institute?

1. Post mortem examination conducted with the unaided eye began to be used only about 200 years ago. 2. Only a century ago the bacterial causes of diseases began to be recognized. 3. By the turn of the century the growing knowledge was already transforming the practice of medicine into an increasingly scientific-based discipline. 4. At the turn of the century doctors were still their own scientists. 5. Use of microscope in medical studies began about 1830.

14. Read the text and speak about medicine of the 20th century

В XX веке медицина претерпела значительные изменения. Во-первых, в центре внимания медиков оказались уже не инфекционные, а хронические и дегенеративные заболеваниям. Во-вторых, гораздо большее значение приобрели научные исследования, особенно фундаментальные, позволяющие глубже понять, как функционирует организм и что приводит к болезни.

Большой размах лабораторных и клинических исследований повлиял и на характер деятельности врачей. Благодаря долгосрочным грантам многие из них целиком посвятили себя научной работе.

Изменились также программы медицинского образования: введено изучение химии, физики, электроники, ядерной физики и генетики, и это неудивительно, поскольку, например, в физиологических исследованиях стали широко использоваться радиоактивные вещества.

Развитие коммуникаций ускорило обмен новейшими научными данными. Такому прогрессу значительно способствовали фармацевтические компании, многие из которых выросли в крупные корпорации с капиталом, исчисляемым многими миллионами долларов, со своими исследовательскими и издательскими центрами. Если раньше медицина была обязана своим развитием в основном врачам-одиночкам, то в XX веке установлению широких контактов медиков помогают совместные исследовательские программы и крупномасштабные лабораторные проекты.

Кроме того, для XX века характерно интенсивное развитие системы здравоохранения, производственной медицины, а также врачебных ассоциаций и медицинских страховых компаний. Наконец, заметный сдвиг произошел в изучении психических заболеваний человека.

V. Learn to translate medical articles

15. Translate the text

Вы хотите обследовать позвоночник и узнать причину своего заболевания?

Тысячи людей во всем мире страдают от головной боли, болей в спине, руках и ногах. Чаще всего это связано с проблемами позвоночника. Для того чтобы узнать причину боли, нужно провести обследование. На сегодняшний день это стало возможным благодаря развитию современных медицинских технологий. Основным методом, позволяющим «рассмотреть» позвоночник человека, является **магнитно-резонансная томография** (МРТ).

Благодаря этому исследованию врачи получают полную информацию о состоянии позвонков и могут определить грыжу диска и ущемление нервов. Это так называемая «структурная» картина заболевания, т. е. анатомические изменения, произошедшие в организме. Но кроме «анатомических» изменений происходят изменения, еще не улавливаемые МРТ. Это так называемые «функциональные» нарушения. Определить степень нарушения клеток спинного мозга, нервных стволов и мышц позволяет исследование, которое называется компьютерная томография. Дополняя друг друга, два этих метода являются на сегодняшний день «золотым стандартом». Конечно, перед началом обследования каждого больного должен проконсультировать опытный врач, специалист по заболеваниям позвоночника.

WORLD HEALTH ORGANIZATOIN

I. Learn to pronounce, write and read English words and medical terms

1. Write in letters

[p**i:**s], [d**e**fənətli], [tʃ**a:**tə], [**æ**mpli], [l**ɔ:**ntʃ], [**i**ntərim]. [pəsj**u:**], [səks**e**s], [spr**e**d], [w**ei**dʒ], [j**ɔ:**z], [bl**ai**ndnis], [trək**ɔu**mə], [**ɔ**nə], [w**ɔ**niŋ], [g**i**ə], [w**ʌ**n], [kj**u**ə], [w**ə:**s], [kw**ɔu**t].

2. Write in transcription

Humanitarian, affiliate, effort, found, unanimously, permanent, annual, vaccine, authority, shift, maintain, harmonize, insect, foiling, anniversary, unqualified, venereal, deny.

3. Read the following words and medical terms

a) Intergovernmental, agency, campaign, research, headquarters, eradicate, debilitation, preventable, emphasis, energy, officials, acknowledge, insecticide, incidence, virulent.

b) Measles, rabies, cholera, smallpox, leprosy, influenza, tuberculosis, malaria, poliomyelitis, plague.

II. Text study

4. Read the text, translate it consulting dictionary, if necessary, and answer the questions after the text

Care for international peace and security is definitely the main objective of the United Nations, but it could hardly be described as the only one called for by the United Nations Charter. This particular document is quite specific in stressing that the paramount idea of world peace would be incomplete without co-operation in solving international problems of an economic, social, cultural or humanitarian character. It has amply turned out that this is exactly where the work of the World Health Organization fits in perfectly.

The World Health Organization is one of a number of intergovernmental agencies which work in close relationship with each other and with the UN to which they are affiliated. Thus, by definition, and in line with the UN Charter, the World Health Organization (WHO) is the world's agency for international co-operation in improving the physical and mental health of all. It helps member nations launch campaigns to stamp out mass diseases, co-ordinates efforts to prevent the spread of epidemics, trains health workers at all levels, and promotes international medical research.

The idea of having an international body to deal with problems of world health dates back to 1945, the year that saw the setting up of the

United Nations as such. Already at that time, the founding members unanimously, agreed that an «international health organization» should be set up. As result, the Interim Commission of the World Health Organization came into being the following year and, on April 7, 1948, the permanent organization was formally constituted.

WHO has its headquarters in Geneva, Switzerland; it is organized in six regions, and its policies are agreed upon at the annual meetings of the World Health Assembly.

There is no denying that WHO has achieved an impressive record in pursuing its main aim, especially in the battle against some of the world's most virulent diseases. Its most remarkable success has been the campaign against smallpox and malaria, the former now completely eradicated from the earth.

Malaria has been eliminated or brought under control in many countries where it once spread debilitation and death. Intensive campaigns are being waged against yaws, yellow fever, tuberculosis and leprosy, again adding to the reputation of WHO as an indispensable coordinating centre. WHO is helping a total of more than twenty countries to fight trachoma, a preventable eye disease which is known to have brought blindness to two million people, and to have affected another five hundred million. It has played a part of honour in the development and testing of poliomyelitis and measles vaccines, and it has kept a watch on cholera, plague, yellow fever, influenza and rabies to give a timely warning to national health authorities. These campaigns against individual diseases have brought spectacular results. Nevertheless, in the three decades that have passed since the organization was founded, WHO has learnt that such undertakings, brilliant as they are, do not provide the total answer.

In recent years, the emphasis has shifted, and most of WHO's energies are now being geared to the unspectacular long-term tasks of building up permanent health services and improving environmental conditions so as to eliminate the causes of disease, build up resistance and maintain the progress won. In other words, the stress is more on prevention than on cure, a pattern not unfamiliar in modern medicine in general.

The World Health Organization now gives extensive support to doctors' training, nursing services, services to mothers and children, family planning as a means of improving family health, water supply and waste disposal systems and to health laboratories. More than ever before, WHO's efforts are aimed at environmental control and at harmonizing it on an international scale.

Officials in charge of WHO admit, however, that the past three decades have not been a succession of unqualified success, acknowledging that some health problems have even become worse. Venereal diseases,

to quote an example, are spreading at epidemic rate, although there is effective treatment for them. In most countries the incidence has been going up by more than eight per cent a year, affecting predominantly young people between the ages of 15 and 25. WHO has a great task ahead of it coordinating the world-wide campaign against AIDS (acquired immune-deficiency syndrome).

Cholera, thought to be under control in most countries, suddenly spread and invaded areas where it had not been seen for fifty years. Insects began developing resistance to insecticides, thus foiling disease control programmes.

In spite of all this, the record remains unparalleled and WHO stands out as an indispensable international health effort co-ordinating centre. There is good enough reason to celebrate the World Health Organization's anniversary on April 7th as World Health Day.

5. Answer the following questions

1. How is the principal objective of the United Nations defined? 2. What is the UN Charter? 3. How does the World Health Organization fit into the UN effort? 4. What is the position of WHO within the UN? 5. Which are the main aims of the World Health Organization? 6. When was WHO founded and why? 7. Who maps out the policies of WHO? 8. What are the highlights of WHO's activities so far? 9. In what way does the World Health Organization act as a coordinating centre? 10. What has been WHO 's part in the vaccination and inoculation campaigns? 11. What are the present long-term objectives pursued by the WHO? 12. Why is WHO increasingly concerned with environmental problems? 13. Why would WHO be interested in the problems of family planning? 14. Are officials in charge of WHO happy about everything — if not why? 15. What is WHO's record in combating venereal diseases? 16. What population group seems to be increasingly vulnerable to venereal diseases? 17. What about the case of cholera? 18. Is everything all right as far as insects are concerned? 19. What is the significance of April 7th? 20. Where are the headquarters of WHO? 21. Where exactly was WHO founded? 22. Is WHO concerned with mental as well as physical health?

6. Confirm or refute the following sentences by reading an appropriate sentence from the text

1. Care for the international peace and security is the only objective of the United Nations. 2. World peace would be incomplete without international cooperation in economics, social and cultural life. 3. WHO is the world's organization for improving physical and mental health of the population. 4. Who was organized in 1948. 5. World Health Assembly has its meetings once in two years. 6. The main achievement of

WHO is in the field of the world's most virulent diseases. 7. Thanks to WHO many dangerous diseases were brought under control. 8. In recent years the emphasis of WHO's work is the same as it used to be in previous years. 9. Now WHO supports special personnel training. 10. One of the main concerns of WHO now is the environmental control. 11. WHO's officials admit that the past decades were a complete success. 12. WHO coordinates the efforts of many countries in health protection.

III. Word study

7. Make up English-Russian pairs of words

Invade, hardly, disposal, constitute, timely, care, co-operation, predominantly, promote, improve, spectacular, supply, security, train, objective, deny, provide, remarkable, exactly, eliminate, close.

Отрицать, сотрудничество, главным образом, безопасность, поразительный, учреждать, улучшать, цель, снабжение, тесный, своевременный, забота, проникать, способствовать, удаление, устранять, впечатляющий, готовить, едва, обеспечивать, точно.

8. Make up meaningful word combinations

venereal	task
yellow	aim
main	vaccine
remarkable	campaign
close	fever
water	disease
environmental	objective
health	success
mental	research
medical	health
virulent	condition
eye	control
measles	problem
individual	relationship
long-term	health
world-wide	supply

9. From the list below fill in the blanks

1. ... WHO is the world's agency for international cooperation in improving the physical and mental health of people. 2. WHO helps ... infectious diseases. 3. WHO ... the problem of world health. 4. In 1948 WHO ... . 5. United Nations, ... , saw its setting in 1945. 6. WHO's policies are ... at the annual meetings of the World Health Assembly.

7. WHO ... in the development and testing of poliomyelitis and measles vaccines. 8. WHO ... cholera, plague, yellow fever and rabies to give a timely warning to national health authorities. 9. ... , WHO's efforts are aimed at environmental control. 10. WHO is ... world-wide health organization. 11. ... the spectacular results, ... , they do not provide the total answer to all the questions.

In spite of, to keep a watch on, by definition, as such, to play a part, as brilliant as they are, more than before, to deal with, to stamp out, the only, to come into being, to agree upon.

10. Make up sentences

1. Rate, with, diseases, venereal, are, epidemic, spreading.
2. Infectious, are, intensive, diseases, campaigns, dangerous, waged, most, against, being.
3. Being, WHO, April, came, on, 1948, into, 7.
4. Doctors', Organization, the, training, Health, gives, World, to, support.
5. The, predominantly, and, venereal, 15, affect, people, 25, young, diseases, between, and, ages.

IV. Learn to speak professional medical English

11. Insert a necessary interrogative word

1. ... is the main objective of the United Nations? — care for the internal peace and security is the main objective of the United Nations? 2. ... does WHO do? — WHO helps member nations to stamp out mass diseases? 3. ... does WHO keep a watch on dangerous infectious diseases? — WHO keeps a watch on dangerous infectious diseases to give timely warning to national health authorities? 4. ... objective is care for international peace and security? — care for international peace and security is the main objective of the United Nations? 5. ... has malaria been eliminated or brought under control? — Malaria has been eliminated or brought under control in many countries of the world. 6. ... is the World Health Organization? — The World Health Organization is one of a number of international agencies? 7. ... did WHO come into being? — WHO came into being in 1948?

12. Speak about

1. WHO's aims and tasks.
2. History of WHO organization.
3. WHO's achievements in the struggle with the most dangerous diseases.
4. WHO's work nowadays.
5. WHO's unsolved tasks.

V. Learn to translate medical articles

13. Translate the text

Disease prevention

In the European Region, preventable diseases continue to impose a high burden of premature mortality, and simple and cost-effective preventive and curative interventions are underused.

WHO/Europe aims to strengthen public health programmes to prevent communicable and noncommunicable diseases, and address risk factors. A high prevalence of risk factors can put populations or communities at greater risk and result in more disease. These risk factors accumulate throughout the life-course and have economic, social, gender, political, behavioural and environmental determinants.

Comprehensive action on the leading causes and conditions and high coverage of proven health interventions can significantly reduce the burden of disease, premature death and disability in Europe.

APPENDICES

Appendix 1

HOW TO WRITE MEDICAL PAPERS

Medical articles presented for publication in British or American scientific journals tend to follow a set pattern:

Title. Is expected to be as informative as possible, as it is, in fact, a very concise abstract of the summary. It is written in capital letters, with a minimum of grammatical articles, and without a full stop.

Author's name. Is given without any titles or degrees; just the initials of the first or middle names and the surname. A comma follows if there is more than one author. Women authors are supposed to quote one given name unabbreviated to avoid misunderstanding. Example: J. Gregor, Eva Martinu.

Place of work. Either follows immediately or is quoted in a footnote on the first page, in which case the authors' names are given again, complete with academic and scientific degrees and positions held. For publication in most British or American journals it is not necessary to quote the name of the head of the department where the laboratory or clinical work was performed.

Summary. It is now customary in British medical journals to put the summary in the first place instead of ending up with it. The reason is that this is often the only part of the paper that is likely to be read, and certainly the only one that may be considered for reference purposes or for publication in International Abstracts. The summary should be the briefest possible explanation of the most important points: i. e. the results and definite conclusions. Summaries should not exceed 3% of the length of the article and in any case should not be longer than 100 words. The style is strictly impersonal with preference given to the past simple tense, the passive voice and the third person. Thus, for instance, instead of writing «we tested a new method» we write «a new method was tested», instead of «we have investigated 125 patients» we write «125 patients were investigated» etc.

Introduction. Is an explanation of what made the author (authors) take up the subject. Occasional use of the first person and the present and present perfect tenses is permissible though references to relevant literature, which often form the bulk of this part, should again be impersonal and in the past tense.

Material and Methods. This is an objective report on how the authors went about their work. As such it should be to the point, free from

involved or long-winded reasoning, and worded as impersonally as possible. It may include specific **case reports,** which some authors present in place of «Material and Methods». The style has all the makings of clinical case notes, i.e. brevity, conciseness and objectivity. This part also includes most of the references to tables and figures not only to illustrate the major points but mainly to avoid any repetitive or convoluted explanations.

Results. Should be the culmination of the paper and their weight alone should prove that the subject was worth writing about. Clarity, impersonality, and objectivity are essential — more so than in any other part except perhaps the Summary. In terms of style, the third person, passive voice and the past tense are almost inevitable. Remember that the first person might easily be interpreted as a lack of modesty and also that the present tense would imply the author's claim to general validity of his results — which amounts to the same. The Results must be strictly separated from

Discussion. This is where the author's personality may make itself felt and where he is expected to explain the significance of his conclusions, possibly in contrast to the views held by other specialists (particularly those quoted in Introduction). The style is freer involving a more frequent use of the active voice and the first person and a wider range of tenses. However, the past tense and impersonal approach are appreciated even in this part.

Acknowledgments. Are an expression of thanks and gratitude to whoever may have stimulated, encouraged, advised, or assisted the authors. All journals expect this part to be as short as possible — if, indeed, it is included at all.

Addendum. Is sometimes included to supply information on discoveries or other important and strictly relevant facts — usually to bridge the time gap resulting from delayed publication.

References. Are usually quoted in the alphabetical order, though they may also be numbered and arranged in the order of appearing in the paper. The surname is always given first, followed by the initials of given names, the year of publication, the title of the journal, its number and page.

Tables. Are meant to illustrate major points included in Material and Methods and should always have a clear and comprehensible layout in order to save space and time.

Figures. Take the form of graphs, flow-charts, diagrams, schematic representations, photographic, X-ray, and microscopic pictures, etc. The purpose of their inclusion is the same as that of tables.

Captions. Are brief explanatory notes on figures and should be worded as sparingly as possible. For the sake of brevity — just as in the

Summary — nominal constructions (gerund, infinitive etc.) should be made the fullest use of. Grammatical articles may be left out so long as the sense remains unaffected.

Useful hints

When presenting your research results at a symposium or a congress — be it a lecture or a short talk — the following suggestions may come in handy:

Start by stating what you are going to talk about, then talk about it, then summarize what you have been talking about. Stick to the allotted time; use the blackboard to write unusual words, foreign names, dates and numerical values on.

Use slides to highlight important points of your lecture and show material which would be hard to explain otherwise. Lecture slides must be legible and understandable. A good slide should convey a single, significant message to support the oral presentation in the form of simplified tables, graphs, diagrams and drawings.

Posters provide much more opportunity for casual discussion and for authors to try original presentation of specimens, data, photographs, etc. Most of the charts, drawings and illustrations used in a poster display might be very similar to those which would be used to make slides, although they should be made simpler and more concise to convey the information in a more expressive way. Thus the lettering should be large enough to give prominence to headings, tables, figures and keyword text. Tables should consist of a brief title, the graphs lines should be easily legible, figures are not supposed to have more than 3 curves on each graph, and the graph axes should be clearly labelled and not overburdened with information. A poster display should briefly explain the importance of the project giving essential background information, present results and conclusions reached by the author. In general, posters are to be self-explanatory, though the author should be prepared to present additional data if necessary.

Both posters and slides are especially valuable if you are going to give a lecture in a language you have not fully mastered.

Answer the questions

1. What is the title of a medical paper supposed to be? 2. Which are the main stylistic principles to be observed in writing a scientific article? 3. How is the author's name to be given? 4. Where will the author's name appear in full? 5. Where would you place the summary of your article? 6. Why is the summary often given first? 7. How is the summary expected to be worded? 8. What is the purpose of the Introduction? 9. What is the content of the part entitled Material and Methods?

10. What is the style of Material and Methods? 11. What is the idea of the paragraph entitled Results? 12. Why should the first person and the present tense be avoided? 13. What is the stylistic difference between Results and Discussion? 14. Why should Acknowledgments be included at all? 15. What is the point of having Addenda in a scientific paper? 16. How are References arranged and worded? 17. What is the purpose of including Tables and Figures? 18. What kinds of figures are employed in medical papers? 19. How should captions be worded? 20. Why should the Discussion be freer in style? 21. What is the difference between a scientific paper and popular scientific journalism?

Appendix 2

AT A MEDICAL SYMPOSIUM

More than other branches of science, medicine is essentially international in nature. It depends increasingly on cooperation and exchange of opinion on a global scale. Medical symposia with international participation have had a long tradition but it is in the past decade or so they have become particularly frequent and English has been generally accepted as the main working language.

A scientific congress is normally arranged by a relevant medical society, or a group of related medical associations, who act as sponsors. Congresses of special importance may enjoy the privilege of being held under the auspices of the President, the Government, the Ministry of Health or similar public institution of the host country. The organizing committee will, as a rule, choose an internationally prominent specialist to act as a President. The committee must also draft the agenda and agree upon the schedule. In the practical running of the conference this is taken care of by the moderators, who take turns in the chair of daily sessions. It is up to the moderator or chairman to see that minutes of the meeting are taken, that speakers take the floor according to schedule, and that whatever motion has been properly seconded is put to the vote. A motion may be either carried, i.e. approved, or voted down, i.e. overruled.

These are two distinct types of language: the more formal prepared papers and addresses from the speakers' rostrum and the slightly less formal, rather colloquial unscripted remarks and turns of phrases, discussion contributions, either from the rostrum or from the floor. Although many variations exist, the following scenario may serve as an example of how to run a medical conference:

President (opening address):

Ladies and gentlemen,

It's great pleasure and honour for me to welcome you all to Saint-Peterburg at this Symposium which, as you know, is devoted to recent advances in the treatment of... . In particular, I wish to welcome our esteemed guests from abroad, hoping that they will feel at home here in Russia and find our meeting a useful event. May I state here that our Symposium is being held under the auspices of the President of the Russian Society of Surgeons, a fact that certainly adds importance to the occasion. The Saint-Petersburg Medical Association has commissioned me to lay particular stress on the research side of what may, at first sight, seem to be a predominantly clinical affair. As a matter of fact, considerable progress has been made along exactly the research lines of our work since we last met, and, judging from the list of those assembled in this hall today, there are amongst our colleagues such prominent scientists as Prof. **XY** from N., whose research work has already greatly contributed to advances in clinical practice in our field. I am sure they will have interesting points to make in the course of our three-day meeting. But just now, it is up to me to declare the Symposium open, and to ask Prof. M., the moderator of today's session, to begin our deliberations.

Moderator (discussion opening): Thank you, Mr. President. And now, ladies and gentlemen, as I understand that most of us have already taken their seats, allow me to go straight to the point. First item on our agenda is the main paper on... by Prof. Z., a name so well-known internationally that hardly any further introduction is needed. So I will now call upon Prof. Z. to present his introductory paper on the subject of ... .

Prof. Z. (discussion): It's a particular pleasure for me to have been assigned to take up a subject which has literally fascinated me for years now. In order to make the most of the time generously allocated to me, I wish to divide the subject into the following three parts ... .

Moderator (running discussion): My thanks to Prof. Z. for his stimulating account of the main lines of research in ... . I am sure all of us have followed with keen interest his paper which is now open to discussion. Since I expect there will be many questions, may I remind you to keep your contributions and remarks down to no more than five minutes each? I can see Dr. P's hand raised. Dr. P., please.

Dr. P. (question): Prof. Z. has raised a number of interesting points. I would like to ask him a question which has long been on my mind. Am I right in assuming that ... ?

Dr. K. (praise): I would like to congratulate Prof. Z. on his paper. He has certainly made us realize again the importance of planning research

with a view to the clinician's practical problems. His has been a most balanced presentation of the subject.

Dr. H. (comment): I wish to make a few brief comments on what has just been said. When Prof. Z. raised the point of coping with the danger of virus infection, I was reminded of our own clinical experience. I want to present some evidence which is definitely related to the theoretically important question of ... .

Dr. J. (disagreement): I am not sure if I can agree with some of the conclusions Dr. H. has arrived at in his contribution. In the first place, I wonder if the evidence he has just spoken about is sufficient to justify his assumption that ... .

Dr. S. (comment): A couple of things have come to my mind as I heard the comments. In connection with the problem of ... I should like to mention some results obtained by our group. In particular, I wish to say a few words on the question of ... .

Prof. C. (appreciation): Speaking on behalf of our small group from India, I wish, at the end of this Symposium, to express profound appreciation to the sponsors and the organizing committee for all the hospitality we have been offered here. We have been very comfortable and pleasantly taken care of ever since we arrived.

Moderator (closing address): I am afraid, our time is up. We have now arrived at the end of our proceeding and all there is left for me is to thank you all for your contributions and your attention, and to sum up what we have heard in a number of interesting reports. The main lines of argument seem to have been as follows ... . And finally, let me say again that all of you have honoured us greatly by participating in this conference.

Answer the questions

1. What is the characteristic feature of medicine? 2. Why is medicine international in nature? 3. What is the position of English at international medical conferences? 4. How is a medical symposium organized? 5. What is the role of the organizing committee in preparing a symposium? 6. What is the role of a moderator at a symposium? 7. How is a motion carried? 8. How would you address a medical symposium? 9. What does the term «under the auspices» imply? 10. How would you — as a moderator — open discussion? 11. What is a scientific paper? 12. How would you express agreement with and appreciation of your colleague's interesting paper? 13. How would you express disagreement or doubts about a paper you have just heard at the conference? 14. What does it mean when you speak on behalf of somebody else? 15. What is the usual way of winding up discussion? 16. When did you last attend a medical conference — either at

home or abroad — and if so, what was the conference about? 17. How would you express gratitude for the hospitality accorded to you in the course of a scientific gathering abroad? 18. Why are medical conferences held in general?

Appendix 3

HEALTH CARE IN THE UNITED STATES AND BRITAIN

There are considerable differences between United States and Britain in the way the health services are organized.

Strictly speaking, there is no organized general health care system in the U.S. In a country open to all the abuses of free enterprise medicine is regarded as just another branch of profit-making private business. True, there have been in existence a programme of free health service for people over 65 — called Medicare — and a similar programme — known as Medicaid — intended for patients of very low income categories, i.e. those under the poverty line. In general, however, all attempts to introduce any kind of comprehensive national health service have so far been strongly opposed by the medical profession organized in AMA (American Medical Association), ADA (American Dental Association) and other professional unions. The only concession has been for AMA to approve, in principle, a plan for voluntary national health insurance that would entail co-operation between Federal and private agencies.

Under the prevailing system, medical attention, not to mention hospitalization, will cost an average American a staggering sum of money even if he carries private insurance (such as Blue Shield, Blue Cross etc.) as most Americans do. One of them, to quote a case from the end of the last century, unlucky enough to contract a bleeding duodenal ulcer, ended up paying 5,000 dollars for his treatment. Owing to general inflation, the cost of treatment has risen even more since then.

This is not to say that medical service in the U.S., once a patient can afford it, is inferior. On the contrary, it is noted for efficiency and for many achievements. Research, particularly in coronary diseases and cancer, has been of a pioneering nature. In fact, more than half of the Nobel Prizes for medicine and physiology went to American scientists in the last 50 years. But the fact remains that the American medical system, if there is one, continues to be oriented at disease rather than prevention.

In contrast, the British National Health Service (NHS), though probably less efficient and less glamorous, is one of the most compre-

hensive throughout the West. It has been in existence since 1948 (passed through Parliament as early as 1946 as a result of strong working class pressure), and it provides free medical care for every resident, irrespective of income, occupation or nationality. There are three distinct parts of the NHS system:

(1) General Practitioner Services include general practitioners (G.P.s), dentists, pharmacists and opticians. The idea of the family doctor has always been strong in Britain. Under the NHS system, everybody is free to choose a general practitioner in his home area and be registered on his list. The average G.P. has a little over 2,000 people on his list, the maximum being 3,500. In towns, it is usual for three or four G.P.s to join together in partnership. This saves the individual G.P. the trouble of having to find a locum when going on holiday. The general medical services are administered by one of the 140 odd county and borough Executive Councils, the Local Medical Committee, the Medical Practices Committee and the General Medical Services Committee of the BMA (British Medical Association). If the G.P. decides his patient needs hospital treatment, he refers him or her to a particular hospital.

(2) Hospital and Specialist Services are the responsibility of the Minister of Health just as the other two parts of the NHS are. Administered through Regional Hospital Boards, they cover all forms of hospital investigation and treatment for both inpatients and outpatients in general hospitals, hospital maternity departments, infectious disease units, psychiatric hospitals and units, convalescent homes and rehabilitation centres, and the services of specialists, either in hospital or in the patient's own home. A blood transfusion service and a pathological laboratory service are included.

The medical staff of a British hospital includes consultants, registrars, resident medical or surgical officers, housemen and pre-registration house officers.

The nursing staff of a hospital is headed by the matron who may be assisted by the deputy matron and, in a large hospital, by assistant matrons. Then there are departmental sisters, ward sisters, tutor sisters (in a teaching hospital), staff nurses and student nurses who are trained to qualify as state registered nurses (S.R.N.). It takes three years to become a S.R.N. and examinations have to be passed at the end of each year. Only these nurses may handle dangerous drugs and aspire to become ward sisters or to hold a rank above that. The training for the qualification of a state enrolled nurse (S.E.N.) takes two years and is essentially a practical one.

The medical auxiliary staff includes: chiropodists, dietitians, physiotherapists, remedial gymnasts, occupational therapists, radiographers,

medical laboratory technicians, medical social workers, psychiatric social workers etc. Surgical officers would be addressed as Mr. and the others as Dr. unless a knighthood has been conferred upon them, in which case the address is Sir plus first name (Sir John). A matron wears a distinctive uniform and is generally addressed as Matron; departmental and ward sisters are referred to as Sister, tutor and staff nurses as Nurse.

Teaching hospitals in England are administered by Boards of Governors made up of representatives of the university, the teaching staff and the respective Regional Hospital Boards. The appointments are made by the Minister of Health.

(3) Local Authority Services are run by the Public Departments of the local authority (region, county, town or city council) and the officer-in-charge is the Medical Officer of Health. He is responsible for such public health matters as cleansing, sanitation, inspection of food, food shops and restaurants, and housing standards, but under his supervisions also come the following services offered to the public under the NHS scheme: local health centres, maternity and child health clinics (including antenatal and postnatal instruction and care of unmarried mothers and their babies), domiciliary midwives (i.e. nurses specially trained in obstetrics), home nurses to attend to sick people in their own homes, health visitors to give advice to the sick and elderly about diet and hygiene, ambulances to take patients to hospital for treatment, and vaccination and immunization facilities.

All these services are essentially free. There are charges for certain items (a course of dental treatment for an adult, for dentures and spectacles, and for prescription) but exemptions and refunds are made for several categories of patients. The greater part of the cost of all medical and welfare services is met from general taxation, and about 10 per cent from weekly contributions paid with the national insurance contributions.

Answer the questions

1. Are British and American health services similar to each other? 2. Is there an organized health care system in America? 3. What do the abbreviations AMA and ADA stand for? 4. Who or what stands in the way of introducing a comprehensive health care system in the United States? 5. What kind of health insurance — if any — is available to an average American? 6. How would you characterize the U.S. medical services in terms of research and scientific standards? 7. How much may the treatment of e.g. bleeding duodenal ulcer cost in the U.S.? 8. How would you describe the British National Health Service in comparison with the American system? 9. Since when has there been

the National Health Service in Britain? 10. What was the decisive factor behind the introduction of National Health Service in post-war Britain? 11. Who is entitled to free medical treatment in the United Kingdom? 12. What are the three main parts of the NHS system? 13. How many people does an average general practitioner cater for? 14. How is the trouble of finding a locum avoided during the holiday period? 15. What institutions are involved in running the G.P. services? 16. Whose responsibility are the Hospital and Specialist Services? 17. In what way are the Hospital and Specialist Services administered? 18. How long does it take to become a state registered nurse in Britain? 19. Are state enrolled nurses allowed to handle dangerous drugs? 20. How do you address a prominent medical man upon whom a knighthood has been conferred? 21. What is the Medical Officer of Health responsible for and what institution is he accountable to? 22. What does the role of domiciliary midwife entail? 23. Are British medical services entirely free? If not, what are the exceptions? 24. How is the cost of medical and welfare service met under the British system?

KEYS TO THE EXERCISES

Lesson 1

11. Thorax — chest; sternum — breastbone; oesophagus — gullet; spine — backbone; intestines — bowels; patella — kneecap; umbilicus — navel; genitals — reproductive organs; trachea — windpipe; buttocks — posterior; clavicle — collarbone; femur — thighbone

13. 1 — in; in; 2 — in; at; 3 — on; 4 — in; 5 — between; of; 6 — in; for; 7 — along; 8 — between; 9 — by

Lesson 2

11. a) 1 — by; 2 — for; 3 — from; 4 — of; 5 — by; 6 — in; 7 — into; 8 — by; 9 — by; 10 — to

b) 1 — of; 2 — under; 3 — in; 4 — for; 5 — by; into

12. a) 1 — выработка; продукт; 2 — точка; 3 — мельчайший; 4 — оболочка; 5 — вырабатывать; 6 — ядро

b) 1 — исходная точка; 2 — каждый из членов; 3 — в целом; 4 — происходить; 5 — конечная стадия

Lesson 3

8. 1 — из нескольких видов; 2 — не только ... но и; 3 — в соответствие; 4 — такой как; 5 — более ... чем; 6 — как только ... так; 7 — в свою очередь; 8 — в значительной степени; 9 — иметь дело; 10 — строго говоря; 11 — первый ... последний; 12 — отделять; как может показаться

9. 1 — constitutes; 2 — lodged; 3 — arrangement; 4 — covers; 5 — embedded; 6 — covers; 7 — overlapping; 8 — provides; 9 — assumed; 10 — pavement; 11 — endowed

Lesson 4

13. 1 — into; 2 — under; 3 — with; 4 — in; 5 — to; 6 — of; 7 — on

Lesson 5

8. a) 1 — in; 2 — of; 3 — by; 4 — under; 5 — for; 6 — by; 7 — in; 8 — in; 9 — of

b) 1 — in; 2 — by; 3 — to; 4 — from; 5 — of; 6 — by; 7 — by; 8 — of; 9 — by; 10 — from

Lesson 7

13. 1 — for; 2 — to; 3 — in; 4 — during; 5 — of/about; 6 — to; 7 — on; 8 — in; 9 — of; 10 — on

Lesson 8

11. 1 — cope with; 2 — referred to; 3 — admitted to; 4 — divided into; 5 — equipped with; 6 — delivered to; 7 — consisted of; 8 — in charge of; 9 — responsible to; 10 — responsible for; 11 — assisted by; 12 — giving out; 13 — carried out

Lesson 10

9. 1 — characteristically; 2 — proper; 3 — usually; 4 — separately; 5 — nearly; 6 — practically; 7 — absolutely; 8 — definitely

10. 1 — to; 2 — into; 3 — to; 4 — in; 5 — by; 6 — into; 7 — into; 8 — for; 9 — for; to; 10 — for; 11 — within; 12 — to; to

Lesson 11

11. 1 — atresia; 2 — varices; 3 — achlorhydria; 4 — hyperchlorhydria; 5 — dyspepsia; 6 — hernia; 7 — intussusception; 8 — diverticulosis; 9 — cirrhosis; 10 — cholecystitis; 11 — cholelithiasis

Lesson 12

12. 1 — heart block; 2 — congenital heart defect; 3 — cardiogenic shock; 4 — coronary thrombosis; 5 — cardiac rupture; 6 — cardiac arrhythmia; 7 — sudden cardiac death; 8 — cyanosis; 9 — cardiac arrest; 10 — heart failure; 11 — atheroma; 12 — myocardial infarction

Lesson 13

9. 1 — adrenocorticotropic hormone; 2 — thyrotropic hormone; 3 — testosterone; 4 — somatotropic hormone; 5 — follicle-stimulating hormone; 6 — luteinizing hormone; 7 — luteotropic hormone; 8 — antidiuretic hormone; 9 — parathormone; 10 — oestrogens; 11 — progestagens

Lesson 14

7. Comprise — include; govern — control, regulate; enclose — embed, surround; transmit — convey, transfer; act — operate, work; receive — get, obtain; involve — implicate, entail; arise — originate, emerge; enable — allow, permit; anticipate — foresee, forestall; support — maintain; start — begin, initiate; find — establish, determine; investigate — examine, study, analyze; evoke — induce, stimulate; shut — close; check — test; indicate — show, demonstrate; modify — change, alter

10. 1 — brain; 2 — ganglion; 3 — neuron; 4 — dendrites; 5 — plexus; 6 — skull; 7 — pons; 8 — midbrain; 9 — cerebellum; 10 — amygdala; 11 — thalamus; 12 — hypothalamus, 13 — hippocampus; 14 — cerebrum; 15 — ventricles; 16 — fissure; 17 — lobes; 18 — scalp

11. 1 — into; 2 — to, 3 — from; 4 — at; 5 — despite, 6 — for; 7 — through; 8 — of; 9 — beyond; 10 — in; 11 — between; 12 — after; 13 — by; 14 — over; 15 — until; 16 — about; 17 — among; 18 — within

Lesson 15

9. a) 1 — course; 2 — cause; 3 — case; 4 — cause; 5 — course; 6 — case; 7 — cause; 8 — cause; 9 — case

b) 1 — severity; 2 — several; 3 — sever; 4 — severity; 5 — severe; 6 — severed; 7 — severity; 8 — several; 9 — several; 10 — several; 11 — severed; 12 — severed; 13 — severe; 14 — severity; 15 — severe; 16 — severe

10. 1 — mark; 2 — precede; 3 — distinguish; 4 — alternate; 5 — restrain; 6 — confine; 7 — trace; 8 — transmit; 9 — administer

Lesson 16

8. Introduce — insert; diminish — reduce; carry out — perform; control — regulate; accomplish — finish; remove — excise; lead — result in; require — need; arrange — organize; include — involve; persist — remain; support — maintain; suspect — think; induce — cause; occur — arise; modify — alter; elevate — rise

Lesson 17

8. Injury — trauma; disruption — rupture; damage — harm; management — treatment; disability — inability; bruise — ecchymosis; suture — stitch; flap — graft; senile — old; dislocation — displacement; swelling — oedema; bleeding — haem-

orrhage; tenderness — pain; accident — catastrophe; immobilization — fixation; contamination — infection; rehabilitation — restoration; feature — character

9. 1 — fracture; 2 — subluxation; 3 — dislocation; 4 — sprain; 5 — tear

10. 1 — approach; 2 — reveal; 3 — research; 4 — care; 5 — required; removed; 6 — recovery; regeneration; function

11. 1 — at; 2 — in; 3 — to; 4 — for; 5 — in; 6 — to; 7 — in; 8 — in; 9 — for; 10 — without; 11 — for; 12 — with; 13 — for; 14 — of; 15 — on; 16 — to; 17 — by; 18 — at; 19 — in; 20 — by

Lesson 18

9. 1 — tenolysis; 2 — arthrodesis; 3 — ankylosis; 4 — nail-bed; 5 — osteogenic; 6 — osteomyelitis, necrotic; 7 — femoral, acetabulum; 8 — scoliosis; 9 — sheaths; 10 — bifida

10. 1 — with; 2 — for; 3 — in; 4 — upon; 5 — on; 6 — about; 7 — for; 8 — in; 9 — in; 10 — in; 11 — by; 12 — from; 13 — in; 14 — about; 15 — at; 16 — of; 17 — in

11. 1 — scoliosis; 2 — kyphosis; 3 — arthrodesis; 4 — orthopedics; 5 — arthrotomy; 6 — ankylosis; 7 — tenotomy; 8 — tenolysis; 9 — lordosis; 10 — spondylolisthesis; 11 — talipes equinovarus; 12 — tenovaginitis; 13 — tenosynovitis; 14 — arthroplasty; 15 — osteotomy

Lesson 19

9. 1 — lymphoblastoma; 2 — adenoma; 3 — adenocarcinoma; 4 — carcinoma; 5 — nephroma; 6 — epithelioma; 7 — myeloma; 8 — neuroblastoma; 9 — myxoma; 10 — leukemia

10. 1 — если присутствует; 2 — вообще говоря; 3 — с точки зрения статистики; 4 — на самом деле; 5 — в любом случае; 6 — составлять; 7 — в общем; 8 — в последнее время; 9 — если когда-нибудь; 10 — значительно более; 11 — вовремя; 12 — слишком явно; 13 — не отстает

12. 1 — to, by, of, with, in; 2 — for; 3 — to; 4 — on; 5 — by; 6 — in; 7 — in; 8 — for; 9 — in; 10 — to; 11 — of, in; 12 — for, on

Lesson 20

9. 1 — protruding ears; 2 — otitis media; 3 — occupational deafness; 4 — nerve deafness; 5 — Meniere's disease; 6 — nosebleeding; 7 — edema of the glottis; 8 — Eustachian tube; 9 — quinsy; 10 — nasal speculum; 11 — tongue depressor; 12 — severe earache; 13 — organ of Corti; 14 — vestibular apparatus; 15 — hard of hearing; 16 — air conduction; 17 — hearing threshold; 18 — bone conduction; 19 — paranasal sinuses; 20 — antrum of Highmore; 21 — cricoid cartilage; 22 — hyoid bone

10. 1 — to; 2 — in; 3 — by; 4 — in; 5 — on; 6 — of; 7 — for; 8 — in; 9 — of; 10 — for; 11 — by; 12 — to; 13 — at; 14 — from; 15 — in; 16 — with

Lesson 21

10. 1 — keratitis; 2 — strabismus; 3 — dacryoadenitis; 4 — xanthelasma; 5 — myopia; 6 — astigmatism; 7 — ectropion; 8 — conjunctivitis; 9 — presbyopia, 10 — iridocyclitis; 11 — cataract; 12 — glaucoma; 13 — blepharitis; 14 — retinitis; 15 — episcleritis; 16 — hypermetropia

Lesson 22

8. a) intermingle — mix; shed — remove; ensheath — enclose; manifest — exhibit; advent — development; limit — restrict; adjoin — border; discharge — excrete; nourish — supply; derive — arise; transmit — transfer; coalesce — unite

10. 1 — furuncle; 2 — cellulitis; 3 — scabies; 4 — leprosy; 5 — dermatitis; 6 — verruca; 7 — herpes; 8 — impetigo; 9 — psoriasis; 10 — acne; 11 — eczema

Lesson 23

10. 1 — glomerulus; 2 — Bowman's capsule; 3 — renal corpuscle; 4 — vas deferens; 5 — Henle's loop; 6 — adrenal glands; 7 — adrenal cortex; 8 — renal veins; 9 — renal pelvis

11. 1 — in; 2 — through; 3 — by; 4 — from; 5 — by; 6 — below; 7 — with; 8 — at; 9 — for; 10 — to; 11 — from; 12 — from; 13 — under; 14 — within; 15 — in; 16 — until; 17 — to; 18 — to; 19 — for; 20 — in; 21 — with; 22 — into; 23 — for; 24 — by; 25 — throughout

13. 1 — pyelitis; 2 — renal colic; 3 — prostatitis; 4 — pyelonephritis; 5 — cystitis; 6 — chronic nephritis; 7 — renal oedema; 8 — simple nephritis; 9 — nephrotic nephritis; 10 — uremia; 11 — glomerulonephritis; 12 — haematuria

Lesson 24

7. Perhaps — probably; rudimentary — undeveloped; appropriate — adequate; lie — position; initially — primarily; labour — delivery; consideration — discussion; retain — keep; introitus — entrance; micturition — urination; assign — attribute; overdue — late; soreness — tenderness; certain — clear; discharge — release; particularly — especially; previous — earlier

Lesson 25

8. Labour — delivery — parturition; problem — question — concern; treatment — cure — therapy; constriction — narrowing — stricture; disorder — disturbance — damage; range — area — field; danger — risk — hazard; newborn — neonate — infant; reaction — response — answer; insufficiency — deficiency — failure; injury — lesion — wound; anomaly — abnormality — peculiarity; malformation — defect — deformity; emaciation — exhaustion — depletion; disease — illness — ailment

10. 1 — as few as; 2 — as early as; 3 — as low as; 4 — as high as; 5 — up to; 6 — as many as; 7 — as much as; 8 — as far as; as late as; 9 — as long as; 10 — as soon as

Lesson 26

8. Responsibility — duty; conception — fertilization; care — aid; adolescent — teenager; confinement — childfirth; rate — level; reduction — decrease; distress — disturbance; type — kind; newborn — neonate; assessment — evaluation; purpose — aim; job — work

Lesson 27

9. 1 — petechiae; 2 — purpura; 3 — ecchymosis; 4 — rhesus-factor; 5 — haemophilia; 6 — leukemia; 7 — bleeding time; 8 — clotting time

11. 1 — take away; 2 — make up; 3 — serve as; 4 — mistaken for; 5 — composed of; 6 — produced in; 7 — governed by; 8 — taken up; 9 — subdivided into; 10 — involved in; 11 — converted into; 12 — essential for; 13 — tested for

Lesson 28

8. Drug — medicine; theriac — ointment; principle — constituent; pubescence — ripening; withdrawal — discontinuation; addict — drug abuser; assay — analysis; dispensation — distribution; administration — introduction; trial — test; medication — treatment; abstinence — refusal; herb — grass; precipitate — sediment; constituent — element; mucilage — mucus; expire — end; potency — power; sterility — purity; admixture — foreign substance; antitoxin — antidote

9. 1 — by the value; 2 — advance; 3 — by means; 4 — promote; 5 — besides; 6 — remain; 7 — intention; 8 — up to now; 9 — nevertheless; 10 — in addition to; 11 — modern; 12 — recently

Lesson 29

8. Gingiva — gum; dentin — ivory; socket — alveolus; initiation — origination; precipitation — deposition; eruption — dentition; attrition — wearing; occlusion — bite; caries — decay; repair — restore; mastication — chewing; inlay — filling

Lesson 30

9. 1 — for, at, through, of; 2 — by, in, from, for; 3 — for, from, into, to, by; 4 — of, in, of; 5 — of; 6 — in, to, of, to; 7 — in, between, to

11. 1 — hermaphroditism; 2 — achondroplasia; 3 — Tay-Sachs disease; 4 — phenylketonuria; 5 — Cooley's anaemia; 6 — haemophilia; 7 — cystic fibrosis; 8 — Down's syndrome; 9 — sickle-cell anaemia

Lesson 31

7. Stiff — rigid, inflexible; manifestation — appearance, symptom; visible — evident, obvious; limber — elastic, flexible; dwindle — diminish, decline; profound — radical, significant; value — importance, significance; extend — prolong, increase; remove — eliminate, eradicate; remain — stay, persist; suffer — experience, undergo; remedy — treat, cure; assume — suppose, think; cease — stop, terminate; coincide — correspond, correlate; shrink — reduce, decrease; associate — connect, link; fatal — lethal, deadly

Lesson 32

8. Disposal — removal; threat — danger; fouling — pollution; ailment — disease; environment — surroundings; danger — harm; condition — state; residence — existence; quantity — amount; association — connection; settlement — deposition; combustion — burning; sense — meaning; abatement — decrease; hazard — risk; matter — substance; distinction — difference; weed-killer — herbicide; emergency — accident

Lesson 35

9. 1 — be born in mind; 2 — such as; 3 — at the turn of the century; 4 — so far; 5 — as to; 6 — not only ... but; 7 — as well as; 8 — in terms of; 9 — in particular; 10 — for instance; 11 — no longer; 12 — a sort of; 13 — all but

10. 1 — with, of, in; 2 — of, of, in, of; 3 — into, of, to, of, for; 4 — on; 5 — in, by; 6 — to; 7 — of; 8 — on, about; 9 — for, of; 10 — on, in; 11 — on

Lesson 36

9. 1 — by definition; 2 — stamp out; 3 — deal with; 4 — come into being; 5 — as such; 6 — agree upon; 7 — play a part; 8 — keep a watch on; 9 — more than before; 10 — the only; 11 — in spite of; as brilliant as they are

PART III. GRAMMAR REFERENCE BOOK

ИМЯ СУЩЕСТВИТЕЛЬНОЕ

Образование множественного числа

Множественное число имен существительных образуется при помощи суффиксов *-s*, *-es*.

Имена существительные, оканчивающиеся на *-s*, *-ss*, *-x*, *-sh*, *-tch*, *-o*, образуют множественное число при помощи суффикса *-es*. В остальных случаях используется суффикс *-s*. После глухих согласных [k, p, t, f] он произносится [s], после звонких, носовых и гласных — [z], например: [s] — *books*, *pipes*, *rates*; [z] — *pens*, *seas*, *trees*, *tubes*, *rules*.

После шипящих и свистящих [s, ss, ʃ, ʒ, tʃ], а также после [z, dʒ] суффикс *-s*, стоящий после «немого» *e*, произносится [iz], например: *stages*, *places*, *edges*. Суффикс *-es* после этих же звуков также произносится [iz], например: boxes, matches, classes.

После *-o* он произносится [z], например: Negroes, potatoes. Имена существительные, оканчивающиеся на *-y* с предшествующим согласным, образуют множественное число при помощи суффикса *-es*, причем *-y* переходит в *-i*, и суффикс *-es* произносится [z], например: family — families, study — studies.

Если перед *-y* стоит гласная, то во множественном числе прибавляется суффикс *-s*, который произносится [z], например: *ways*, *plays*, *days*.

Имена существительные, оканчивающиеся на *-f*, *-fe*, образуют множественное число при помощи суффикса *-es*, причем *-f* переходит в *-v*. Суффикс *-es* произносится [z], например:

life — lives,
half — halves,
shelf — shelves.

Некоторые имена существительные образуют множественное число путем изменения корневой гласной, например:

man [mæn] — men [men],
woman [wuman] — women [wimin],
tooth [tu:θ] — teeth [ti:θ],
foot [fut] — feet [fi:t].

Некоторые имена существительные, заимствованные из греческого и латинского языков, сохранили множественное число, свойственное этим языкам:

Единственное число	Множественное число
analysis [ənælisis] — анализ	analyses [ənælisi:z] — анализы
crisis [kr**ai**sis] — кризис	crises [kr**ai**si:z] — кризисы
datum [d**ei**təm] — данная величина	data [d**ei**tə] — данные
nucleus [nj**u:**kliəs] — ядро	nuclei [nj**u:**kliai] — ядра
radius [r**ei**djəs] — радиус	radii [r**ei**diai] — радиусы
phenomenon [fin**ɔ**minən] — явление	phenomena [fin**ɔ**minə] — явления
streptococcus [strept k**ɔ**kəs] — стрептококк	streptococci [streptə k**ɔ**ksai] — стрептококки
larva [l**a:**və] — личинка	larvae [l**a:**vi] — личинки

Имена существительные, оканчивающиеся на *-ics*, употребляются обычно в единственном числе. Конечная *-s* не является в данном случае показателем множественного числа. К этой группе имен существительных относятся названия некоторых наук: mathematics, physics, mechanics, optics, genetics, obstetrics, economics и т. п.

Имя существительное *means* «средство, средства», не меняя своей формы, употребляется как в единственном, так и во множественном числе, например:

1. Palpation is a means of examination.
2. There are some effective means of improving treatment.

Имя существительное *news* «новости» употребляется с глаголом в единственном числе, например: What is the news this morning?

Имя существительное *people* «народ, люди» употребляется с глаголом во множественном числе. Форма множественного числа *peoples* имеет значение «народность, национальность».

Падежи имен существительных

Имена существительные в английском языке имеют всего два падежа: общий и притяжательный. Падежные отношения передаются в основном при помощи предлогов:

of — родительный падеж (кого? чего?). *Examination of a patient* — Обследование больного;

to — дательный падеж (кому? чему?). He gave this drug to his patient. — Он дал это лекарство своему больному;

with, *by* — творительный падеж (кем? чем?). *The patient was examined by the doctor in charge.* — Больной был осмотрен лечащим врачом.

Притяжательный падеж передает отношения принадлежности. Признаком притяжательного падежа является суффикс -*'s*, во множественном числе только «'», например: *the Earth's atmosphere, these scientists' contribution to the development of medicine*.

Имена существительные, не имеющие -*s* во множественном числе, образуют притяжательный падеж при помощи -*'s*, например: children's ward. Имена существительные, оканчивающиеся в единственном числе на -s, принимают либо -*'s*. либо «'», например: *Dickens' novels*, или *Dickens's novels*; *Venus' atmosphere*, или *Venus's atmosphere*. И в том, и в другом случае окончание читается [iz] — [d**i**kensiz]; [v**i:**nəsiz]. Во всех остальных случаях -*'s* читается по тем же правилам, что и суффиксы множественного числа.

Слова — определители имени существительного

К данной группе относятся строевые слова, которые указывают, что знаменательное слово, перед которым стоит определитель, является именем существительным. Определителями являются:

1) артикли *a*, *an*, *the*;

2) местоимения *my*, *his*, *her*, *its*, *our*, *your*, *their*; *this*, *these*, *that*, *those*; *much*, *many*, *few*, *little*, *some*, *any*, *no*, *each*, *every*.

АРТИКЛИ

Неопределенный артикль *a (an)*. Определенный артикль *the*

Артикль ставится либо непосредственно перед именем существительным, когда перед ним нет определений, либо перед первым из этих определений:

A drug, an area, a patient; a large box. The special children infectious unit.

Основные значения артиклей

A (*an*) — один; один из; какой-то.

В соответствии с этим значением артикль *a* (*an*) употребляется только с исчисляемыми существительными в единственном числе.

The — этот; о котором говорилось выше; определенный; подразумеваемый; единственный в своем роде.

Артикль *the* употребляется с именами существительными как в единственном, так и во множественном числе.

The room is not empty.	Комната (эта, определенная, о которой уже говорилось) не пустая.
There is a table and some chairs in it.	В ней есть (один) стол и несколько стульев.
He is a doctor from our hospital.	Он врач (один из ..., какой-то) нашей больницы.

Артиклю *a* (*an*) соответствует во множественном числе нулевой артикль (т. е. отсутствие артикля).

He is a doctor.	He uses drugs.
They are doctors.	We use drugs to treat this disorder.

Артикль не ставится перед именами собственными: *His name is Pavlov. Saint-Petersburg is one of the largest cities of Russia*. Но: *the Ukraine*, *the Crimea*, *the Caucasus*.

Перед географическими названиями, состоящими из нескольких слов, употребляется артикль *the*: *the Russian Federation*, *the United States of America*, *the Indian Ocean*, *the Black Sea*.

Перед именами существительными, которые обозначают отвлеченные понятия или названия веществ, артикль не ставится: *We breathe the air which consists mainly of oxygen and nitrogen*.

Названия заболеваний, симптомов и признаков болезни также, как правило, используются без артиклей: *Tuberculosis is an infectious disease. High temperature, cough, fever are the symptoms of influenza*.

МЕСТОИМЕНИЯ

Личные местоимения

Число	Лицо	Личные	Объектные (объектный падеж)	Притяжательные
Единственное	1	I — я	me — меня, мне	my — мой, моя, мое, мои
	3	he — он she — она it — он, она, оно	him — его, ему her — ее, ей it — его, ему, ее, ей	his — его her — ее its — его, ее
Множественное	1	we — мы	us — нам, нас	our — наш, наша, наше, наши
	2	you — вы (ты)	you — вам, вас (тебя, тебе)	your — ваш, ваша, ваше, ваши
	3	they — они	them — им, их	their — их

Возвратные (усилительные) местоимения

Единственное число	Множественное число
myself himself — сам, себя herself itself	ourselves yourselves — сами, себя themselves

Указательные местоимения

Единственное число	Множественное число
this — этот, эта, это that — тот, та, то	these — эти those — те

Вопросительные местоимения

Who? — Кто?
Whose? — Чей? Чья? Чье?
Which? — Который?
What? — Что? Какой?
Whom? — Кого? Кому?

Местоимения *some*, *any*, *no* и их производные

Местоимение	Тип предложения
some — какой-то, некоторый, несколько any — любой, какой-нибудь, никакой no — никакой every — каждый, всякий	утвердительное вопросительное отрицательное утвердительное, вопросительное, отрицательное
something — что-то, что-нибудь somebody — кто-то, кто-нибудь somewhere — где-то, куда-то	утвердительное
anything — что-нибудь, ничего anybody — любой, каждый anyone — любой, каждый anywhere — где-нибудь, везде	вопросительное
nothing — ничего nobody — никто no one — никто nowhere — нигде, никуда	отрицательное
everything — все everybody — все everywhere — везде, всюду	утвердительное, вопросительное, отрицательное

Местоимения *much, little, many, few*

Much «много», *little* «мало» употребляются с неисчисляемыми именами существительными, например: *much water* — много воды, *little time* — мало времени;

many «много», *few* «мало» употребляются с исчисляемыми именами существительными, например: *many books* — много книг, *few chairs* — мало стульев; а *few* «несколько», а *little* «немного».

Сравнение значений *few — a few, little — a little.*

There are few chairs in the room	В комнате мало стульев (нужно принести еще несколько).
There are two tables and a few chairs in the room.	В комнате два стола и несколько стульев (комната не пустая).
There is little water in the flask.	В колбе мало воды (нужно добавить еще немного).
There is a little water in the flask.	В колбе есть немного воды (колба не пустая).

Местоимения — заместители имени существительного

That, *these*, *those*, *one* употребляются вместо имени существительного, чтобы избежать его повторения в предложении.

В русском переводе данное имя существительное повторяется.

The nucleus of hydrogen contains only one proton but *that* of helium — two protons and two neutrons.	Ядро водорода содержит только один протон, а *ядро* гелия — два протона и два нейтрона.
Radiation can destroy good tissues as it destroys the diseased *ones.*	Радиация может разрушить здоровые ткани так же, как она разрушает больные *ткани.*

ЧИСЛИТЕЛЬНЫЕ

Количественные числительные

1 — one	11 — eleven
2 — two	12 — twelve
3 — three	13 — thirteen
4 — four	14 — fourteen
5 — five	15 — fifteen
6 — six	16 — sixteen
7 — seven	17 — seventeen
8 — eight	18 — eighteen
9 — nine	19 — nineteen
10 — ten	20 — twenty

21 — twenty-one
22 — twenty-two
26 — twenty-six
30 — thirty
40 — forty
50 — fifty
60 — sixty
70 — seventy
80 — eighty
90 — ninety
100 — a (one) hundred
105 — one hundred and five
143 — one hundred and forty-three
200 — two hundred
300 — three hundred
468 — four hundred and sixty-eight
1000 — a (one) thousand
1248 — one thousand two hundred and forty eight
6000 — six thousand
100,000 — a hundred thousand
1,000,000 — a (one) million

Порядковые числительные

1-й — the first
2-й — the second
3-й — the third
4-й — the fourth
5-й — the fifth
6-и — the sixth
7-й — the seventh
8-й — the eighth
9-й — the ninth
10-й — the tenth
11-й — the eleventh
12-й — the twelfth
13-й — the thirteenth
14-й — the fourteenth и т. д.
20-й — the twentieth
25-й — the twenty-fifth
30-й — the thirtieth
40-й — the fortieth
80-й — the eightieth
90-й — the ninetieth
100-й — the hundredth
1000-й — the thousandth
1 000 000-й — the millionth и т. д.

Чтение дат

April 10, 2000	April the tenth, twenty oo; The tenth of April, twenty zero zero.
February 22, 1809	February the twenty-second, eighteen o nine; The twenty-second of February, eighteen o nine.

ПРИЛАГАТЕЛЬНЫЕ И НАРЕЧИЯ

Степени сравнения

Сравнительная степень односложных и некоторых двусложных прилагательных и наречий образуется при помощи суффикса *-er*. Превосходная степень — при помощи суффикса *-est*, например:

short — shorter — the shortest
короткий — короче — самый короткий, кратчайший

clever — cleverer — the cleverest
умный — умнее — самый умный

Если односложное прилагательное представляет собой закрытый слог, оканчивающийся одной согласной, то при добавлении суффиксов *-er*, *-est*, эта согласная удваивается, например:

big — bigger — the biggest
hot — hotter — the hottest

Если односложное прилагательное оканчивается буквой *g*, то при добавлении суффиксов *-er*, *-est* она сохраняет свое произношение [g], например:

long [lɔŋ] — longer [lɔŋgə] — the longest [lɔŋgəst]
strong [strɔŋ] — stronger [strɔŋgə] — the strongest [strɔŋgəst]

Если односложное прилагательное оканчивается «немым» *e*, то при добавлении суффиксов *-er*, *-est* «немое» *e* опускается, например:

large — larger — the largest
fine — finer — the finest

Если основа прилагательного оканчивается на *-y* с предшествующей согласной, то при добавлении *-er*, *-est* *y* переходит в *-i*, например:

dry — drier — the driest
happy — happier — the happiest

Сравнительная и превосходная степень многосложных прилагательных и наречий образуется при помощи служебных слов, соответственно *more*, *(the) most*, например:

important — more important — the most important
важный — более важный — самый важный

rapidly — more rapidly — most rapidly
быстро — быстрее — быстрее всего

Прилагательные и наречия, степени сравнения которых образуются не по правилам

good хороший хорошо	better лучше	(the) best наилучший лучше всего
bad badly плохой плохо	worse хуже	(the) worst наихудший хуже всего
much много	more (the) больше	most many наибольший больше всего
little маленький мало	less меньше	(the) least наименьший меньше всего

ГЛАГОЛ

Вспомогательные глаголы *to be, to have, to do*

В современном английском языке существуют три основных вспомогательных глагола: *to be, to have, to do*. Эти глаголы используются для образования видовременной системы английского глагола (*to be, to have*) и вопросительно-отрицательных предложений (*to do*) и в таких случаях не имеют никакого лексического значения, а указывают на время, число, лицо, вид и залог основного глагола.

Глаголы изменяются по лицам и числам, т. е. спрягаются.

Спряжение глаголов *to be, to have, to do*

<table>
<tr><th rowspan="2">Глагол</th><th rowspan="2">Число</th><th rowspan="2">Лицо</th><th colspan="3">Время</th></tr>
<tr><th>настоящее</th><th>прошедшее</th><th>будущее</th></tr>
<tr><td rowspan="2">to be</td><td>Единственное</td><td>1. I
3. he, she, it</td><td>am
is</td><td>was</td><td>shall be
will be</td></tr>
<tr><td>Множественное</td><td>1. we
2. you
3. they</td><td>are</td><td>were</td><td>shall be
will be
will be</td></tr>
<tr><td rowspan="2">to have</td><td>Единственное</td><td>1. I
3. he, she, it</td><td>have
has</td><td rowspan="2">had</td><td>shall have
will have</td></tr>
<tr><td>Множественное</td><td>1. I
2. you
3. they</td><td>have</td><td>shall have
will have
will have</td></tr>
<tr><td rowspan="2">to do</td><td>Единственное</td><td>1. I
3. he, she, it</td><td>do
does</td><td rowspan="2">did</td><td>shall do
will do</td></tr>
<tr><td>Множественное</td><td>1. we
2. you
3. they</td><td>do</td><td>shall do
will do
will do</td></tr>
</table>

Вопросительная форма

1. Is he a surgeon? Was he a surgeon? Will he be a surgeon? Is she a doctor? Was she a doctor? Will they be at a clinic? Are they at a clinic? Were they at a clinic?

2. Has he pains in the abdomen? Had he pains in the abdomen? Will he have pains in the abdomen? Has she a new patient? Had she a

new patient? Will she have a new patient? Will they have new drugs? Have they new drugs? Had they new drugs?

3. Does he work in the clinic? Did he work in the clinic? Will he work in the clinic? Does she treat patients? Did she treat patients? Will she treat patients? Do they examine patients? Did they examine patients? Will they examine patients?

Отрицательная форма

1. He is not a surgeon. He was not a surgeon. He will not be a surgeon. She is not a doctor. She was not a doctor. She will not be a doctor. They are not at the clinic. They were not at the clinic. They will not be at the clinic.

2. He has no pains in the abdomen. He had no pains in the abdomen. He will not have pains in the abdomen. She has no new patients. She had no new patients. She will have no new patients. They have no new drugs. They had no new drugs. They will have no new drugs.

3. He does not work in the clinic. He did not work in the clinic. He will not work in the clinic. She does not treat patients. She did not treat patients. She will not treat patients. They do not examine patients. They did not examine patients. They will not examine patients.

Оборот *there is, there are*

Этот оборот обычно стоит в начале предложения.

Утвердительная форма

There is a book on the table.	На столе имеется книга.
There is some water in the glass.	В стакане есть немного воды.
There are many people in the room.	В комнате много людей.

Вопросительная форма

Is there any book on the table?	На столе есть какая-нибудь книга?
Is there any water in the glass?	В стакане есть вода?
Are there any people in the room?	В комнате есть люди?

ФОРМЫ АНГЛИЙСКОГО ГЛАГОЛА

В системе форм английского глагола различают два основных класса: личные и неличные формы. Личные формы характеризуются залогом, видом (аспектом), временем, числом и лицом. Они монофункциональны: выполняют функцию сказуемого или входят в состав сказуемого. Никаких других функций, кроме сказуемого, личные формы глагола выполнять не могут.

Неличные формы характеризуются залогом и видом (аспектом). Они могут выполнять в предложении любую функцию, кроме сказуемого. К неличным формам относятся инфинитив, причастие и инговая форма.

Основные формы глагола

Глагольными формами, которые лежат в основе образования всех сложных форм залога, вида и времени, являются:

I. Инфинитив (The Infinitive): to ask — спрашивать; to break — ломать.

II. Простое прошедшее время: asked — спрашивал (The Past Indefinite Tense); broke — ломал.

III. Причастие (The Participle) — asked — спрошенный; broken — сломанный.

IV. Инговая форма (the Ing-form): asking — спрашивающий, спрашивая; breaking — ломающий, ломая.

Все глаголы образуют инфинитив при помощи частицы *to*, которая ставится перед основой глагола. Инговую форму все глаголы также образуют одинаково: при помощи суффикса *-ing*, который прибавляется к основе.

По образованию простого прошедшего времени и причастия все глаголы делятся на стандартные (правильные) и нестандартные (неправильные). У стандартных глаголов эти формы совпадают, они образуются при помощи суффикса *-ed*, который прибавляется к основе глагола. Нестандартные глаголы образуют эти формы поразному. Они даются в специальных списках и таблицах.

Правильные Глаголы	to work to obtain	worked obtained	worked obtained	working obtaining
Неправильные глаголы	to go to come	went came	gone come	going coming

При добавлении суффикса *-ed*, *-ing* к основе глагола соблюдаются следующие правила написания и произношения:

1. Если основа глагола оканчивается на «немое» *e*, то при добавлении суффиксов *-ed*, *-ing* это «немое» *e* опускается: to live — lived —living, to receive — received — receiving.

2. Если основа глагола оканчивается на *-y* с предшествующей согласной, то при добавлении суффикса *-ed* -y переходит в *-i*, а при добавлении суффикса *-ing* *-y* сохраняется:

to study — studied — studying,

to carry — carried — carrying.

Если перед *-y* стоит гласная, то *-y* сохраняется:

to enjoy — enjoyed — enjoying, to play — played — playing.

3. Если основа глагола оканчивается согласной с предшествующей гласной и эта гласная произносится кратко, то конечная согласная удваивается: to stop — stopped — stopping, to submit — submitted — submitting.

4. Если основа глагола оканчивается буквой *-r* и ей предшествует ударная гласная, то *-r* удваивается:

to occur — occurred — occurring, to refer — referred — referring, to prefer — preferred — preferring.

Суффикс *-ed* произносится:

1) [id] — после *t*, *d*: wanted [w**ɔ**ntid], landed [l**æ**ndid];

2) [d] — после гласных и звонких согласных, кроме *d*: described [diskr**ai**bd], played [pl**ei**d];

3) [t] — после глухих согласных, кроме *t*: worked [wə**:**kt], produced [prədj**u:**st].

Список наиболее часто используемых неправильных глаголов

I	II	III	Значение
arise	arose	arisen	возникать
be	was, were	been	быть
bear	bore	born	рождать
become	became	become	становиться
begin	began	begun	начинаться
bind	bound	bound	связывать
blow	blew	blown	дуть
break	broke	broken	ломать
bring	brough	brought	приносить
build	built	built	строить
burn	burnt	burnt	гореть; жечь
buy	bought	bought	покупать
catch	caught	caught	ловить; схватывать; подхватить
choose	chose	chosen	выбирать
come	came	come	приходить
cut	cut	cut	резать
deal	dealt	dealt	иметь дело с
do	did	done	делать
draw	drew	drawn	тащить; рисовать
drink	drank	drunk	пить
eat	ate	eaten	есть
fall	fell	fallen	падать
feel	felt	felt	чувствовать
find	found	found	находить
forget	forgot	forgotten	забывать
get	got	got	получать; становиться

I	II	III	Значение
give	gave	given	давать
go	went	gone	идти; ехать
grow	grew	grown	расти; выращивать
have	had	had	иметь
hear	heard	heard	слышать
hold	held	held	держать
keep	kept	kept	держать, хранить
know	knew	known	знать
lead	led	led	приводить к; руководить
learn	learnt	learnt	учить
	learned	learned	
leave	left	left	оставлять; уезжать
let	let	let	позволять
lose	lost	lost	терять
make	made	made	делать; заставлять
mean	meant	meant	значить; подразумевать
meet	met	met	встречать
put	put	put	класть
read	read	read	читать
rise	rose	risen	подниматься
run	ran	run	бежать
say	said	said	говорить; сказать
see	saw	seen	видеть
send	sent	sent	посылать
show	showed	shown	показывать
sing	sang	sung	петь
sit	sat	sat	сидеть
sleep	slept	slept	спать
speak	spoke	spoken	говорить
spell	spelt	spelt	писать или произносить
	spelled	spelled	по буквам
spend	spent	spent	тратить
spread	spread	spread	распространяться
stand	stood	stood	стоять
swim	swam	swum	плавать
take	took	taken	брать
teach	taught	taught	обучать; учить
tell	told	told	рассказывать
think	thought	thought	думать
undergo	underwent	undergone	подвергаться
understand	understood	understood	понимать
win	won	won	выигрывать
write	wrote	written	писать

Личные формы глагола

Как было указано выше, личные формы глагола характеризуются: 1) группой времен, в которых они использованы (простые, длительные, завершенные, завершенно-длительные); 2) залогом (действительный или страдательный); 3) временем (настоящим, *present*; прошедшим, *past*; будущим, *future*); 4) числом (единственным, множественным); 5) лицом (первым — *I, we*; вторым — *you*; третьим — *he, she, it, they*).

В английском языке глагол может быть использован в одной из четырех групп времен: 1) в группе простых; 2) в группе длительных; 3) в группе завершенных; 4) в группе завершенно-длительных времен.

Группа простых времен образуется от 1-й формы глагола. В настоящем времени в 3-м лице единственного числа к основе прибавляется окончание *-s*, во всех остальных лицах в настоящем времени используется 1-я форма глагола без каких-либо изменений.

Глагол в группе простых времен обозначает действие, которое происходило, происходит или будет происходить постоянно, через какие-то промежутки времени или повторяться. Часто в таком случае используются наречия времени, такие как *constantly* (постоянно), *as a rule* (как правило), *everyday* (month, week, year, summer...) (каждый день, ...месяц, ...неделю, ...год, ...лето), *often* (часто), *seldom* (редко), *from time to time* (время от времени, иногда), *usually* (обычно), *sometimes* (иногда), *last week* (на прошлой неделе), *next week* (на будущей неделе), *yesterday* (вчера), *tomorrow* (завтра) и др.

В русском языке английскому глаголу в группе простых времен соответствует глагол совершенного или несовершенного вида, настоящего, прошедшего или будущего времени, отвечающий на вопросы: Что делал? Что сделал? Что делаю? Что буду делать? Что сделаю?

Группа простых времен

Число	Лицо	Время		
		настоящее	прошедшее	будущее
Единственное	1. I 3. he, she, it	ask asks	asked	shall ask will ask
Множественное	1. we 2. you 3. they	ask	asked	shall ask will ask will ask

Группа длительных времен образуется с помощью одной из форм вспомогательного глагола *to be* и четвертой (инговой) формы основного глагола.

To be + **4-я форма глагола = длительные времена**

Глагол в группе длительных времен обозначает действие, которое происходило, происходит или будет происходить в определенный период времени. Этот период должен быть указан или ясен из ситуации.

Часто в качестве указателя периода протекания действия используются следующие слова и выражения: *now* (в настоящее время, сейчас), *at present* (в настоящее время), *at this (that) time* **(**в это (то) время**)**, *for*... (в течение); *from ... to ...* (с ... до); *since ...* (с...), *at* (в), *presently* (в настоящее время).

Например:

What is he doing?	Что он делает?
He is examining a patient now.	Сейчас он осматривает больного.
What will you be doing tomorrow at this time?	Что вы будете делать завтра в это время?
I shall be examining my patients.	Я буду осматривать больных.
What were you doing yesterday from 5 till 7 o'clock in the evening?	Что вы делали вчера с 5 до 7 часов вечера?
I was reading a new journal.	Я читал новый журнал.

В русском языке глаголу в группе длительных времен соответствует глагол несовершенного вида настоящего, прошедшего или будущего времени, который отвечает на вопросы: Что делал? Что делаю? Что буду делать?

Группа длительных времен

Число	Лицо	Время		
		настоящее	прошедшее	будущее
Единственное	1. I 3. he, she, it	am asking is asking	was asking	shall be asking will be asking
Множественное	1. we 2. you 3. they	are asking	were asking	shall be asking will be asking

Группа завершенных времен образуется с помощью одной из форм вспомогательного глагола *to have* и четвертой формы основного глагола.

To have + **3-я форма глагола = завершенные времена**

Глагол в группе завершенных времен обозначает действие, которое завершилось или завершится к моменту речи или тесно связано с настоящим моментом. Часто указание на момент речи осуществляется с помощью наречий *yet* (уже), *just* (только), *just only* (только что), *already* (уже), *ever* (когда-нибудь), *never* (никогда), *recently* (недавно), *lately* (недавно, в последнее время). Группа завершенных времен употребляется также с обстоятельствами, обозначающими незавершенный отрезок времени, такими как *today* (сегодня), *this week* (на этой неделе), *this year* (в этом году).

Have you seen him today? — Вы видели его сегодня?

(Предполагается, что вопрос задан до 12 часов дня, когда утреннее время еще не истекло.)

Сравните:

Did you see him this morning? — Вы видели его сегодня утром?

(Этот вопрос может быть задан только днем или вечером, когда утро уже прошло.)

Если речь идет о действии, которое завершится к какому-то моменту в будущем, то часто используется предлог *by*.

By the end of this week the experiment will have been finished. — К концу этой недели эксперимент будет завершен.

Обычно глагол в группе завершенных времен соответствует в русском языке глаголу совершенного вида прошедшего или будущего времени и отвечает на вопросы: Что сделал? Что сделаю?

Следует отметить, что настоящее завершенное соответствует в русском языке глаголу прошедшего времени совершенного вида, отвечающего на вопрос: Что сделал?

Группа завершенных времен

Число	Лицо	Время		
		настоящее	прошедшее	будущее
Единственное	1. I 3. he, she, it	have asked has asked	had asked	shall have asked will have asked

Число	Лицо	Время		
		настоящее	прошедшее	будущее
Множественное	1. we 2. you 3. they	have asked	had asked	shall have asked will have asked

Группа завершенно-длительных времен образуется с помощью одной из форм глагола *to have*, третьей формы глагола *to be (been)* и четвертой (инговой) формы основного глагола.

To have + ***been*** + **4-я форма глагола** = **группа завершенных времен**

Глагол в группе завершенно-длительных времен обозначает действие, которое началось, начнется до определенного момента в прошедшем, настоящем или будущем, продолжалось до этого момента и будет продолжаться дальше. Группа завершенно-длительных времен часто используется со следующими предлогами и наречиями: *for...*, *since...*, *already*.

I have been studying English for many years already.	Я учу английский язык уже много лет (учил, учу и еще буду учить).

На русский язык глагол группы завершенно-длительных времен переводится глаголом настоящего, прошедшего или будущего времени с добавлением частицы «уже». Эта группа времен в основном используется в стиле художественной прозы.

Часто указание на время совершения действия следует не от одного конкретного слова или словосочетания, а из более широкого контекста, предшествующего предложения или ситуации в целом.

He had been examining the patient for half an hour when the results of the analysis were brought at last.	Он уже полчаса обследовал больного, когда наконец принесли результаты анализа.

Группа завершенно-длительных времен

Число	Лицо	Время		
		настоящее	прошедшее	будущее
Единственное	1. I 2. he, she, it	have been asking has been asking	had been asking	shall have been asking will have been asking

Продолжение

Число	Лицо	Время		
		настоящее	прошедшее	будущее
Множественное	1. we 2. you 3. they	have been asking	had been asking	shall have been asking will have been asking

Для научного стиля типичны формы *Present Indefinite, Past Indefinite, Present Perfect*, реже встречаются *Future Indefinite, Present Continuous, Past Perfect*. Единичными случаями представлены *Past Continuous, Present Perfect Continuous*. Формы *Future Continuous, Future Perfect, Future Perfect Continuous, Past Perfect Continuous* в научной литературе практически не употребляются.

Видовременные формы английского глагола действительного залога

Группа времен	Число	Лицо	Время		
			настоящее	прошедшее	будущее
Простые	ед.	1. I 3. he, she, it	ask asks	asked	shall ask will ask
	мн.	1. we 2. you 3. they	ask	asked	shall ask will ask
Длительные	ед.	1. I 3. he, she, it	am asking is asking	was asking	shall be asking will be asking
	мн.	1. we 2. you 3. they	are asking	were asking	shall be asking will be asking
Завершенные	ед.	1. I 3. he, she, it	have asked has asked	had asked	shall have asked will have asked
	мн.	1. we 2. you 3. they	have asked	had asked	shall have asked will have asked

Продолжение

Группа времен	Число	Лицо	Время		
			настоящее	прошедшее	будущее
Завершенно-длительные	ед.	1. I 3. he, she, it	have been asking has been asking	had been asking	shall have been asking will have been asking
	мн.	1. we 2. you 3. they	have been asking	had been asking	shall have been asking will have been asking

Вопросительная и отрицательная формы

Простые времена. *Present Indefinite* и *Past Indefinite*, образуют вопросительную и отрицательную формы при помощи вспомогательного глагола *to do*, соответственно, *do*, *does* и *did*, при этом смысловой глагол употребляется в форме инфинитива без частицы *to*. В вопросительной форме вспомогательный глагол ставится перед подлежащим, в отрицательной — вместе с отрицанием *not*, после подлежащего, например:

She studies English. — Does she study English? — No, she does not study English. They speak French. — Do they speak French? — No, they do not speak French. He studied English last year. — Did he study English last year? — No, he did not study English last year. They went home late. — Did they go home late? — No, they did not go home late.

Сложные времена образуют вопросительную форму путем постановки первого вспомогательного глагола перед подлежащим, а отрицательную форму путем постановки частицы *not* после первого вспомогательного глагола, например:

Is he working now? — No, he is not working now. Have you studied English? — No, I have not studied English. Have you been working here long? — No, I have not been working here long.

Глагол *to have* в качестве смыслового глагола со значением «иметь», «обладать» образует вопросительную и отрицательную формы с помощью вспомогательного глагола *to do*, в последнем случае вместо вспомогательного глагола *to do* и отрицания *not* возможно употребление отрицательных местоимений no, none. Например:

Do you have any journals in applied mathematics? — No, I don't (do not) have any. (No, I have none. I have no journals in applied mathematics.)

В британском употреблении возможна форма *have got*:

Have you got any journals in applied mathematics? — No, I haven't got any.

В выражениях типа *to have a lesson, to have trouble, to have difficulties* в вопросительной форме употребляются только формы глагола *do*; в отрицательной форме употребляются либо формы глагола *do* и отрицания *not*, либо отрицательные местоимения *no*, *none*, например:

How often do you have English lessons? Do you have any trouble with that equipment? — No, we don't (do not) have any trouble with it. (No, we have no trouble with it.)

Следует особо отметить, что, в отличие от русского языка, в английском предложении может быть только одно отрицание. Нижеприведенному русскому предложению с тремя отрицаниями соответствует английское предложение с одним отрицанием:

Он нам никогда ничего об этом не говорил. — He has never told us anything about it.

Страдательный залог

В английском языке глагол может быть использован в одном из двух залогов: действительном или страдательном. Страдательный залог в английском языке образуется с помощью одной из форм глагола *to be* и третьей формы основного глагола.

To be **+ 3-я форма глагола = страдательный залог**

Глагол в действительном залоге обозначает действие, которое совершается лицом или предметом, выраженным именем существительным или личным местоимением, стоящим на первом месте в предложении, и направлено на лицо или предмет, выраженный именем существительным или объектным местоимением, стоящим после глагола-сказуемого. Например:

The doctor examined the patient. — Врач осмотрел больного.

Глагол в страдательном залоге обозначает действие, которое совершается лицом или предметом, выраженным именем существительным или объектным местоимением, стоящим после глагола сказуемого, и направлено на лицо или предмет, выраженный именем существительным или личным местоимением, стоящим на первом месте в предложении. Например:

The patient was examined by the doctor. — Больной был осмотрен врачом.

На русский язык глагол в страдательном залоге может переводиться четырьмя основными способами.

1. С помощью одной из форм глагола «быть» и краткого страдательного причастия. Например:

The patient was examined by the doctor.	Больной был осмотрен врачом.

2. С помощью неопределенно-личной формы глагола. Например:

The patient was examined.	Больного осмотрели.

3. С помощью возвратного глагола, оканчивающегося на -ся, -сь. Например:

The patient was examined by the doctor.	Больной осматривался врачом.

4. С помощью преобразования страдательной конструкции в действительную. В этом случае перевод начинается с конца предложения. Например:

The patient was examined by the doctor.	Врач осмотрел больного.

Времена английского глагола в страдательном залоге

В страдательном залоге в основном сохраняются все группы времен и времена, которые присущи глаголу в действительном залоге. Исключение составляет группа завершенно-длительных времен и будущее время в группе длительных времен.

Использование всех групп времен в страдательном залоге соответствует тому, что говорилось об употреблении времен и групп времен в действительном залоге.

Времена английского глагола в страдательном залоге

Группа времен	Число	Лицо	Время		
			настоящее	прошедшее	будущее
Простые	ед.	1. I 3. he, she, it	am asked is asked	was asked	shall be asked will be asked
	мн.	1. we 2. you 3. they	are asked	were asked	shall be asked will be asked will be asked

Продолжение

Группа времен	Число	Лицо	Время		
			настоящее	прошедшее	будущее
Длительные	ед.	1. I 3. he, she, it	am being asked is being asked	was being asked	–
	мн.	1. we 2. you 3. they	are being asked	were being asked	–
Завершенные	ед.	1. I 3. he, she, it	have been asked has been asked	had been asked	shall have been asked will have been asked
	мн.	1. we 2. you 3. they	have been asked	had been asked	shall have been asked will have been asked

Вопросительная форма образуется путем постановки первого вспомогательного глагола перед подлежащим.

Will they be asked? Have you been asked?

Отрицательная форма образуется при помощи отрицания, которое ставится после первого вспомогательного глагола:

They have not been asked.

МОДАЛЬНЫЕ ГЛАГОЛЫ

В английском языке глагол может обозначать не только действие, но и отношение говорящего к действию. С этой точки зрения действие может рассматриваться как возможное, вероятное, желательное или необходимое. Отношение говорящего к действию выражается с помощью модальных глаголов.

В английском языке модальные глаголы представляют собой особую группу глаголов, которые по своим свойствам отличаются от других глаголов по ряду признаков.

Во-первых, они не изменяются в 3-м лице единственного числа в группе простых времен (т.е. не имеют окончания *-s*); во-вторых, имеют не все видовременные формы; в-третьих, образуют вопросительно-отрицательные формы самостоятельно, без помощи вспомогательных глаголов; в-четвертых, всегда сопровождаются инфинитивом другого глагола, без частицы *to*.

В английском языке к модальным глаголам относятся:

can — могу, можешь, может, можем, можете, могут
may — могу, можешь, может, можем, можете, могут
must — должен, должна, должны
should — следует
ought (to) — следует
need — необходимо
would — хотел (бы), хотела (бы), хотели (бы)

Глаголы *can* и *may* имеют форму прошедшего времени *could* и *might*, соответственно, остальные модальные глаголы по временам не изменяются. Если модальный глагол необходимо использовать в не свойственном ему времени, то используются глаголы-заместители:

can = to be able to
may = to permit, to allow
must = to be to, to have to

Необходимо отметить, что глагол *can* обозначает физическую возможность, а глагол *may* — моральную. Например:

I can read English books.	Я могу читать английские книги (т. е. умею, меня научили).
I may read English books.	Я могу читать английские книги (т. е. мне разрешили).

Если за модальным глаголом стоит глагол *to have* в одной из его форм и третья форма основного глагола, то такие глагольные сочетания переводятся на русский язык вводными словами типа: «вероятно», «может быть», «возможно», «должно быть» или с помощью сослагательного наклонения с частицей «бы». Например:

You can have done it.	Ты мог бы это сделать (но не сделал).
He may have been late.	Возможно, он опоздает.
He must have come.	Должно быть, он пришел.

ПОРЯДОК СЛОВ В АНГЛИЙСКОМ ПРЕДЛОЖЕНИИ

В английском предложении существует так называемый прямой порядок слов, при котором за каждым членом предложения закреплено его место в предложении. Перемещение членов предложения с одного места на другое может привести к искажению, изменению или уничтожению смысла всего высказывания. Например:

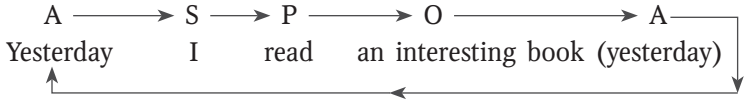
The doctor treats the patient. Врач лечит больного.

Если поменять местами подлежащее и дополнение, получим правильное с точки зрения грамматики английского языка, но

абсолютно бессмысленное предложение (The patient treats the doctor.). В этом заключается существенное отличие английского языка от русского, в котором смысл предложения практически не изменяется при перемещении членов предложения с одной позиции на другую. (В русском языке существует свободный порядок слов.)

В английском языке на первом месте всегда стоит подлежащее (*S — subject*) с зависимыми словами, если таковые имеются; на втором — сказуемое (*P — predicate*), на третьем — дополнение (*O — object*); на четвертом — обстоятельство (*A — adverbial modifier*).

Иногда обстоятельство времени, места или цели может переноситься в начало предложения. В таком случае оно занимает так называемую нулевую позицию (0). Схематически это можно представить следующим образом:



В английском языке, в отличие от русского, ни один из главных членов предложения, то есть ни подлежащее ни сказуемое, не может быть опущен. Если по смыслу предложения подлежащее не требуется, то есть предложение должно быть безличным или неопределенно-личным, то используется формальное подлежащее, выраженное местоимениями *it, they, one, this (these), that (those)*. Например:

It was getting dark.	Темнело.
It is interesting.	Интересно.
One should be more careful.	Следует быть более внимательным.

ВОПРОСИТЕЛЬНЫЕ ПРЕДЛОЖЕНИЯ. ОБЩИЙ ВОПРОС

В английском языке можно выделить несколько типов вопросительных предложений: общие, специальные и разделительные вопросительные предложения или вопросы.

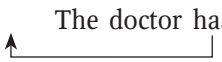
Общий вопрос — это вопрос ко всему предложению, требующий ответа «Да» или «Нет». В русском языке таким вопросительным предложениям соответствуют следующие:

Ты был сегодня в институте? — Да (Нет).

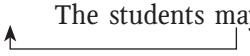
Подобные вопросы в английском языке часто называют «Yes — No questions» по типу ответа, который на них дают.

Для того чтобы задать общий вопрос, надо на первое место в предложении поставить вспомогательный или модальный глагол,

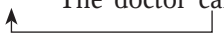
если таковые имеются в исходном (утвердительном) предложении. Если же их нет, то используется вспомогательный глагол to do в соответствующем лице, числе и времени. Например:



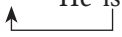
Has the doctor examined the patient?
Yes, he has.
No, he has not (hasn't).



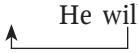
May the students be present at the operation?
Yes, they may.
No, the may not.



Can the doctor help this patient?
Yes, he can.
No, he cannot (can't).



Is he a good specialist?
Yes, he is.
No, he is not (isn't).



Will he go to the library tomorrow?
Yes, he will.
No, he will not (won't).

Has this boy been learning English for 5 years?
Yes, he has.
No, he has not (hasn't).

Did the scientist make an experiment?
Yes, he did.
No, he did not (didn't).

РАЗДЕЛИТЕЛЬНЫЕ ВОПРОСЫ

Разделительный вопрос состоит из двух частей: утвердительного или отрицательного предложения и краткого вопроса. Например:

He is a doctor, isn't he?	Он врач, не так ли?
He does not know any foreign language, does he?	Он не знает ни одного иностранного языка, да? (Разве он не знает английский?)

Разделительный вопрос используется в том случае, когда предполагается получить подтверждение высказывания, содержащегося в утвердительной части предложения.

Если первая часть разделительного вопроса представляет собой отрицательное предложение, то вторая часть, т.е. вопрос, должна быть утвердительной, и наоборот, если первая часть разделительного вопроса утвердительная, то вторая часть должна быть отрицательной.

Подлежащее в кратком вопросе всегда обозначает то же лицо или предмет, что и в первой части и выражается личным местоимением. В русском языке вопросительная часть разделительного вопроса соответствует вопросительным предложениям типа: Не так ли? Не правда ли? Да? и вопросительным предложениям с частицей «ведь». Например:

This is an outpatient clinic, isn't it?	Это ведь амбулаторное отделение?
He likes to study at the academy, doesn't he?	Ему нравится учиться в академии, не правда ли? (не так ли?)
This drug is not effective, is it?	Это лекарство неэффективно, да?

СПЕЦИАЛЬНЫЕ ВОПРОСЫ

Специальный вопрос — это вопрос к отдельным членам предложения: подлежащему, сказуемому, дополнению, определению или обстоятельству.

Для того чтобы задать специальный вопрос, надо на первое место поставить одно из вопросительных слов, в зависимости от того, к какому члену предложения задается вопрос:

who — кто
whose — чей, чья, чье, чьи
whom — кому, кого, кем
what — что, какой
which — какой, который (из нескольких)
why — отчего, почему, зачем

where – где. куда, откуда
when – когда
how – как
how many – сколько (когда речь идет об исчисляемых предметах)
how much – сколько (когда речь идет о неисчисляемых предметах)
how long – сколько (когда речь идет о периоде времени)

Затем следует вспомогательный или модальный глагол, а далее вся остальная часть предложения за исключением слова (слов), к которому задается вопрос. Если вопрос задается к подлежащему, то сохраняется прямой порядок слов, а само подлежащее заменяется вопросительными словами *Who* или *What*.

Рассмотрим все типы вопросов на примере одного предложения:

Yesterday this young talented scientist was performing an experiment on white mice in his laboratory for 5 hours. – Вчера этот молодой талантливый ученый в течение 5 часов проводил в лаборатории эксперимент на белых мышах.

1. **Вопрос к подлежащему:**
– Who was performing an experiment on white mice in his laboratory yesterday?
– This young talented scientist was.
2. **Вопрос к сказуемому:**
– What was this young scientist doing yesterday on white inice in his laboratory for 5 hours?
– (He was) performing an experiment.
3. **Вопрос к дополнению:**
– Whom was this young talented scientist performing an experiment on in his laboratory for 5 hours yesterday?
– (He was performing an experiment) on white mice.
4. **Вопрос к обстоятельству времени:**
a) – When was this young talented scientist performing an experiment on white mice for 5 hours?
– (He was performing an experiment on white mice for 5 hours) yesterday.
b) – How long was this talented young scientist performing an experiment on white mice yesterday?
– (He was performing an experiment on white mice yesterday) for 5 hours.
5. **Вопрос к определению:**
– What scientist was performing an experiment on while mice for 5 hours yesterday?
– This young talented scientist was.

Неличные формы глагола

К неличным формам глагола относятся инфинитив, причастие, инговая форма. Они могут входить в состав сложных глагольных форм, употребляться в качестве самостоятельных членов предложения и входить в состав предикативных конструкций.

Инговые формы

Инговые формы — это неличные формы глагола (не могут быть сказуемым в предложении и сочетаться с личными местоимениями), которые образуются с помощью суффикса *-ing*, присоединяемого к первой (основной, словарной) форме глагола.

В предложении инговые формы могут быть подлежащим (отвечают на вопросы Кто? или Что?), определением (Какой?), дополнением (Что?), обстоятельством (Как? Каким образом? Когда? Зачем? Почему?). На русский язык инговая форма может переводиться именем существительным, причастием, оканчивающимся на -щий (-щая, -щее, -щие), -вший (-вшая, -вшее, -вшие), деепричастием, оканчивающимся на -а, -я, -в.

В английском языке инговые формы могут быть простыми и сложными и использоваться в страдательном или действительном залоге.

Инговые формы

Группа времен	Залог	
	действительный	страдательный
Простые	asking	being asked
Завершенные	having asked	having been asked

Перевод инговых форм на русский язык зависит от того места, которое они занимают в предложении:

1) если в предложении инговая форма с зависимыми словами стоит перед глаголом-сказуемым, то на русский язык переводится именем существительным:

Reading is very useful. — Чтение (читать) очень полезно.

2) если в предложении инговая форма стоит после предлога, местоимения (притяжательного, указательного) или существительного в объектном падеже, то на русский язык переводится именем существительным:

For making a diagnosis the doctor asked the patient to undergo some analyses.	Для постановки диагноза врач попросил больного сделать анализы.

His coming was unexpected.	Его приезд был неожиданным.
This patient's complaining on gastric disorder was surprising.	Жалоба этого больного на расстройство желудка была неожиданной.

3) если инговая форма стоит после личной формы глагола, то на русский язык переводится именем существительным или неопределенно-личной формой глагола:

His favorite occupation is reading. They are operating now.	Его любимое занятие — чтение. Сейчас они проводят операцию.

4) если инговая форма стоит непосредственно перед или после существительного, к которому относится по смыслу, а также между артиклем или местоимением и существительным, то на русский язык переводится причастием, оканчивающимся на -щий (-щая, -щее, -щие):

The doctor examining a patient is our leading specialist.	Врач, осматривающий больного, — наш ведущий специалист.
The beginning conference is a new stage in science.	Начинающаяся конференция — новый шаг в науке.
The doctor prescribed the drug relieving pain.	Врач прописал лекарство, снимающее боль.

5) если инговая форма входит в состав глагольного сочетания *having* + 3-я форма основного глагола, то на русский язык переводится деепричастием, оканчивающимся на -в, -а, -я.

The doctor made the final diagnosis having got laboratory data.	Врач поставил окончательный диагноз, получив результаты лабораторных исследований.

6) если инговая форма стоит в предложении на первом месте перед подлежащим, то на русский язык переводится деепричастием, оканчивающимся на -а, -я:

Performing the experiment he used new method.	Проводя эксперимент, он использовал новый метод.

7) если инговая форма стоит после союзов *when*, *while*, то на русский язык переводится деепричастием, оканчивающимся на -а, -я:

While examining a patient the doctor asked his patient a lot of questions.	Осматривая больного, врач задал ему много вопросов.

8) если инговая форма входит в состав глагольного сочетания *being* + 3-я форма основного глагола, то на русский язык перево-

дится с помощью глагола быть (в форме «будучи») и страдательного причастия, оканчивающегося на -мый, -тый, -ный.

The patient went home being carefully examined.	Будучи тщательно осмотренным, больной пошел домой.

Следует отметить, что в том случае, когда перед инговой формой стоят предлоги *in*, *on*, *upon*, то на русский язык эти предлоги переводятся как «при». Если же перед инговой формой стоят союзы *when*, *while*, то инговая форма переводится на русский язык деепричастием, оканчивающимся на -а, -я, а сами союзы на русский язык не переводятся. Инговые формы в функции определения (отвечают на вопрос Какой?) и обстоятельства времени (отвечают на вопрос Когда?) могут переводиться на русский язык соответствующими придаточными предложениями, вводимыми союзами «который», «когда»:

The doctor examining a patient is a well known specialist.	Врач, который осматривает больного, хороший специалист.
He was surprised having got these results.	Он удивился, когда получил эти результаты.

Причастие II

В английском языке причастие II по-разному образуется у правильных и неправильных глаголов. У правильных глаголов причастие II по форме совпадает с прошедшим временем глагола.

На русский язык причастие II переводится страдательным причастием, оканчивающимся на -мый, -тый, -ный, или придаточным предложением времени или условия.

В зависимости от места в предложении причастие II переводится на русский язык по-разному:

1) если в предложении глагольная форма, оканчивающаяся на *-ed*, стоит после одной из форм вспомогательного глагола *to be* или *to have*, то это глагол-сказуемое, которое на русский язык переводится глаголом в соответствующем числе, лице, времени и залоге:

The patient was examined by the doctor.	Больной был осмотрен врачом.

2) Если глагольная форма, оканчивающаяся на *-ed*, стоит в предложении перед именем существительным, то на русский язык переводится глаголом в соответствующем времени, лице, числе и залоге:

The doctor asked the patient about his complaints.	Врач спросил больного о его жалобах.

3) если глагольная форма, оканчивающаяся на *-ed*, стоит после личного местоимения, то на русский язык переводится глаголом в соответствующем времени, числе, лице и залоге:

She asked me about my complaints.	Она спросила меня о моих жалобах.

4) если глагольная форма, оканчивающаяся на *-ed*, стоит после артикля, указательного или притяжательного местоимения перед существительным, то на русский язык переводится причастием, оканчивающимся на -мый, -тый, -ный:

The admitted patient had appendicitis.	У доставленного больного был аппендицит.

5) если глагольная форма, оканчивающаяся на *-ed*, стоит перед предлогом *by*, то на русский язык переводится причастием, оканчивающимся на -мый, -тый, -ный:

The method used by the scientist was very effective.	Метод, использованный этим ученым, оказался очень эффективным.

6) если глагольная форма, оканчивающаяся на *-ed*, стоит после союзов *if*, *when*, то на русский язык переводится придаточным предложением времени или условия:

If prescribed the drug will be used by the patient.	Если лекарство пропишут, оно будет применяться больным.
When developed the drug was tested on inanimals.	Когда лекарство разработали, оно было испытано на животных.

7) если глагольная форма, оканчивающаяся на *-ed*, стоит перед другой глагольной формой, то на русский язык переводится причастием, оканчивающимся на -мый, -тый, -ный:

The obtained results showed high transaminase level.	Полученные результаты показали высокий уровень трансаминазы.

8) если перед третьей формой неправильного глагола нет ни одной из форм вспомогательного глагола *to be* или *to have*, то это причастие II, которое переводится на русский язык причастием, оканчивающимся на -мый, -тый, -ный.

Грамматические конструкции с инговой формой и причастием II

Инговая форма и причастие могут входить в состав так называемой абсолютной причастной конструкции, или независимого причастного оборота. По структуре эта конструкция сходна с

предложением, с той разницей, что здесь функцию вторичного сказуемого выполняют инговая форма или причастие. Данная конструкция может стоять перед, в середине и после основного предложения. В двух последних случаях она, как правило, отделяется запятой. Этой конструкции может предшествовать предлог *with*.

Абсолютная причастная конструкция, стоящая перед основным предложением, переводится на русский язык придаточным предложением с союзами «если», «так как», «когда». В середине и после основного предложения — независимым предложением, которое может вводится словами «причем», «при этом».

The patients being examined, the treatment was prescribed.	Когда больных обследовали, лечение было назначено.
The solution was introduced into the medium, meat broth being its main component.	Раствор был введен в среду, при этом мясной бульон был его основным компонентом.

Инговая форма и причастие входят в состав оборотов типа *if desired, when measuring, as (is) shown*. Эти обороты могут быть преобразованы в предложения: If it is desired, when we are measuring, as it is shown.

It was found necessary to take one important precaution when making these measurements.	При выполнении этих измерений оказалось необходимым соблюдать одну важную предосторожность.
The results were averaged in different ways, as shown in Table 2.	Результаты были усреднены различными способами, как показано в таблице 2.

ИНФИНИТИВ

Инфинитив — это неличная форма глагола, формальным показателем которой является наличие частицы *to*. Следует отметить, что после модальных глаголов, а также после некоторых глаголов в инфинитивных конструкциях, инфинитив используется без частицы *to*.

По форме инфинитив совпадает с первой (основной) формой глагола и соответствует в русском языке неопределенной форме глагола (иногда существительному), определительному придаточному предложению или придаточному предложению цели.

В английском языке инфинитив имеет одну простую и четыре сложных формы.

Формы инфинитива

Форма	Залог	
	действительный	страдательный
Простой	to ask	to be asked
Длительный	to be asking	–
Завершенный	to have asked	to have been asked

Инфинитив, как и инговая форма, может быть в предложении подлежащим, дополнением, определением и обстоятельством. Кроме того, он может быть частью составного сказуемого. Типичными для научной речи являются функции обстоятельства цели и следствия, определения и части составного сказуемого.

Перевод инфинитива на русский язык зависит от его места в предложении:

1) если в предложении инфинитив стоит перед глаголом-сказуемым, то на русский язык переводится неопределенной формой глагола.

To test the drug for side effects was necessary.	Проверить лекарство на побочные действия было необходимо.

2) если в предложении инфинитив стоит непосредственно после глагола-сказуемого, то на русский язык переводится неопределенной формой глагола или именем существительным:

The drug was used to treat acute inflammations.	Лекарство применяли для лечения острых воспалений.

3) если в предложении инфинитив стоит после одной из форм вспомогательных глаголов *to be* или *to have*, то на русский язык переводится неопределенной формой глагола:

Operation is to be made immediately.	Операцию необходимо сделать немедленно.

4) если в предложении инфинитив стоит перед подлежащим, то на русский язык переводится придаточным предложением цели, вводимым союзами «чтобы», «для того чтобы».

To make final diagnosis the doctor asked the patient to undergo some analyses.	Для того чтобы поставить окончательный диагноз, врач попросил больного сдать анализы.

5) если в предложении инфинитив стоит после дополнения или обстоятельства места, то на русский язык переводится придаточным предложением цели, вводимым союзами «чтобы», «для того, чтобы»:

The experiment was performed to study the activity of this compound.	Эксперимент был проведен для того, чтобы изучить действие этого соединения.

6) если в предложении инфинитив стоит после имени существительного, к которому относится по смыслу, то на русский язык переводится определительным придаточным предложением с оттенком будущности или долженствования, вводимым союзом «который»:

The drug to be used in this case is very effective.	Лекарство, которое будет использоваться в этом случае, очень эффективное.

Инфинитив следствия соотносится обычно с наречиями *too*, *enough*, *sufficiently* и прилагательными sufficient, а также с *so ... as*, *such ... as*.

The data are not sufficient to give reliable results.	Этих данных недостаточно, чтобы получить надежные результаты.
This method is too complicated to be used in the experiment.	Этот метод слишком сложный, чтобы использовать его в данном эксперименте.
The error is so small as to be easily neglected.	Эта погрешность настолько мала, что ею легко можно пренебречь.

Инфинитив в качестве компонента именного составного сказуемого употребляется в основном с глаголом-связкой *to be*, который может иметь одну из форм *Indefinite* или *Perfect*. Сам инфинитив употребляется в данном случае только в форме *Indefinite*, *Active Voice — to come*, *to produce* и т.п. Подлежащим при таком сказуемом чаще является слово со значением «метод», «цель», «задача»: *method*, *approach*, *procedure*, *way*, *technique*, *purpose*, *objective*, *aim*, *goal*, *problem*, *task*.

Глагол *to be* переводится на русский язык словами «состоит в том, чтобы», «заключается в том, чтобы».

The object of their experiment has been to find the connection between the two kinds of parasites.	Цель эксперимента состояла в том, чтобы найти связь между двумя видами паразитов.

Our task was to determine the rate of the reaction.	Наша задача заключалась в том, чтобы определить скорость реакции.

Инфинитив в качестве компонента модального составного сказуемого употребляется после модальных глаголов *can*, *must*, *may* (без частицы *to*) и после глаголов *to have*, *to be* (с частицей *to*).

В модальном составном сказуемом с глаголом *to be*, в отличие от идентичного по форме именного составного сказуемого, употребляются только формы *is*, *are*, *was*, *were*, а инфинитив может быть как в действительном, так и в страдательном залоге, причем преобладают формы страдательного залога.

This substance is to be handled with great care.	С этим веществом нужно обращаться очень осторожно.
This element is to be found In natural foods.	Этот элемент можно найти в естественной пище.

ИНФИНИТИВНЫЕ КОНСТРУКЦИИ

В английском языке инфинитив с зависимыми словами может образовывать инфинитивные конструкции, которые получили название «сложное дополнение» (*Complex Object*), «сложное подлежащее» (*Complex Subject*) и *«for — to»* — инфинитивная конструкция (*«for — to Infinitive Construction»*).

Конструкция «сложное дополнение» состоит из имени существительного или объектного местоимения и инфинитива с частицей *to*.

Имя существительное или объектное местоимение	+	**инфинитив**	=	**сложное дополнение**

Глагол в личной форме употребляется только в действительном залоге.

Конструкция «сложное дополнение» занимает в предложении место дополнения и отвечает на вопрос «Что?».

На русский язык эта конструкция переводится дополнительным придаточным предложением, вводимым союзами «что», «чтобы», «как».

The doctor wanted the patient to make blood analysis.	Врач хотел, чтобы больной сделал анализ крови.
They considered him to be quite healthy.	Они считали, что он вполне здоров.

Конструкция «сложное дополнение» используется после глаголов, обозначающих:

1) чувственное восприятие:
   to see — видеть
   to hear — слышать
   to watch — наблюдать, смотреть
   to feel — чувствовать
   to observe — наблюдать
   to notice — замечать

The students watched the surgeon operate the patient.	Студенты наблюдали, как хирург проводил операцию.

2) умственную деятельность:
   to know — знать
   to think — считать, полагать, думать
   to consider — считать, полагать
   to believe — верить, считать, полагать
   to suppose — предполагать
   to expect — ожидать, предполагать
   to imagine — полагать, предполагать, думать
   to find — обнаруживать, устанавливать
   to feel — чувствовать
   to trust — доверять

I know him to be a good surgeon.	Я знаю, что он хороший хирург.

3) заявление, сообщение:
   to pronounce — заявлять
   to declare — заявлять
   to report — сообщать

The scientist reported the drug to be toxic for man and animals.	Ученый сообщил, что лекарство токсично для людей и животных.

4) желание, намерение:
   to want — хотеть
   to wish — хотеть
   to desire — хотеть, желать
   to mean — намереваться
   to intend — намереваться
   to choose — выбирать

I want my son to become a surgeon.	Я хочу, чтобы мой сын был хирургом.

5) чувства и эмоции:
   to like — любить, нравиться, хотеть
   to dislike — не любить, не нравиться, не хотеть

to love — любить, нравиться
to hate — не любить, не нравиться, не хотеть, не желать
cannot bear — не выносить

I don't like you to go there. — Я не хочу, чтобы вы ходили туда.

6) принуждение, насилие
to make — заставить
to cause — заставить
to get — добиться
to have — заставить

(После глагола *to make* инфинитив в конструкции «Сложное дополнение» используется без частицы *to*.)

Конструкция с глаголами *allow, permit, enable* является трехчленной. Она включает один из названных глаголов, имя существительное (или местоимение) и инфинитив. Глаголы *allow, permit, enable* и инфинитив могут быть в действительном залоге:

He *allowed me to use* his pen. — Он *разрешил мне воспользоваться* его ручкой.

Глаголы *allow*, *permit* и инфинитив могут быть в страдательном залоге:

This *permits* instructions of the two classes *to be executed* in parallel. — Это *позволяет выполнять* команды двух классов параллельно.

We *were allowed to take part* in the experiment. — Нам *разрешили участвовать* в этом эксперименте.

В последнем случае изменяется порядок следования компонентов.

Конструкция с глаголами *make, cause, lead* также состоит из трех компонентов: одного из указанных глаголов, имени существительного (или местоимения) и инфинитива. Все три глагола имеют в данном случае значение «заставлять». Если глагол *make* имеет форму действительного залога, то инфинитив не имеет частицы *to*.

This *made him use* another method. — Это *заставило его использовать* другой метод.

Если глагол *make* имеет форму страдательного залога, то инфинитив употребляется с частицей *to*, при этом изменяется порядок следования компонентов.

This substance in human blood *can be made to migrate* with any molecular group. — Это вещество в крови человека *можно заставить* передвигаться с любой группой молекул.

После глаголов *cause*, *lead*, *force* во всех случаях употребляется инфинитив с частицей *to*.

We *are lead to question* the importance of this event.	Мы *вынуждены усомниться* в важности этого события.
In these conditions pressure is *caused to remain* constant.	В этих условиях давление *можно заставить оставаться* постоянным.

Конструкция «сложное подлежащее» (Complex Subject) состоит из имени существительного или личного местоимения, занимающих в предложении первую позиция (т.е. позицию подлежащего — отсюда название конструкции) и инфинитива с частицей *to*. Между существительным/личным местоимением и инфинитивом находится глагол-сказуемое.

Имя существительное или личное местоимение	+ **инфинитив** =	**сложное подлежащее**

На русский язык конструкция «сложное подлежащее» переводится как сложноподчиненное предложение с придаточным дополнительным, вводимым союзом «что». Глагол-сказуемое переводится на русский язык безличным или неопределенно-личным предложением типа: «Известно...», «Думают...», «Считают...», «Полагают...» и т.п. Глагол-сказуемое можно также переводить на русский язык вводными словами типа: «как считают», «как полагают», «как думают» и подобными.

This young man is known to be a good surgeon.	Известно, что этот молодой человек хороший хирург. (или: Этот молодой человек, как известно, хороший хирург.)

Часто конструкция «сложное подлежащее» используется в страдательном залоге со следующими глаголами, обозначающими:

1) Чувственное восприятие:
   to see
   to hear и т.д. **(**см. список глаголов, с которыми используется конструкция «сложное дополнение», п.1.)**)**

The patient was heard to moan.	Было слышно, как больной стонал.

2) Умственную деятельность:
   to think — думать, считать, полагать
   to consider — считать, полагать

to know — знать, считать
to expect — ожидать
to believe — верить, считать, полагать
to suppose — предполагать

The drug was expected to be very effective.	Полагали, что это лекарство очень эффективно.

3) С глаголами в действительном залоге:
to prove — оказываться
to appear — оказываться
to turn out — оказываться
to happen — оказываться, случаться

The method proved to be very effective.	Метод оказался очень эффективным.

4) С глагольными сочетаниями:
to be likely — вероятно
to be unlikely — маловероятно
to be certain — наверняка, несомненно
to be sure — конечно, обязательно

He is unlikely to come in time.	Маловероятно, что он придет вовремя.

Инфинитивная конструкция с предлогом *for* включает два компонента: имя существительное с предлогом *for* и инфинитив. Особенностью этого оборота является то, что в предложении он может быть подлежащим, частью именного составного сказуемого, обстоятельством цели или следствия, определением. На русский язык этот оборот чаще всего переводится соответствующим придаточным предложением, в котором английскому существительному с предлогом *for* соответствует подлежащее, а инфинитиву — сказуемое.

For this to be proved many experiments must be performed.	Для того чтобы доказать это, надо провести много экспериментов
There is one more point for him to account for (определение).	Имеется еще один вопрос, который он должен объяснить.
The main thing to be achieved was for their calculations to be in good agreement with experimental data (часть именного составного сказуемого).	Основное, чего следовало достичь, это то, чтобы их вычисления хорошо согласовывались с экспериментальными данными.

СОСЛАГАТЕЛЬНОЕ НАКЛОНЕНИЕ

Глаголы в форме сослагательного наклонения выражают действие желаемое, предполагаемое, воображаемое. В русском языке это значение передается глаголами в прошедшем времени с частицей «бы».

Я бы никогда не подумал, что это так важно.

Формы сослагательного наклонения

Синтетические

Настоящее время:		Прошедшее время:	
I, he, she, it	be, have	I, he, she, it	were, had,
we, you, they	do, work	we, you, they	did, wored

Аналитические

should, would
might, could
\+ инфинитив без частицы *to*

Употребление форм сослагательного наклонения

Настоящее время и аналитическая форма *should* (для всех лиц) + инфинитив без частицы *to* употребляются параллельно в следующих случаях:

1) после безличных предложений:

It is necessary that ...	Необходимо, чтобы ...
It is important that ...	Важно, чтобы ...
It is desired that ...	Желательно, чтобы ...
It is unlikely that ...	Маловероятно, чтобы ...
и т. п.	

It is important that the work be done in time.	Важно, чтобы эта работа была выполнена вовремя.
It is necessary that the experiment should be completed as soon as possible.	Необходимо, чтобы эксперимент был завершен как можно скорее.

2) в придаточных дополнительных предложениях после глаголов:

suggest — предполагать,	request — просить, предлагать
suppose — предполагать	propose — предлагать
insist — настаивать	advise — советовать
require — требовать	recommend — рекомендовать
demand — требовать	order — приказывать

They suggested that the problem should be solved using computer program.	Они предложили, чтобы задача была решена с помощью компьютерной программы.
He insisted that the experiment be conducted in our laboratory.	Он настаивал, чтобы эксперимент проводился в нашей лаборатории.

3) в придаточных предложениях цели после союзов: *lest* — чтобы не, *so that* — так, чтобы.

This substance must be kept in special containers lest toxic substance escape.	Это вещество нужно хранить в специальных контейнерах, чтобы токсические вещества не выходили наружу.
Write down the name of the drug lest you should forget it.	Запишите название лекарства, чтобы вы его не забыли.
I repeated the diagnosis so *that* he remember it better.	Я повторил диагноз, чтобы он его лучше запомнил.
We went by plane so that they should not wait for us long.	Мы полетели самолетом, чтобы они нас долго не ждали.

После союза *as if* — как будто, как если бы употребляется форма прошедшего времени.

The weather is so cold *as if* it were winter now.	Погода такая холодная, *как будто бы* сейчас зима.

В простых предложениях употребляется аналитическая форма *should, would, might, could* + инфинитив без частицы *to* (простой или перфектный).

There would be no life without water.	Без воды не было бы жизни.
You could have done it better.	Вы могли бы сделать это лучше.
They should have been more attentive.	Им следовало бы быть более внимательными.

Употребление сослагательного наклонения в условных предложениях

I тип. Событие осуществимое, относится к настоящему или будущему.

If he comes ask him to wait.	Если он придет, попросите его подождать.
If he should come, ask him to wait.	Если он все-таки придет, попросите его подождать (что маловероятно).

II тип. Событие маловероятное, относится к настоящему или будущему.

If they took a taxi they would come to the station in time.	Если бы они взяли такси, они приехали бы на станцию вовремя (но это маловероятно, они наверняка опоздают).
If I were you I would not do it.	Если бы я был на вашем месте, я бы этого не сделал.
If he could go there at once he would find his friend at home.	Если бы он мог пойти туда сейчас же, он застал бы своего друга дома (но он, к сожалению, не может этого сделать).

III тип. Событие нереальное. Оно не может произойти, поскольку время для его осуществления уже прошло.

If they had taken a taxi they would have come to the station in time.	Если бы они взяли такси, они бы приехали на станцию вовремя (но они не нашли такси и опоздали).

Условные предложения могут вводиться следующими союзами:
if — если
unless — если ... не
in case — в случае
provided (that) — при условии, что

БЕССОЮЗНЫЕ ПРИДАТОЧНЫЕ ПРЕДЛОЖЕНИЯ

Опущение союза в условных предложениях возможно в том случае, если в составе сказуемого придаточного предложения имеется вспомогательный глагол, который в этом случае занимает первое место в предложении.

Should they take a taxi they will come to the station in time.	Если они все-таки возьмут такси, то приедут на станцию вовремя.
Should they come at 5 they would Find him at home.	Если бы они пришли в 5 часов, они застали бы его дома.
They would have found him at home had they come a little bit earlier.	Они застали бы его дома, если бы пришли немного раньше.

Придаточные условные предложения могут вводиться следующими словами:
but for — если бы

if it were not for — если бы не
if it had not been for — если бы не
had it not been for — если бы не

Were it not for these data our results would never be so accurate.	Если бы не эти данные, наши результаты ни за что не были бы такими точными.

В определительных и дополнительных придаточных предложениях союзы *which*, *that* могут опускаться. В русских предложениях соответствующие союзы (что, который) не опускаются.

I didn't know he is your chief.	Я не знал, что он ваш начальник.
The results we had obtained were later used in developing new computational methods.	Результаты, которые мы получили, позже были использованы при разработке новых вычислительных методов.

ЭМФАЗА

Эмфатические обороты используются для выделения, акцентирования, эмоционального усиления какой-либо части предложения или всего предложения.

1. Оборот *it is ... that (which)* используется для выделения подлежащего, дополнения, любого обстоятельства, но не сказуемого. Выделяемая фраза находится между *it is* и *that (which)*, которые на русский язык не переводятся. В соответствующем русском предложении эта фраза чаще всего выделяется при помощи слова «именно».

It is in this range that the highest temperatures are observed.	Самые высокие температуры наблюдаются именно в этом диапазоне.

2. Глагол *do, (does, did)* используется в утвердительных предложениях для выделения сказуемого, стоящего в *Present Indefinite Tense* или в *Past Indefinite Tense*. В этом случае глагол *do (does, did)* стоит непосредственно перед сказуемым, которое имеет форму инфинитива без частицы *to*. В соответствующем русском предложении сказуемое будет усилено словами «действительно», «на самом деле».

But at the end of the reaction the temperature did drop.	Но в конце реакции температура действительно упала.

3. Эмоциональное усиление всего предложения достигается, в частности, постановкой в начале предложения таких слов, как *never, only, hardly* (едва ли), *seldom* (редко), *nor* (тоже не, и не)

и некоторых других с последующей инверсией вспомогательного глагола из состава сказуемого и подлежащего.

Never before have they witnessed such a great progress in electronics.	Никогда прежде не наблюдали такого бурного прогресса в развитии электроники.
Hardly will he be able to find a solution to such complicated problem.	Едва ли он сможет найти решение такой сложной проблемы.

Если сказуемое выражено глаголом в группе простых времен в действительном залоге в настоящем или прошедшем времени, то перед подлежащим стоит соответственно *do*, *does* или *did*.

Only once did they observe the phenomenon.	Они наблюдали это явление всего один раз.

4. Эмфаза достигается также постановкой в начале предложения слов

However + прилагательное
No matter how + какой бы ...ни
Прилагательное + *as*

No matter how convincing this theory may seem it does have some weak points.	Какой бы убедительной ни казалась эта теория, она все же имеет некоторые слабые стороны.
Important as the proposal may seem it cannot be of great help in solving the problem.	Каким бы важным ни казалось это предложение, оно не может существенно помочь в решении этой задачи.

VOCABULARY

A

abatement [ə**ei**tmənt] — уменьшение, снижение; ослабление, смягчение
abbreviation [əbr**i:**vi**ei**ʃən] — сокращение
abdomen [æbdəmen] — брюшина, брюшная полость, живот
abdominal [əbdɔminl] — брюшной
abduct [əbdʌkt] — оттягивать, отводить
ability [ə**bi**liti] — способность
abnormal [æbn**ɔ:**məl] — неправильный, аномальный
abnormality [æbnɔ:məliti] — аномалия, аномальность, патология, нарушение
  chemical ~ [ch**e**mikl] — химическое нарушение
  congenital ~ [kəndʒ**e**nitl] — врожденный порок
abnormally [æbn**ɔ:**məli] — аномально
abortion [əb**ɔ:**ʃn] — аборт
  criminal ~ [kr**i**minəl] — криминальный аборт, подпольный аборт
  habitual ~ [həb**i**tjuəl] — обычный аборт
  selective ~ [sil**e**ktiv] — выборочный аборт
abscess [æbsis] — абсцесс, нарыв
absence [æbsəns] — отсутствие
absent [æbsənt] — отсутствующий
absolute [æbsəlu:t] — абсолютный
absolutely [æbsəlu:tli] — безусловно, абсолютно
absorbable [əbz**ɔ:**bəbl] — абсорбируемый, поглощаемый
absorption [əbs**ɔ:**pʃn] — абсорбция, поглощение
abstinence [æbstinəns] — воздержание, абстиненция
abundance [əb**ʌ**ndəns] — изобилие, множество
abundant [əb**ʌ**ndənt] — обильный
abuse [əbj**u:**s] — злоупотребление
access [æksəs] — доступ
accident [æksidənt] — несчастный случай
accommodate [ək**ɔ**mədeit] — приспосабливаться, вмещать(ся)
accommodation [ək**ɔ**məd**ei**ʃn] — приспособление, аккомодация
accompaniment [ək**ʌ**mpənimənt] — дополнение
accompany [ək**ʌ**mpəni] — сопровождать
accomplish [ək**ɔ**mpliʃ] — совершать, выполнять
according (to) [ək**ɔ:**diŋ] — согласно, в соответствии
account (for) [ək**au**nt] — отвечать, объяснять
account [ək**au**nt] — отчет, сообщение
accumulate [ək**ju**mjuleit] — накапливаться
accumulation [ək**ju:**mjul**ei**ʃən] — накопление
accuracy [ækjurəsi] — аккуратность, точность
accurate [ækjurət] — аккуратный, точный
acellular [əs**e**ljulə] — бесклеточный
acetabulum, *pl.* **acetabula** [æsit**æ**bjuləm, æsit**æ**bjulə] — вертлужная впадина
acetone [æsitəun] — ацетон
acetylcholine [æsitilk**əu**li:n] — ацетилхолин

ache [**ei**k] — боль
body ~ [bɔdi] — боль (ломота) в теле
joint ~ [dʒɔint] — боль в суставах
muscle ~ [mʌsl] — боль в мышцах
achieve [ətʃ**i:**v] — достигать
achievement [ətʃ**i:**vmənt] — достижение
achlorhydria [eiklɔ:h**ai**driə] — ахлоргидрия
achondroplasia [əkɔndrɔupl**ei**ʒiə] — ахондроплазия
acid [æsid] — кислота
acetic ~ [əs**i:**tik] — уксусная кислота
amino ~ [əm**ai**nɔu] — аминокислота
aromatic ~ [ærɔumætik] — ароматическая кислота
ascorbic ~ [əsk**ɔ:**bik] — аскорбиновая кислота
butyric ~ [bjut**i**rik] — масляная кислота
carbonic ~ [ka:bɔnik] — угольная кислота
carboxylic ~ [ka:bɔks**i**lik] — карбоновая кислота
deoxyribonucleic ~ [di:**ɔu**ksirai-bɔunj**u:**kli:ik], DNA — дезоксирибонуклеиновая кислота, ДНК
fatty ~ [fæti] — жирная кислота
folic ~ [fɔlik] — фолиевая кислота
formic ~ [fɔ:mik] — муравьиная кислота
gamma-aminobutyric ~ [gæmə-əm**ai**nɔubju:t**i**ərik] — гамма-аминомасляная кислота
glutamic ~ [glu:tæmik] — глутаминовая кислота
hydrochloric ~ [h**ai**drəklɔ:rik] — соляная кислота
lactic ~ [læktik] — молочная кислота
malic ~ [mælik] — яблочная кислота
nitric ~ [n**ai**trik] — азотная кислота
nitrous ~ [n**ai**trəs] — азотистая кислота
nucleic ~ [nj**u:**kli:ik] — нуклеиновая кислота
organic ~ [ɔ:gænik] — органическая кислота
orthophosphoric ~ [**ɔ:**θəfɔsf**ɔ**-rik] — ортофосфорная кислота
oxalic ~ [ɔksælik] — щавелевая кислота
oxygen-free ~ [**ɔ**ksidʒən-fri:] — бескислородная кислота
para-aminosalicylic ~ [pærəem**ai**-nɔusælis**i**lik] — парааминосалициловая кислота
picric ~ [p**i**krik] — пикриновая кислота
pyruvic ~ [pair**u:**vik] — виноградная кислота
ribonucleic ~ [r**ai**bɔunju:kl**i:**ik], RNA — рибонуклеиновая кислота, РНК
salicylic ~ [sælis**i**lik] — салициловая кислота
succinic ~ [sʌks**i**nik] — янтарная кислота
sulphuric ~ [sʌlfj**u**ərik] — серная кислота
tartaric ~ [ta:tærik] — винная кислота
uric ~ [j**u**ərik] — мочевая кислота
acidic [æs**i**dik] — кислый, кислотный
acidity [əs**i**diti] — кислотность
acidproof [æsidpr**u:**f] — кислотоустойчивый
acknowledge [əknɔlidʒ] — признавать
acne [ækni] — прыщи, воспаление сальной железы
acquire [əkw**ai**ə] — приобретать
acromegaly [ækrɔum**e**gəli] — акромегалия

acromioclavicular [ækr**ɔu**mi:ɔuklə**vi**kjulə] — акромиально-ключичный
act (on) [**æ**kt] — воздействовать, влиять (на)
actinomycin [æktinɔum**ai**sin] — актиномицин
activate [**æ**ktiveit] — активировать
active [**æ**ktiv] — активный
actively [**æ**ktivli] — активно
activity [ækt**i**viti] — деятельность
actual [**æ**ktʃuəl] — фактический, реальный
actually [**æ**ktʃuəli] — фактически
acuity [əkj**u:**əti] — острота, острота зрения
  visual ~ [v**i**ʒjuəl] — острота зрения
acute [əkj**u:**t] — острый
acuteness [əkj**u:**tnis] — острота
Adam's apple [**æ**dəmz**æ**pl] — адамово яблоко
adapt [ədæpt] — приспосабливать, приспосабливаться
add [**æ**d] — добавлять, присоединять
addict [**æ**dikt] — наркоман
addiction [ədikʃən] — пристрастие, зависимость, наркомания
adenine [**æ**dinain] — аденин
adenitis [ædin**ai**tis] — аденит
  haemorrhagic ~ [h**e**mər**æ**dʒik] — геморрагический аденит
adenocarcinoma [**æ**dinɔuka:sin**ɔu**mə] — аденокарцинома
adenohypophysis [**æ**dinɔuhaipɔfisis] — аденогипофиз
adenoids [**æ**dinɔidz] — аденоиды
adenoma [ædin**ɔu**mə] — аденома
adenosis [ædin**ɔu**sis] — аденоз
  vaginal ~ [vədʒ**ai**nl] — влагалищный аденоз
adequate [**æ**dikwit] — адекватный, соответствующий
adherent [ədh**i**ərənt] — вязкий, липкий, адгерентный
adhesion [ədh**i:**ʒn] — прилипание, слипание; спайка, соединение, сращение
  labial ~ [l**ei**biəl] — сращение губ
adhesive [ədh**i:**siv] — липкий
adjacent [ədʒ**ei**sənt] — соседний
adjoin [ədʒ**ɔi**n] — граничить, примыкать
adjunct [**æ**dʒʌŋkt] — дополнение, приложение, придаток
adjust [ədʒʌst] — приводить в соответствие, регулировать
adjustment [ədʒʌstmənt] — корректировка, настройка
administer [ədm**i**nistə] — давать, применять, управлять, назначать, вводить
administering [ədm**i**nisteriŋ] — применение
administration [ədm**i**nistr**ei**ʃən] — назначение, применение, введение
admissible [ædm**i**sibl] — допустимый, приемлемый
admission [ədm**i**ʃn] — доставка, поступление
admit [ədm**i**t] — доставлять; признавать, допускать
admixture [ædm**i**kstʃə] — примесь
adolescent [**æ**dəl**e**sent] — подросток
adolescent [**æ**dɔul**e**snt] — подростковый
adopt [ədɔpt] — принимать; усыновлять
adoption [ədɔpʃən] — принятие
adrenal [ædr**i:**nl] — надпочечная железа, надпочечник; надпочечный
adrenaline [ədr**e**nəlin] — адреналин
adrenals [ədr**i:**nlz] — надпочечник
adrenocorticotropic [ədr**i:**nɔuk**ɔ:**tikɔutr**ɔ**pik] — адренокортикотропный
adsorber [ədsɔ:bə] — адсорбер
adult [**æ**dʌlt] — взрослый
advance [ədv**a:**ns] — достижение, прогресс
advanced [ədv**a:**nst] — развитый

advantage [ədv**a:**ntidʒ] — преимущество
advent [ædvənt] — наступление, приход
adverse [ædvə:s] — неблагоприятный
advice [ədv**ai**s] — совет
aeration [eər**ei**ʃn] — аэрация
aerosol [**e**ərɔusɔl] — аэрозоль
aerosol [**e**ərɔusɔl] — аэрозольный
aetiology [i:ti**ɔ**lədʒi] — этиология
affair [əf**e**ə] — дело
affect [əf**e**kt] — поражать
affection [əf**e**kʃən] — болезнь, поражение
affective [əf**e**ktiv] — эмоциональный
afferent [æfərənt] — афферентный
affiliate [əf**i**lieit] — присоединяться
afflict [əfl**i**kt] — поражать
affliction [əfl**i**kʃən] — нарушение; болезнь, недуг
afford [əf**ɔ:**d] — давать возможность, быть в состоянии, позволить себе
afterdischarge [**a:**ftədistʃ**a:**dʒ] — разряд последействия
after-seizure [**a:**ftə**si:**zə] — послеприпадочный
age [**ei**dʒ] — возраст
ageing [**ei**dʒiŋ] — старение
agency [**ei**dʒənsi] — агентство; организация
agent [**ei**dʒənt] — агент
  aging ~ [eidʒiŋ] — агент старения
  bacteriostatic ~ [bæktiəriɔust**æ**tik] — бактериостатик, бактериостатическое вещество
  chemo-therapeutic ~ [k**i:**mɔuθerə pj**u:**tik] — химиотерапевтический агент
  cytotoxic chemotherapeutic ~ [s**ai**tətɔksik k**i:**mɔuθerəpj**u:**tik] — цитотоксический химиотерапевтический агент
agglutination [əgl**u:**tin**ei**ʃn] — агглютинация
agglutinin [əgl**u:**tinin] — агглютинин
agglutinogen [æglu:t**i**nɔdʒen] — агглютиноген
aggravate [**æ**grəveit] — отягчать, усугублять, ухудшать
aggregation [ægrig**ei**ʃn] — агрегация, скопление
agonizing [**æ**gənaiziŋ] — агонизирующий
agony [**æ**gəni] — агония
agranulocyte [ægr**æ**njulɔus**ai**t] — агранулоцит
agranulocytosis [ægrænjulɔusait**ɔu**sis] — агранулоцитоз
agree [əgr**i:**] — соглашаться
agriculture [**æ**grikʌltʃə] — сельское хозяйство
ahead [əh**e**d] — впереди
ail [**ei**l] — недомогать, болеть
ailing [**ei**liŋ] — больной, нездоровый, хворый
ailment [**ei**lmənt] — болезнь, нездоровье, недомогание, заболевание
aim [**ei**m] — цель
air[ɛə] — воздух
  cold ~ [kɔuld] — холодный воздух
  damp ~ [dæmp] — влажный воздух
  smoky ~ [smɔuki] — задымленный воздух
air-conduction [**e**əkəndʌkʃən] — воздушная проводимость, звукопроводимость
air-piece [**e**əp**i:**s] — конец стетоскопа, вставляемый в ухо
air-sac [**e**əs**æ**k] — воздушный мешок
airways [**e**əweiz] — воздухоносные пути
akin [ək**i**n] — схожий, похожий
alarming [əl**a:**miŋ] — беспокоящий, тревожный
albumin [ælbjumin] — альбумин

albuminuria [ælbjuminj**u**əriə] — альбуминурия
alcohol [ælkəhɔl] — спирт, алкоголь
alcoholic [ælkəh**ɔ**lik] — спиртовой, алкогольный
alcoholism [ælkəhɔlizm] — алкоголизм
aldehyde [ældihaid] — альдегид
aldosterone [ældəst**i**ərɔun] — альдостерон
alicyclic [ælis**ai**klik] — алициклический
alignment [ɔl**ai**nmənt] — выравнивание, расположение, положение
aliphatic [ælif**æ**tik] — алифатический
alive [ɔl**a**iv] — живой
alkali [ælkəlai] — щелочь
alkaline [ælkəlain] — щелочной
alkaliproof [ælkəlaipr**u:**f] — щелочеустойчивый
alkaloid [ælkəlɔid] — алкалоид
allele [ɔli**:**l] — аллель
allergic [ɔl**e**dʒik] — аллергический
allergology [ælɔg**ɔ**lɔdʒi] — аллергология
allergy [ælɔdʒi] — аллергия
allocate [ælɔukeit] — назначать, распределять
allocation [ælɔk**ei**ʃɔ] — расположение, размещение, распределение
allow [ɔl**a**u] — позволять
allowance [ɔl**a**uɔns] — пособие
  family ~ [fæmili] — пособие многодетным семьям
alone [ɔl**ɔu**n] — один
alpha [ælfɔ] — альфа
~-wave [ælfɔw**ei**v] — альфа-волна
alter [**ɔ:**ltɔ] — изменять
alteration [**ɔ**ltɔr**ei**ʃn] — изменение
alternate [ɔ:lt**ɔ:**nit] — сменяться, чередоваться
alternative [ɔ:lt**ɔ:**nɔtiv] — альтернатива, выбор
although [ɔ:lð**ɔu**] — хотя
altogether [**ɔ:**ltɔgeðɔ] — в целом
aluminium [ælj**u**miniəm] — алюминий
aluminum (USA) [ɔl**u:**minəm] — алюминий
alveolus, *pl.* **alveoli** [ælv**i**ələs, ælv**i**əlai] — альвеола
amalgam [ɔm**æ**lgɔm] — амальгама
amaze [ɔm**ei**z] — изумлять, удивлять
amazing [ɔm**ei**ziŋ] — ошеломляющий, удивительный
amber [**æ**mbɔ] — желтый, янтарный
amber [**æ**mbɔ] — янтарь
ambitious [æmb**i**ʃɔs] — честолюбивый
amblyopic [æmbli**ɔu**pik] — амблиопический, пораженный амблиопией
amblypia [æmbli**ɔu**piə] — амблиопия
ambulance [**æ**mbjuləns] — машина скорой помощи
amenorrhoe [eimenɔr**i**:ə] — аменорея
  primary ~ [pr**ai**məri] — первичная аменорея
  secondary ~ [s**e**kəndəri] — вторичная аменорея
amide [**æ**maid] — амид
amine |ɔm**i:**n, **æ**min] — амин
ammonia [ɔm**ɔu**niə] — аммиак
amniocentesis [æmniɔusənt**i:**sis] — амниоцентез
amoeba, *pl.* **amoebae** [ɔm**i:**bə, ɔm**i:**bi] — амёба
amoebic [ɔm**i:**bik] — амёбный
amount [ɔm**au**nt] — количество
amphetamine [æmf**i**tɔmi:n] — амфетамин
ample [**æ**mpl] — богатый, обильный
amplitude [**æ**mplitju:d] — амплитуда
amply [**æ**mpli] — обильно, богато
ampoule [**æ**mpu:l] — ампула
amygdala [æm**i**gdələ] — миндалина
amylase [**æ**mileiz] — амилаза

anabolism [ənæbəlizm] — анаболизм
anaemia [ən**i:**miə] — анемия
Addisonian pernicious ~ [ædis**əu**niən pən**i:**ʃəs] — пернициозная анемия Аддисона
Cooley's ~ [k**u:**liz] — эритробластическая анемия, анемия Кули
haemolytic ~ [h**i**:m**ə**litik] — гемолитическая анемия
hereditary sickle-cell ~ [hir**e**ditəri s**i**kl sel] — наследственная серповидноклеточная анемия
iron deficiency ~ [**ai**rən dif**i**ʃənsi] — железодефицитная анемия
macrocytic ~ [mækrəus**ai**tik] — макроцитарная анемия
sickle-cell ~ [s**i**klsel] — серповидноклеточная анемия
anaerobic [æniər**əu**bik] — аэробный
anaesthesia [ænisθ**i:**zjə] — анестезия, обезболивание
general ~ [dʒ**e**nərəl] — общая анестезия
anaesthetic [ænisθ**e**tik] — анестетик, обезболивающее вещество
anaesthetist [ən**i**sθətist] — анестезиолог
anaesthetize [ən**i:**sθətaiz] — анестезировать, обезболивать
anal [**ei**nl] — анальный
analgesic [ænældʒ**e**sik] — анальгетик, болеутоляющее средство
analogous [ənæləgəs] — аналогичный, сходный
analysis [ənæləsis] — анализ
diffraction ~ [difrækʃn] — дифракционный анализ
anaphase [ænəfeiz] — анафаза
anaplasia [ænəpl**ei**siə] — анаплазия
anastomose [ənæstɔm**əu**z] — соединяться, создавать соустие (анастомоз)
anastomosis [ənæstɔm**əu**sis] — анастомоз
anatomical [ænətɔmikl] — анатомический
anatomy [anætəmi] — анатомия
pathological ~ [pæθələdʒikl] — патологическая анатомия
anchor [æŋkə] — прикреплять, присоединять
androgen [ændrədʒin] — андроген
aneurysm [ənj**u**ərizm] — аневризм(а)
anger [æŋgə] — гнев, раздражение
angina pectoris [ændʒ**ai**nə p**e**ktəris] — стенокардия
angiography [ændʒiɔgrəfi] — ангиография
angle [æŋgl] — угол
inner ~ [**i**nə] — внутренний угол
right ~ [r**ai**t] — прямой угол
ankle [æŋkl] — лодыжка
ankylosis [æŋkil**əu**sis] — анкилоз
bony ~ [b**əu**ni] — костный анкилоз
fibrous ~ [f**ai**brəs] — фиброзный анкилоз
annual [ænjuəl] — ежегодный
anodontia [ænɔd**ɔ**nʃiə] — отсутствие зубов
complete ~ [kəmpl**i:**t] — полное отсутствие зубов
partial ~ [p**a:**ʃəl] — частичное отсутствие зубов
anogenital [einɔudʒ**e**nitəl] — аногенитальный
anomaly [ən**ɔ**məli] — аномалия, неправильное развитие
Anopheles [ənɔfili:z] — анофелес, малярийный комар
anorexia [ænɔur**e**ksiə] — анорексия
anosmia [ənɔzmiə] — аносмия
anoxia [ənɔksiə] — кислородное голодание, недостаток кислорода в крови
antagonist [æntægənist] — антагонист, зуб-антагонист
anterior [ænt**i**əriə] — передний

antero-posterior [æntiərəu-pɔ-stiəriə] — переднезадний
anthrax [ænθrəks] — сибирская язва
antibacterial [æntibæctiəriəl] — антибактериальный
antibiotic [æntibaiɔtik] — антибиотик
  wide-spectrum ~ [waid-spektrəm] — антибиотик широкого спектра действия
antibody [æntibɔdi] — антитело
anticipate [æntisipeit] — предвидеть
anticoagulant [æntikɔuægjulənt] — антикоагулянт
anticyclone [æntisaikləun] — антициклон
antidepressant [æntidipresənt] — антидепрессант
antigen [æntidʒən] — антиген
antigenic [æntidʒenik] — антигенный
antipolio [æntipɔuliɔu] — противополиомиелитный
antipyrine [æntipairi:n] — антипирин
antiseptic [æntiseptik] — антисептический
antiserum, *pl.* **antisera** [æntisiərəm, æntisiərə] — антисыворотка
antitoxin [æntitɔksin] — антитоксин
antrum [æntrəm] — полость
  ~ of Highmore [æntrəməvhaimɔ:] — гайморова пазуха
  mastoid ~ [mʌstɔid] — мастоидная полость
anus [einəs] — анус
  imperforate ~ [impə:fərit] — непроботенный (зараженный) анус
anxiety [æŋzaiəti] — тревога, беспокойство
aorta [ei ɔ:tə] — аорта
aortic [ei ɔ:tik] — аортальный
apart [əpa:t] — на расстоянии
apex, *pl.* **apices** [eipeks, eipisi:z] — вершина, верхушка
apical [æpikl] — апикальный, верхушечный
apparatus [æpəreitəs] — аппарат
  Golgi~ [gɔldʒi] — аппарат Гольджи
  suction ~ [sʌkʃən] — аспиратор, отсасыватель, отсос
  vestibular ~ [vestibjulə] — вестибулярный аппарат
apparently [əpærəntli] — явно, несомненно
appear [əpiə] — появляться, казаться, оказываться
appearance [əpiərəns] — появление, вид, внешний вид
append(ic)ectomy [əpendis)ektəmi] — аппендэктомия
appendage [əpendidʒ] — придаток
appendicitis [əpendisaitis] — аппендицит
appendix [əpendiks] — аппендикс
  ~ vermiform [və:mifɔ:m] — червеобразный отросток
appetite [æpitait] — аппетит
appliance [əplaiəns] — приспособление, устройство
  prosthetic ~ [prɔsθetik] — протез
applicable [æplikəbl] — применимый
application [æplikeiʃən] — применение, использование
  topical ~ [tɔpikl] — местное (топическое) применение
applied [əplaid] — прикладной
apply [əplai] — накладывать; применять, использовать
appoint [əpɔint] — назначать (на должность)
appointment [əpɔintmənt] — назначение (на должность)
apposition [æpɔuziʃən] — присоединение; накладывание, приложение; аппозиция
approach [əprɔutʃ] — подход

appropriate [əprə**u**priit] — соответствующий, подходящий, уместный
approve [əpr**u:**v] — одобрять
approximately [əprɔksimitli] — примерно, приблизительно
arch [**a:**tʃ] — арка, свод
  mandibular ~ [mænd**i**bju:lə] — нижнечелюстная дуга
  maxillary ~ [mæksiləri] — верхнечелюстная дуга
area [**e**əriə] — область
  raw ~ [r**ɔ:**] — поврежденная область, область повреждения
areola [ər**i:**ələ] — околососковый кружок
argument [**a:**gjumənt] — аргумент, доказательство
arise [ər**ai**z] — возникать, брать начало, происходить
arm [**a:**m] — рука
Arnica montana [**a:**nikə mɔnt**a:**nə] — горная арника
aromatic [ærəmætik] — ароматический
around [ər**au**nd] — вокруг
arousal [ər**au**zəl] — пробуждение, возбуждение (половое)
arrange [ər**ei**ndʒ] — располагать, размещать
arrangement [ər**ei**ndʒment] — расположение
arrest [ər**e**st] — остановка, задержка
  cardiac ~ [k**a:**diæk] — остановка сердца
arrest [ər**e**st] — останавливать, задерживать
arrhythmia [ər**i**θmiə] — аритмия
  cardiac~ [k**a:**diæk] — сердечная аритмия
arrival [ər**ai**vəl] — прибытие
arrive [ər**ai**v] — прибывать, поступать
arsenic [**a:**snik] — мышьяковый
art [**a:**t] — искусство
arteriole [a:t**i:**əri:ɔul] — артериола
arteriosclerosis [a:t**i**əriɔuskliər**ɔu**sis] — артериосклероз
arteritis [**a:**tər**ai**tis] — артериит
artery [**a:**təri] — артерия
  celiac ~ [s**i:**liæk] — чревная (брюшная) артерия
  coronary ~ [kərənəri] — коронарная артерия
  carotid ~ [kərɔtid] — каротидная (сонная) артерия
  hepatic ~ [hipætik] — печеночная артерия
  inferior mesenteric ~ [inf**i**əriə mesənt**e**ric] — нижняя брыжеечная артерия
  pulmonary ~ [pʌlmənəri] — легочная артерия
  renal ~ [r**i**nəl] — почечная артерия
  subclavian ~ [sʌbkl**ei**viən] — подключичная артерия
  superior mesenteric ~ [sjupi**ə**riə mesənt**e**ric] — верхняя брыжеечная артерия
arthritis [a:θr**ai**tis] — артрит
  acute septic ~ [əkj**u:**t s**e**ptic] — острый септический артрит
  acute suppurative ~ [əkj**u:**t sʌpjuərətiv] — острый гнойный артрит
  infective ~ [inf**e**ktiv] — инфекционный артрит
  miscellaneous ~ [m**i**səl**e**niəs] — смешанный артрит
arthrodesis [a:θrɔud**i:**sis] — артродез
  natural ~ [nætʃərəl] — естественный артродез
arthroplasty [a:θrɔuplæsti] — артропластика
arthrotomy [a:θrɔtɔmi] — артротомия
article [**a:**tikl] — предмет, вещь
articular [a:t**i**kjulə] — суставной
articulation [a:t**i**kjul**ei**ʃn] — сустав, сочленение

artificial [**a:**tifi**ʃ**əl] — искусственный
artificially [**a:**tifi**ʃ**əli] — искусственно
ascending [ə**s**endiŋ] — восходящий
ascertain [æsə**t**ein] — выяснять, убеждаться, устанавливать
ascite [ə**s**ait] — асцит
ascites [ə**s**aiti:z] — асцит
asepsis [æs**e**psis] — асептика
aseptic [æs**e**ptik] — асептический
ash [æ**ʃ**] — пепел, зола
  total ~ [t**ɔ**utl] — общее содержание золы
aspect [æspect] — часть, аспект
asphyxia [æsfi**k**siə] — удушье, асфиксия
aspire [ə**s**pai**ə**] — стремиться
aspirin [æspərin] — аспирин
assay [ə**s**ei] — анализ, проба, исследование
assemble [ə**s**embl] — собирать
assembly [ə**s**embli] — сбор, совокупность; ассамблея
assess [ə**s**es] — определять, оценивать
assessment [ə**s**esmənt] — определение, оценка
assign [ə**s**ai**n**] — назначать, устанавливать; приписывать
assignment [ə**s**ai**n**mənt] — назначение, распределение
assimilate [æs**i**mileit] — усваивать
assist [ə**s**i**s**t] — помогать, содействовать
assistance [ə**s**i**s**təns] — помощь
associate [ə**s**ɔu**ʃ**iət] — связывать, ассоциировать
association [ə**s**ɔu**s**i**ei****ʃ**ən] — связь, ассоциация
assortment [ə**s**ɔ**:**tmənt] — ассортимент, набор; классификация
assume [ə**s**j**u:**m] — признавать, допускать, принимать, брать (на себя)
assumed [ə**s**j**u**md] — предполагаемый
aster [æstə] — астра
asthenia [æsθ**i:**niə] — астения
asthma [æsθmə] — астма
  bronchial ~ [brɔ**ŋ**kiəl] — бронхиальная астма
  cardiac ~ [k**a:**diæk] — сердечная астма
astigmatism [æst**i**gmətizm] — астигматизм
atabrine [ætəbrin] — атабрин
atactic [ətæktik] — атактический
ataxia [ətæksiə] — атаксия
  locomotor ~ [ləkəm**ou**tər] — динамическая атаксия, локомоторная атаксия
ataxic [ətæksik] — атактический
atheroma [æθərɔ**u**mə] — атерома
atherosclerosis [æθərɔuskliərɔ**u**sis] — атеросклероз
athetoid [æθətoid] — атетоидный, атетозный
athetosis [æθit**ɔ**usis] — атетоз
atmosphere [**æ**tməsfiə] — атмосфера
atmospheric [**æ**tməf**e**rik] — атмосферный
atom [**æ**təm] — атом
atomic [ətɔmik] — атомный
atraumatic [ætrɔ:m**æ**tik] — атравматичный
atresia [ətr**i:**zjə] — атрезия
atresic [ətr**i:**zik] — атрезиальный
atretic [ətr**i:**tik] — атретический
atrium, *pl.* **atria** [**ei**triəm, **ei**triə] — предсердие
atrophic [ətr**ɔ**fik] — атрофический
atrophied [**æ**trəfaid] — атрофированный
atrophy [**æ**trəfi] — атрофия
atropine [**æ**tɔrpi:n] — атропин
attach (to) [ətætʃ] — присоединять(ся), прикреплять(ся)
attack [ətæk] — приступ, атака; поражать, атаковать
attend [ət**e**nd] — посещать

attendant [ət**e**ndənt] — сопутствующий, сопровождающий
attitude [ætitju:d] — отношение
attribute [ætribju:t] — относить
attrition [ətri**ʃ**n] — стирание
audiography [ɔ:di**ɔ**grəfi] — аудиография
auditory meatus [**ɔ:**ditəri mi**ei**təs] — слуховой проход
aura [**ɔ:**rə] — аура, предвестник эпилептического припадка
  epileptic ~ [epil**e**ptic] — эпилептическая аура, предвестник эпилептического приступа
auricle [**ɔ:**rikl] — предсердие; ушная раковина
auscultation [**ɔ:**sk∧l**tei**ʃn] — аускультация
automated [**ɔ:**təm**ei**tid] — автоматический
automatism [ɔ:t**ɔ**mətizm] — автоматизм
autonomous [ɔ:t**ɔ**nəməs] — автономный
autosomal [**ɔ:**tɔus**ɔu**ml] — аутосомный
available [əv**ei**ləbəl] — доступный, имеющийся в наличии
avascular [əvæskjulə] — аваскулярный, бессосудистый, не содержащий сосудов
average [**æ**vridʒ] — средний
avoid [əv**ɔi**d] — избегать
award [əw**ɔ:**d] — награда
awareness [əw**e**ənis] — уверенность
  relaxed ~ [rilækst] — ослабленное понимание
awkward [**ɔ:**kwəd] — неудобный
axilla, *pl.* **axillae** [æks**i**lə, æx**i**li:] — подмышечная впадина
axiom [æksiəm] — аксиома
axiomatic [æksiɔumætik] — самоочевидный, аксиоматический
axis [æksis] — ось
  long ~ [lɔŋ] — длинная ось
axon [æksən] — аксон

B

baby [b**ei**bi] — ребенок, младенец
  dysmature ~ [dismətj**u**ə] — недоношенный ребенок
  full-term ~ [f**u**lt**ɔ:**m] — доношенный ребенок
bacillus, *pl.* **bacilli** [bəs**i**ləs, bəs**i**lai] — бацилла
  Klebs-Löffler ~ [kl**e**bz-l**ɔ:**flə] — бацилла Клебса — Лефлера
bacitracin [bæsitr**ei**sin] — бацитрацин
back [bæk] — спина
backache [bækeik] — боль в спине
backbone [bækbɔun] — позвоночник
background [bækgraund] — фон, история, подоплека
backside [bæksaid] — задняя сторона
bacteriologist [bækt**i**ər**i**l**ɔ**lədʒist] — бактериолог
bacterium, *pl.* **bacteria** [bækt**i**əriəm, bækt**i**əriə] — бактерия
bag [bæg] — мешок
balance [bæləns] — весы; баланс, равновесие
balance-pan [bæ**l**ənspæn] — чашка весов
balsam [b**ɔ:**lsəm] — бальзам
  ~ of Tolu [tɔl**u:**] — толуанский бальзам
  ~ of Peru [pər**u:**] — перуанский бальзам
  Canada ~ [kænədə] — канадский бальзам
ban [bæn] — запрещать
bank [bænk] — банк
  blood ~ [blʌd] — банк крови
band [bænd] — полоска, лента
barbiturate [ba:b**i**tjureit] — барбитурат
barium [b**e**əriəm] — барий
barrel-shaped [bærəl ʃ**ei**pt] — бочкообразный

barrier [bæriə] — барьер
base [b**ei**s] — основа, основание
  ointment ~ [**ɔi**ntmənt] — основа мази
basin [b**ei**sin] — таз, чашка
basis, *pl.* **bases** [b**ei**sis, b**ei**si:z] — основа, основание
basophil [b**ei**zɔfil] — базофил
bath [b**a:**θ] — баня
  oil ~ [ɔil] — масляная баня
  sand ~ [sænd] — песочная баня
  water ~ [wɔtə] — водяная баня
battle [bætl] — борьба
beaker [b**i:**kə] — мензурка
beam [b**i:**m] — луч; пучок
bean-shaped [b**i:**n ʃ**ei**pt] — бобообразный, похожий на боб
beat [b**i:**t] — биение, удар
beauty [bj**u:**ti] — красота
bed [b**e**d] — койка, кровать
bedrest [b**e**dr**e**st] — постельный режим
bedpan [b**e**dpæn] — подкладное судно
bedside [b**e**ds**ai**d] — место у кровати
  ~locker [b**e**dsaidl**ɔ**kə] — прикроватная тумбочка
behave [bih**ei**v] — вести (себя)
behaviour [bih**ei**viə] — поведение
believe [bil**i:**v] — верить, считать, полагать
belly [b**e**li] — живот
  pot ~ [p**ɔ**t] — выступающее брюшко
belong [bil**ɔ**ŋ] — принадлежать
bench [b**e**ntʃ] — стол для экспериментов
beneath [bin**i:**θ] — ниже, под
benefit [b**e**nefit] — выгода, преимущество
benign [bin**ai**n] — доброкачественный
beri-beri [b**e**riberi] — бери-бери, авитаминоз
berserk [bə:s**ə:**k] — неуправляемый
beta [b**i:**tə] — бета
beta-wave [b**i:**təw**ei**v] — бета-волна
between [bitw**i:**n] — между
beyond [bij**ɔ**nd] — за
bicarbonate [baik**a:**bənit] — бикарбонат, двууглекислый
biceps [b**ai**seps] — бицепс, двуглавая мышца
biconcave [b**ai**kɔnk**ei**v] — двояковогнутый
bicuspid [baikʌspid] — премоляр, малый коренной зуб
bifid [b**ai**fid] — расщепленный
bifurcation [b**ai**fə:k**ei**ʃn] — бифуркация, разветвление
bilateral [bailætərəl] — двусторонний
bile [b**ai**l] — желчь
bilharzias [bilh**a:**ziəs] — бильгарциоз
bilirubin [bilir**u:**bin] — билирубин
binaural [bain**ɔ:**rəl] — бинауральный
bind [b**ai**nd] — связывать
biochemical [b**ai**ɔuk**e**mikəl] — биохимический
biochemistry [b**ai**ək**e**mistri] — биохимия
biologist [bai**ɔ**lədʒist] — биолог
biology [bai**ɔ**lədʒi] — биология
  molecular ~ [mələ**e**kjələ] — молекулярная биология
biopsy [baiəpsi] — биопсия
birth [b**ə:**θ] — рождение
bit [bit] — кусок, кусочек
bite [b**ai**t] — прикус, укус
  close ~ [cl**ɔu**s] — закрытый прикус
  cross ~ [krɔs] — перекрестный прикус
  open ~ [**ɔu**pn] — открытый прикус
  proper ~ [prɔpə] — правильный прикус

bladder [blædə] — мочевой пузырь
urinary ~ [**ju**ərinəri] — мочевой пузырь
blade [bl**ei**d] — пластинка
shoulder~ [ʃəuldə] — лопатка
blast [bl**a:**st] — ударная волна
bleed, bled, bled [bl**i:**d] — кровоточить
bleeding [bl**i:**diŋ] — кровотечение
~ time [taim] — время кровотечения
blepharitis [blefər**ai**tis] — блефарит
ulcerative ~ [ʌlsərətiv] — язвенный блефарит
blindness [bl**ai**ndnis] — слепота
night ~ [n**ai**t] — куриная слепота
bliss [bl**i**s] — блаженство, счастье
block [blɔk] — блокировать
heart ~ [h**a:**t] — сердечный блок
blocker [blɔkə] — блокатор
bronchial ~ [brɔŋkjəl] — бронхоблокатор
blood [blʌd] — кровь
citrated ~ [sitr**ei**tid] — цитратная кровь
deoxygenated ~ [dez**ɔ**ksidʒən**ei**tid] — дезоксигенированная кровь
oxygenated ~ [ɔksidʒen**ei**tid] — оксигенированная кровь
venous ~ [v**i:**nəs] — венозная кровь
whole ~ [hɔ**u**l] — цельная кровь
blood-stream [blʌd-str**i:**m] — кровоток
blood-tinged [blʌd t**i**ndʒd] — окрашенный кровью
blotch [blɔtʃ] — пятно
blotchy [blɔtʃi] — пятнистый
blow [blɔ**u**] — надувать щеки
blow [blɔu] — удар
bluish [bl**u:**iʃ] — цианозный, синюшный
blunt |blʌnt] — тупой
blurring [blə**:**riŋ] — помутнение
back [bæk] — спина
board [bɔ**:**d] — руководство
body [bɔdi] — тело; организация, орган (управления)
ciliary ~ [s**i**liəri] — цилиарное тело, ресничное тело
foreign ~ [fɔrin] — инородное тело
geniculate ~ [dʒen**i**kjuleit] — коленчатое тело
pineal [p**i**niəl] — шишковидная железа
bodies [bɔdiz] — тела
quadrigeminal ~ [kwɔdridʒ**e**minəl] — четверохолмие
superior quadrigeminal ~ [sjup**i**əriə kwɔdridʒeminl] — верхние бугры четверохолмия
boil [bɔil] — нарыв, фурункул
boil [bɔ**i**l] — кипятить
boiling [b**oi**liŋ] — кипячение
bond [bɔnd] — связь
bone [bɔ**u**n] — кость
alveolar ~ [ælv**i**ələ] — альвеолярная кость
~ deafness [d**e**fnəs] — костная глухота
ethmoid ~ [**e**θmɔid] — решетчатая кость
hyoid ~ [h**ai**ɔid] — подъязычная кость
temporal ~ [t**e**mpərəl] — височная кость
turbinate ~ [tə**:**binət] — носовая раковина
bone-conduction [bɔun kəndʌkʃən] — костная проводимость
bony [bɔ**u**ni] — костный
book [bu:k] — записывать
booking [b**u:**kiŋ] — запись
boost [b**u:**st] — поддержка, стимул
border [bɔ**:**də] — граничить

borough [bʌrə] — городок
botanical [bətænikl] — ботанический
botulotoxin [bɔtjulətɔxin] — ботулотоксин
bound [b**au**nd] — окружать
boundary [b**au**ndəri] — пограничный
bout [b**au**t] — приступ
bowel [b**au**əl] — кишка, кишечник
brachial [br**ei**kiəl] — брахиальный
brain [br**ei**n] — головной мозг
branch [br**a:**ntʃ] — ветвь; отрасль
branched [br**a:**ntʃt] — ветвящийся
breach [br**i:**tʃ] — нарушение, разрыв
break (broke, broken) [br**ei**k, brəuk, brɔukən] — разрушать, разрывать
break (away) [br**ei**kəwei] — отделяться
break (down) [br**ei**kd**au**n] — расщеплять(ся), разрушаться
break (down) [breikdaun] — расщепление, распад
break (through) [br**ei**kθru:] — прорыв, достижение
breakthrough [br**ei**kθru:] — прорыв
breast [br**e**st] — грудь (женская), молочная железа
breastbone [br**e**stbɔun] — грудина
breath [br**e**θ] — дыхание
breathe [bri:ð] — дышать
breathing [br**i:**ðiŋ] — дыхание
  abdominal ~ [æbdɔminl] — диафрагмальное дыхание
  amphoric ~ [æmfɔrik] — амфорное дыхание
  bronchial ~ [brɔnkiəl] — бронхиальное дыхание
  cavernous ~ [kəvə**:**nəs] — кавернозное дыхание
  Cheyne — Stokes' ~ [tʃ**ei**n st**ɔu**ks] — дыхание Чейна — Стокса
  deep ~ [d**i:**p] — глубокое дыхание
  distressed ~ [distr**e**st] — нарушенное дыхание
  fast ~ [f**a:**st br**i:**ðiŋ] — частое дыхание
  intercostal ~ [**i**ntəkɔstəl] — грудное дыхание
  oral ~ [**ɔ:**rəl] — дыхание через рот
  rapid ~ [ræpid] — быстрое дыхание
  thoracic ~ [θɔ:ræsik] — грудное дыхание
breathlessness [br**e**θləsnis] — одышка
breed, bred, bred [br**i:**d] — размножаться
breeding [br**i:**diŋ] — размножение
bridge [br**i**dʒ] — мост
brief [br**i:**f] — короткий, недолгий
brim [br**i**m] — край
bring on (pain) [br**i**ŋɔn] — вызывать (боль)
brisk [br**i**sk] — резкий
broad [br**ɔ:**d] — широкий
broadly [br**ɔu**dli] — вообще говоря, широко
broken [br**ɔu**kn] — разбитый, сломанный, нарушенный (о здоровье, сне)
bronchiole [brɔnkiɔul] — бронхиола
  respiratory ~ [resp**i**rətəri] — респираторная бронхиола
  terminal ~ [tə**:**minl] — терминальная бронхиола
bronchitis [brɔŋk**ai**tis] — бронхит
  acute ~ [əkj**u:**t] — острый бронхит
  chronic ~ [krɔnik] — хронический бронхит
  secondary ~ [s**e**kəndəri] — вторичный бронхит
bronchoscope [brɔŋkəsk**ɔu**p] — бронхоскоп
bronchoscopy [brɔŋkɔskəpi] — бронхоскопия

bronchus, *pl.* **bronchi** [brɔnkəs, brɔnkai] — бронх
bruise [br**u:**z] — ушибать, контузить; кровоподтек, гематома
bruising [br**u:**siŋ] — посинение
buccal [bʌkl] — щечный
buckled [bʌkld] — соединенный
bud [bʌd] — почковаться, отпочковываться
budding [bʌdiŋ] — почкование
bud-like [bʌd-laik] — почкообразный
build (up) [b**i**ldʌp] — создавать, строить
built-in [b**i**ltin] — встроенный
bulb [bʌlb] — луковица
bulbar [bʌlbə] — бульбарный
bulk [bʌlk] — масса, большое количество, основная масса
bulky [bʌlki] — обильный
bundle [bʌndl] — пучок
bur [bə:] — бор
  cone ~ [k**ɔu**n] — конусообразный бор
  inverted cone ~ [invə:tidk**ɔu**n] — инвертированный конический бор
burden [bə:dn] — груз, нагрузка
burette [bjuər**e**t] — бюретка
burn [bə:n] — ожог
  brush ~ [brʌʃ] — ожог от трения, потертость
  chemical ~ [k**e**mikl] — химический ожог
  radiation ~ [r**ei**di**ei**ʃən] — лучевой ожог
  thermal ~ [θə:məl] — термический ожог
burner [bə:nə] — горелка
  Bunsen ~ [bʌnsən] — горелка Бунзена
bursa, *pl.* **bursae** [bə:sə, bə:si:] — сумка
business [b**i**znəs] — дело, работа
busy [b**i**zi] — занятый
buttock [bʌtək] — ягодица

C

cabinet [kæbinit] — кабинет
  filing ~[f**ai**liŋ] — картотека
  Sauerbruch's ~ [s**au**əbruks] — камера Зауэрбрука, камера с отрицательным давлением
caecal [s**i:**kl] — относящийся к слепой кишке
caecum [s**i:**kəm], *pl.* **caeca** [s**i:**kə] — слепая кишка
calcification [kælsifik**ei**ʃn] — кальцификация
calcify [kælsifai] — кальцифицировать, отвердевать
calcium [kælsiəm] — кальций
calculus, *pl.* **calculi** [kælkjuləs, kælkjulai] — камень
calf, *pl.* **calves** [k**a:**f, k**a:**vz] — икра (ноги)
call (for) — требовать
calm [k**a:**m] — спокойный
calorific [kælər**i**fik] — теплотворный, калорический
calorigenic [kælɔridʒenik] — теплотворный
camp [kæmp] — лагерь, сторона
  concentration ~ [k**ɔ**nsəntr**ei**ʃən] — концентрационный лагерь
campaign [kæmp**ei**n] — кампания
canal [kənæl] — канал
  alimentary ~ [ælim**e**ntəri] — пищеварительный канал
  semicircular ~ [semisə**:**kjulə] — полукружный канал
  Schlemm's ~ [ʃl**e**mz] — шлеммов канал
  spinal ~ [sp**ai**nəl] — спинномозговой канал
cancellous [kænsələs] — губчатый
cancer [kænsə] — рак
  abdominal ~ [əbdɔminəl] — рак желудка
  lung ~ [lʌŋ] — рак легких
  surface ~ [sə:fis] — поверхностный рак

cancer-like [kænsəl**ai**k] — ракообразный, ракоподобный
cancerous [kænsərəs] — раковый
cane [k**ei**n] — тростник
~ **-sugar** [ʃ**u**ga] — тростниковый сахар
canine [kænain] — клык
canthus, *pl.* **canthi** [kænθəs, kænθai] — угол глазной щели
inner ~ [**i**nə] — внутренний угол глазной щели
outer ~ [**au**tə] — внешний угол глазной щели
cap [kæp] — колпачок
capability [k**ei**pəb**i**lity] — способность
capable [k**ei**pəbl] — способный
capacity [kəpæsiti] — вместимость, емкость
vital ~ [v**ai**tl] — жизненная емкость
timed vital ~ [t**ai**mdvaitl] — временная жизненная емкость
capillary [kəp**i**ləri] — капилляр, капиллярный
capability [k**ei**pəb**i**lity] — способность
capping [kæpiŋ] — формирование коронки
capsular [kæpsjulə] — капсульный
capsule [kæpsju:l] — капсула
Bowman's ~ [b**ɔu**mənz] — капсула Боумана
Glisson's ~[gl**i**sənz] — капсула Глиссона
carbodioxide [k**a:**bɔud**ai**ɔksaid] — углекислый газ
carbohydrate [k**a:**bɔuh**ai**dreit] — карбогидрат
carbon [k**a:**bən] — углерод
carboxyl [k**a:**bəksil] — карбоксил
carcinogenic [k**a:**sinɔudʒ**e**nik] — канцерогенный
carcinoma [ka:sin**ɔu**mə] — карцинома
cardiac [k**a:**diək] — сердечный
cardiovascular [k**a:**diɔvæskjulə] — сердечно-сосудистый
care [k**e**ə] — уход, забота
follow-up ~ [fɔləuʌp] — внебольничное наблюдение
careful [k**e**əful] — тщательный
carefully [k**e**əfuli] — тщательно, аккуратно
caries [k**e**əri:z] — кариес
arrested dental ~ [ə**re**stid] — запломбированный кариес
dental ~ [d**e**ntl] — зубной кариес
carina tracheae [kər**i:**nə treik**i:**i:] — киль трахеи
care (for) [keə] — ухаживать
carpal [k**a:**pəl] — кость запястья
carrier [kæriə] — носитель
carry (out) [kæriaut] — проводить
cartilage [k**a:**tilidʒ] — хрящ
cricoid ~ [kr**ai**kɔid] — перстневидный хрящ
thyroid ~ [θ**ai**rɔid] — щитовидный хрящ
cartilaginous [k**a:**tilædʒinəs] — хрящевой
caruncle [kærənkl] — карункул
case [k**ei**s] — случай
trivial ~ [tr**i**viəl] — незначительный случай, банальный случай
case-history [h**i**stəri] — история болезни
case-taking — [k**ei**st**ei**kiŋ] — снятие анамнеза
cast [k**a:**st] — отложение
cellular ~ [s**e**ljulə] — клеточное отложение
granular ~ [grænjulə] — гранулярное отложение
hyaline ~ [h**ai**əlain] — гиалиновое отложение
casts [k**a:**sts] — цилиндры (в моче)
catabolic [kætəb**ɔ**lik] — катаболический
catabolism [kətæbəlizm] — катаболизм
catalyst [kætəlist] — катализатор

catalyze [kætəlaiz] — катализировать
cataract [kætərækt] — катаракта
congenital ~ [kəndʒenitəl] — врожденная катаракта
coronary ~ [kərənəri] — коронарная катаракта
diabetic ~ [daiəbetik] — диабетическая катаракта
senile ~ [si:nail] — старческая катаракта
catarrh [kəta:] — катар
catarrhal [kəta:rəl] — катаральный
catatonia [kætətəuniə] — кататония
catatonic [kætətənik] — кататонический
category [kætəgəri] — категория
catgut [kætgʌt] — кетгут
catheter [kæθitə] — катетер
catheterise [kæθitəraiz] — катетеризировать
catheterization [kæθitəraizeiʃn] — катетеризация
causative [kɔ:zətiv] — причинный
cause [kɔ:z] — причина
original ~ [əridʒinəl] — первопричина
caustic [kɔ:stik] — каустик
cavernous [kævənəs] — кавернозный
cavity [kæviti] — полость
abdominal ~ [əbdɔminəl] — брюшная полость
nasal ~ [neizəl] — носовая полость
oral ~ [ɔ:rəl] — ротовая полость
pleural ~ [plurəl] — плевральная полость
pulp ~ [pʌlp] — пульповая полость
thoracic ~ [θəræsik] — грудная полость
uterine [ju:tərain] — полость матки
cavus [keivəs] — полый
celebrate [seləbreit] — отмечать, праздновать
cease [si:z] — прекращаться
cell [sel] — клетка
amoeboid ~ [əmibɔid] — амебовидная клетка
columnar ~ [kəlʌmnə] — цилиндрическая клетка
daughter ~ [dɔ:tə] — дочерняя клетка
epithelial ~ [epiθi:liəl] — эпителиальная клетка
germ ~ [dʒə:m] — зародышевая клетка
keratin-producing ~ [kerətinprədju:siŋ] — клетка, продуцирующая кератин
mechanical ~ [mikænikl] — механическая клетка
melanin-producing ~ [melənin-prədju:siŋ] — клетка, продуцирующая меланин
motor nerve ~ [məutə nə:v] — моторная нервная клетка
nerve ~ [nə:v] — нервная клетка
nucleated ~ [nju:klieitid] — клетка, содержащая ядро
prickle ~ [prikl] — шиповидная клетка, шиповидный дендрацит
primitive ~ [primitiv] — примитивная клетка
stem ~ [stem] — стволовая клетка
cellulitis [seljulaitis] — целлюлит
orbital ~ [ɔ:bitl] — целлюлит глазной впадины
cellulose [seljulɔus] — целлюлоза
cementum[simentəm] — цемент (зуба)
centaury [sentɔ:ri] — золототысячник
center [sentə] — центр
blood transfusion ~ [blʌd trænsfjuʒən] — станция переливания крови
cardiac ~ [ka:diæk] — сердечный центр

nerve ~ [nə:v] — нервный центр
respitatory ~ [rispaiətəri] — дыхательный центр
welfare ~ [welfeə] — оздоровительный центр
infant welfare ~ [infəntwelfeə] — центр детского здоровья
centrifuge [sentrifju:dʒ] — центрифуга
cerebellar [seribelə] — мозжечковый
cerebellum [seribeləm] — мозжечок
cerebral [serəbrəl] — церебральный, мозговой, черепно-мозговой, относящийся к головному мозгу
cerebroside [seribrəsaid] — цереброзид
cerebrospinal [sirebrəuspainəl] — цереброспинальный, спинномозговой
cerebrum, *pl.* **cerebra** [seribrəm, seribrə] — головной мозг
certain [sə:tən] — определенный, некоторый
cervical [sə:vaikl] — цервикальный, шейный, относящийся к шее, шейке
cervicitis [sə:visaitis] — цервицит
cervix, *pl.* **cervices, cervixes** [sə:viks], [sə:visi:z], [sə:viksiz] — шейка, шея
cessation [seseiʃn] — прекращение
chain [tʃein] — цепь, цепочка
chamber [tʃeimbə] — камера
anterior ~ [æntiəriə] — передняя камера
ionization ~ [ainəizeiʃən] — ионизационная камера
negative pressure ~ [negətivpreʃə] — камера с отрицательным давлением
posterior~ [pɔstiəriə] — задняя камера
chance [tʃa:ns] — шанс
change [tʃeindʒ] — изменение
pathological ~ [pʌθələdʒikl] — патологическое измененние
change [tʃeindʒ] — изменять
channel [tʃænəl] — канал
characteristic [kærəktəristik] — характерный
characteristically [kærəktəristikli] — обычно, характерным образом
characteristics [kærəktəristiks] — характеристика, особенность
female secondary ~ [fi:meilsekəndəri] — женские вторичные половые признаки
male secondary ~ [meilsekəndəri] — мужские вторичные половые признаки
charge [tʃa:dʒ] — заряд
charge [tʃa:dʒ] — заряжать
charge [tʃa:dʒ] — платить
charter [tʃa:tə] — хартия
cheap [tʃi:p] — дешевый
cheek [tʃi:k] — щека
chemical [kemikl] — химический
caustic ~ [kɔ:stik] — едкое химическое вещество
chemist [kemist] — химик
chemistry [kemistri] — химия
inorganic ~ [inɔ:gænik] — неорганическая химия
organic ~ [ɔ:gænik] — органическая химия
chemoterapeutical [kemɔuθerəpju:tikl] — химиотерапевтический
chemotherapy [kemɔuθerəpi] — химиотерапия
chest [tʃest] — грудь, грудная клетка
~ -lead [li:d] — грудной отвод
chiasma [kaiæzmə] — хиазма
optic ~ [ɔptik] — перекрест зрительных нервов
chickenpox [tʃikinpɔks] — ветряная оспа
chief [tʃi:f] — основной, главный
childbirth [tʃaildbə:θ] — роды

childhood [tʃ**ai**ldhud] — детство, детский возраст
chimney [tʃ**i**mni] — дымовая труба
chin [tʃ**i**n] — подбородок
chiropodist [kir**ɔ**pədist] — мозольный оператор, педикюрша
chisel [tʃ**i**zl] — резец, стоматологический экскаватор
~ **scaler** [sk**ei**lə] — крючок
~ **spoon** [sp**u:**n] — резцовая ложка
chloramine [kl**ɔ:**rəmi:n] — хлорамин
chloride [kl**ɔ:**r**ai**d] — хлорид
chlorine [kl**ɔ:**ri:n] — хлор
chloroform [kl**ɔ:**rəfɔ:m] — хлороформ
chloroplast [kl**ɔ:**rəpla:st] — хлоропласт
chlorpromazine [klɔ:pr**ɔu**mæzi:n] — хлорпромазин
choke [tʃ**ɔu**k] — задыхаться, давиться
cholecystectomy [k**ɔu**lisist**e**ktəmi] — холецистэктомия
cholecystitis [k**ɔu**li:sist**ai**tis] — холецистит
cholecystogram [k**ɔu**li:s**i**stəgræm] — холецистограмма
cholelithiasis [k**ɔu**lili:θ**ai**əisis] — холелитиаз
cholelithotomy [k**ɔu**liliθ**ɔ**təmi] — холелитотомия
cholera [k**ɔ**lərə] — холера
cholesterol [kəl**e**stərɔl] — холестерин
cholinergic [k**ɔ**lin**ɔ:**dʒik] — холинергический
chondroma [kɔndr**ɔu**mə] — хондрома
chondrosarcoma [kɔndrəusa:k**ɔu**mə] — хондросаркома
choose [tʃ**u:**z] — выбирать
chorea [kər**i**ə] — хорея
Huntington's ~ [hʌntiŋtənz] — хорея Гантингтона
minor ~ [m**ai**nə] — малая хорея
Sydenham's ~ [s**i**dnæmz] — инфекционная хорея, хорея Сиденхэма, малая хорея
choroid [k**ɔ**rɔid] — сосудистая оболочка глаза
chromatid [kr**ɔu**mətid] — хроматид
chromosome [kr**ɔu**məs**ɔu**m] — хромосома
chronic [kr**ɔ**nik] — хронический
chronicity [krɔn**i**sity] — постоянство, хроничность
cilia [s**i**liə] (*pl.*) — реснички
ciliary [s**i**liəri] — ресничный, мерцательный
circulation [s**ɔ:**kjul**ei**ʃən] — кровообращение, циркуляция
cerebral ~ [s**e**ribrəl] — мозговой круг кровообращения
less ~ [l**e**s] — легочный круг кровообращения, малый круг кровообращения
lesser ~ [l**e**sə] — малый круг кровообращения
lung ~ [lʌŋ] — легочный круг кровообращения, малый круг кровообращения
pulmonary ~ [pʌlmənəri] — легочный круг кровообращения, малый круг кровообращения
systemic ~ [sist**e**mik] — системная циркуляция, большой круг кровообращения
circulatory [s**ɔ:**kjul**ei**təri] — циркуляторный
cirrhosis [sər**ɔu**sis] — цирроз
hepatic ~ [hipætik] — цирроз печени
civilization [s**i**vəlaiz**ei**ʃən] — цивилизация
clavicle [klævikl] — ключица
clavicular [kləv**i**kjulə] — ключичный
clay [kl**ei**] — глина
clean [kl**i:**n] — чистый

cleaning [kl**i:**niŋ] — очистка, уборка
cleanse [kl**e**nz] — проводить санацию, чистить, очищать
clear [kl**i**ə] — чистить
cleft [kl**e**ft] — щель, расщелина
  synaptic ~ [sin**æ**ptik] — синаптическая трещина
clench [kl**e**ntʃ] — стискивать (зубы)
climacteric [klaimækt**e**rik] — климактерический
climatic [klaim**æ**tik] — климатический
clinik [kl**i**nik] — клиника
  antenatal ~ [æntin**ei**tl] — женская консультация
clinical [kl**i**nikl] — клинический
clinician [klini**i**ʃn] — клиницист
clip [kl**i**p] — зажим
  spring ~ [spr**i**ŋ] — пружинный зажим
clitoris [kl**i**təris] — клитор
clock [kl**ɔ**k] — часы
  genetic ~ [dʒin**e**tik] — генетические часы
clonic [klɔnik] — клонический
clonus [kl**əu**nəs] — клонус, мышечное сокращение
close [kl**əu**z] — тесный, близкий
Clostridium tetani [klɔstr**i**diəm t**e**tənai] — столбнячная палочка
closure [kl**əu**ʒə] — закрытие
clot [clɔt] — сгусток
clot [klɔt] — свертываться, сворачиваться
clotting [klɔtiŋ] — свертывание
cloud [kl**au**d] — тень, пятно; потемнение
faint [f**ei**nt] — слабое потемнение
  fair ~ [f**eə**] — легкое потемнение
  heavy ~ [h**e**vi] — сильное потемнение
clouding [kl**au**diŋ] — помутнение
club [klʌb] — утолщать
clubbed [klʌbd] — утолщенный
  ~ fingers [klʌbdf**i**ŋgəz] — утолщение концевых фаланг, «барабанные палочки»
clubbing of the fingers [klʌbiŋ] — паралич пальцев
club-foot [klʌb-f**u**t] — косолапость
clue [kl**u:**] — ключ
clump [klʌmp] — собираться, группироваться
coagulation [kɔuægjul**ei**ʃn] — коагуляция, свертывание
coal [k**əu**l] — уголь
coalesce [kɔuəl**e**s] — объединяться, срастаться, сливаться
coalescence [kɔuəl**e**səns] — сращивание, срастание
coarse [k**ɔ:**s] — грубый
coat [k**əu**t] — покрывать
coating [k**əu**tiŋ] — покрытие, оболочка
cocaine [kɔuk**ei**n] — кокаин
cochlea [k**ɔ**kliə] — улитка
code [k**əu**d] — код
co-enzyme [kɔu**e**nzaim] — коэнзим, кофермент
coin [k**ɔi**n] — придумывать
coincide [k**əu**ins**ai**d] — совпадать
cold [kəuld] — простуда
  common ~ [k**ɔ**mən] — простуда
colectomy [kəl**e**ktəmi] — колэктомия
colic [kɔlik] — колика
colitis [kɔl**ai**tis] — колит
  ulcerative ~ [ʌlsərətiv] — язвенный колит
collagen [kɔlədʒən] — коллаген
collapse [kəlæps] — коллапс; разрушение
collapsible [kəlæpsibl] — мягкий, гибкий (туба), сминающийся
collar-bone [kɔləb**əu**n] — ключица
collateral [kɔlætərəl] — коллатеральный
collection [kəl**e**kʃn] — скопление

collective [kəl**e**ktiv] — коллективный
colloidal [kɔləidl] — коллоидный
colon [k**ɔu**lən] — ободочная кишка
  ascending ~ [əs**e**ndiŋ] — восходящая часть ободочной кишки
  descending ~ [dis**e**ndiŋ] — нисходящая часть ободочной кишки
  pelvic ~ [p**e**lvik] — тазовая часть ободочной кишки
  sigmoid ~ [s**i**gmɔid] — сигмовидная часть ободочной кишки
  transverse ~ [trænsvə:s] — поперечная часть ободочной кишки
colostomy [kəl**ɔ**stəmi] — колостомия
colostrums [kəl**ɔ**strəm] — молозиво
colour [kʌlə] — цвет
colouration [kʌlər**ei**ʃən] — окрашивание, окраска
column [k**ɔ**ləm] — позвоночный столб; столб, колонка
  spinal ~ [sp**ai**nl] — позвоночник, позвоночный столб
  vertebral ~ [və**:**tibrəl] — позвоночник, позвоночный столб
coma [k**ɔu**mə] — кома
comatose [k**ɔu**mətɔuz] — коматозный
combat [k**ɔ:**mbæt] — бороться
combination [kɔmbin**ei**ʃən] — комбинация, сочетание
combine [kəmb**ai**n] — объединять, соединять
combined [kəb**ai**nd] — объединенный, сочетанный
combustible [kəmbʌst**i**bl] — горючий
combustion [kəmbʌstʃən] — сжигание
comedo, *pl.* **comedones** [k**ɔ**mədɔu, k**ɔ**mədɔunz] — комедон
comfort [kʌmfət] — комфорт
commence [kəm**e**ns] — начинать, начинаться
commercial [kəmə**:**ʃəl] — коммерческий
comminuted [k**ɔ**minju:tid] — раздробленный
commission [kəm**i**ʃən] — комиссия
common [k**ɔ**mən] — распространенный, частый, общий
  ~ cold [k**ɔu**ld] — простуда
commonly [k**ɔ**mənli] — обычно
commonplace [k**ɔ**mənpleis] — общее место
communicable [kəmj**u:**nikəbl] — заразный
  ~ disease [diz**i:**z] — заразное заболевание
communicate [kəmj**u**nikeit] — сообщаться, соприкасаться
community [kəmj**u:**nəti] — общество
compatibility [kəpætəb**i**liti] — совместимость
compatible [kəmp**æ**tibl] — совместимый
compensatory [kəmp**e**nsətəri] — компенсаторный
compilation [kəmpil**ei**ʃən] — компиляция
complain [kəmpl**ei**n] — жаловаться
complaint [kəmpl**ei**nt] — жалоба
  chief ~ [tʃ**i:**f] — основная жалоба
complement [k**ɔ**mpliment] — комплект, набор, комплемент
complete [kəmpl**i:**t] — завершать
complete [kəmpl**i:**t] — полный
completely [kəmpl**i:**tli] — полностью
complex [k**ɔ**mpleks] — комплекс
complex [k**ɔ**mpleks] — сложный
spike-wave [sp**ai**k w**ei**v] — комплекс пиковых волн
complicate [k**ɔ**mplikeit] — сложный
complication [k**ɔ**mpl**ikei**ʃən] — осложнение
component [kəmp**ɔu**nənt] — компонент, составная часть
compose [kəmp**ɔu**z] — составлять

composition [kɔmpəz**i**ʃən] — состав
compound [kɔmpaund] — (химическое) соединение, смесь
comprehensive [kɔmprih**e**nsiv] — всеобъемлющий, всеохватывающий
compress [kɔmpr**e**s] — сжимать
compression [kəmpr**e**ʃən] — сжатие
compulsive [kəmpʌlsiv] — навязчивый
compulsory [kəmpʌlsəri] — обязательный
computer [kəmpj**u:**tə] — компьютер
computerize [kəmpj**u:**təraiz] — компьютеризировать
concave [kɔŋk**ei**v] — вогнутый
concede [kəns**i:**d] — уступать
conceivable [kəns**i:**vəbl] — понятный
conceive [kəns**i:**v] — зачать
concentration [kɔnsəntr**ei**ʃn] — концентрация
conception [kəns**e**pʃən] — зачатие
conceptualization [kəns**e**ptjuəlaiz**ei**ʃn] — концептуализация
concern [kənsə**:**n] — дело, забота, беспокойство
concern [kənsə**:**n] — касаться, относиться, иметь дело, иметь отношение
concession [kəns**e**ʃn] — соглашение
concha, *pl.* **conchae** [kɔnkə, kɔnki:] — ушная раковина
  inferior ~ [inf**i**əriə] — нижняя раковина
  middle ~ [m**i**dl] — средняя раковина
  superior ~ [sj**u**piəriə] — верхняя раковина
condense [kənd**e**ns] — конденсировать; уплотняться
condenser [kənd**e**nsə] — конденсатор
condition [kəndi**ʃ**ən] — состояние
conducive (to) [kəndj**u:**siv] — ведущий (к чему-либо), приводящий (к)
conduct [kɔndʌkt] — проведение
conduct [kəndʌkt] — проводить
conduction [kəndʌkʃn] — проводимость
conductive [kəndʌktiv] — проводящий
cone [k**əu**n] — конический; конус
cones [k**əu**nz] — колбочки (чувствительные элементы глаза)
confer [kənf**ə:**] — давать, передавать; жаловать, даровать
conference [kɔnfərəns] — конференция
confine [kənf**ai**n] — ограничивать, ограничиваться
confinement [kənf**ai**nmənt] — роды
confirm [kənf**ə:**m] — подтверждать
confused [kənfj**u**zd] — спутанный
congelation [kɔndʒil**ei**ʃn] — обморожение
congenital [kəndʒ**e**nitəl] — врожденный
congest [kəndʒ**e**st] — переполнять
congestion [kəndʒ**e**stʃən] — гиперемия, прилив крови; переполнение, застой
congestive heart [kəndʒ**e**stiv] — застойная недостаточность сердца
conjunctiva [kɔndʒʌnkt**ai**və] — конъюнктива
conjunctivitis [kɔndʒʌnktiv**ai**tis] — конъюнктивит
  acute catarrhal ~ [əkj**u:**t kət**a:**rəl] — острый катаральный конъюнктивит
  angular ~ [æŋgjulə] — угловой конъюнктивит
  chronic ~ [krɔnik] — хронический конъюнктивит
  vernal ~ [və**:**nl] — весенний конъюнктивит
  viral ~ [v**ai**ərəl] — вирусный конъюнктивит
connotation [kɔnəut**ei**ʃn] — подтекст, скрытый смысл
conquer [kɔŋkə] — побеждать
conquest [kɔŋkwest] — победа

conscious [kɔnʃəs] — сознательный, находящийся в сознании
consciousness [kɔnʃəsnis] — сознание
consequently [kɔnsikwəntli] — соответственно
considerable [kənsidərəbl] — значительный
consideration [kənsidərеiʃən] — рассмотрение
consist (of) [kənsist] — состоять (из)
consistency [kənsistənsi] — консистенция
consolidate [kənsɔlideit] — укреплять
consolidation [kənsɔlideiʃn] — консолидация, уплотнение
consonant [kɔnsənənt] — согласный звук
conspicuous [kənspikjuəs] — видный, заметный
constant [kɔ:nstənt] — постоянный
constipation [kɔnstipeiʃn] — запор
constituent [kənstitjuənt] — компонент, составная часть, составляющий
constitute [kɔnstitju:t] — создавать, составлять
constitution [kɔnstitju:ʃən] — конституция, строение
  inherited ~ — [inherited] — наследственная конституция
constrain [kənstrein] — сдерживать
constrict [kənstrikt] — сужать
constricted [kənstriktid] — сжатый, суженный, связанный
constriction [kənstrikʃn] — сжатие, сокращение
construction [kənstrʌkʃən] — создание, сооружение
consultant [kənsʌltənt] — консультант
consultation [kɔnsəlteiʃən] — консультация, обсуждение
consume [kəsju:m] — поглощать
consumption [kənsʌmpʃən] — потребление
  galloping ~ [gæləpiŋ] — галопирующее поглощение
contact [kɔntækt] — контакт
  direct ~ [direct] — прямой контакт
  indirect ~ [indirekt] — опосредованный контакт
contagious [kənteidʒəs] — заразный
contain [kəntein] — содержать
container [kənteinə] — контейнер, вместилище
contaminant [kəntæminənt] — загрязнитель
contaminate [kəntæmineit] — загрязнять
contaminated [kəntæmineitid] — загрязненный
contamination [kəntæmineiʃən] — контаминация, загрязнение, заражение
contemporary [kəntempərəri] — современный
content [kɔntent] — содержимое, суть
contents [kɔntents] — содержание (оглавление)
  neurological ~ [njurələdʒikəl] — неврологическое содержимое
continue [kəntinju:] — продолжать
continued [kəntinju:d] — длительный
continuous [kəntinjuəs] — непрерывный, непрекращающийся, длительный, продолжительный
contraception [kɔntrəsepʃən] — контрацепция, предупреждение беременности
contract [kəntrækt] — приобретать; сокращаться
contractile [kəntrætail] — сократительный
contractility [kɔntrəktiliti] — сократимость, сокращаемость

contraction [kəntrækʃn] — сокращение
contribuntion [kəntribj**u:**ʃn] — вклад
contribute [kəntr**i**bju:t] — вносить вклад, способствовать
control [kəntr**əu**l] — контроль
control [kəntr**əu**l] — контролировать
contuse [kəntj**u:**z] — ушибать
contused [kəntj**u:**zd] — контуженный
contusion [kənj**u**ʒən] — контузия
convenience [kənv**i:**niəns] — удобство
convenient [kənv**i:**niənt] — удобный, подходящий
conveniently [kənv**i:**niəntli] — удобно
converge [kənv**ə:**dʒ] — сходиться
convergence [kənv**ə:**dʒəns] — схождение
conversely [kɔnvə:sli] — наоборот
convert [kɔnvə:t] — преобразовывать, превращать
convex [kɔnv**e**ks] — выпуклый, круглый
convey [kənv**ei**] — передавать
convoluted [kɔnvəljutid] — искривленный, изогнутый, извилистый
convolution [kɔnvəl**u:**ʃn] — искривление, скручивание
convulsion [kənvʌlʃən] — конвульсия, судорога
  epileptiform ~ [**e**pileptif**ɔ:**m] — эпилептиформная судорога
  generalized ~ [dʒ**e**nərəl**ai**zd] — генерализованная судорога
  localized ~ [l**əu**kəl**ai**zd] — локализованная судорога
cool [k**u:**l] — прохладный
co-operation [kɔuɔpər**ei**ʃən] — сотрудничество
co-ordinate [kɔu**ɔ:**dineit] — координировать, согласовывать
coordination [kɔu**ɔ:**din**ei**ʃn] — координация
cope (with) [k**əu**p] — бороться, справляться
copious [k**əu**piəs] — обильный
copy [k**ɔ**pi] — копировать
copy [k**ɔ**pi] — копия
cord [k**ɔ:**d] — канатик, тяж, связка
  spinal ~ [sp**ai**nəl] — спинной мозг
  umbilical ~ [ʌmb**i**likl] — пуповина
  vocal ~s [v**əu**kl] — голосовые связки
core [k**ɔ:**] — ядро
coreiform [k**ɔ**r**i:**if**ɔ:**m] — хореиформный
coriander [k**ɔ**riændə] — кориандр
corium [k**ɔ**riəm] — кориум
cork [k**ɔ:**k] — пробка
cornea [k**ɔ:**niə] — роговица
coronal [k**ɔ**rənl] — коронковый
corpus [k**ɔ:**pəs] — тело
  ~ callosum [kəl**ə**səm] — мозолистое тело
  ~ luteum [lj**u:**tiəm] — желтое тело
corpuscle [k**ɔ:**pʌsl] — корпускула
corpuscular [kɔ:pʌskjulə] — корпускулярный
correction [kər**e**kʃn] — исправление
correctly [kər**e**ktli] — точно, непосредственно
corresponding [k**ɔ**rispɔdiŋli] — соответствующий
correspondingly [k**ɔ**rispɔndiŋli] — соответственно
cortex, *pl.* **cortices** [k**ɔ:**teks, k**ɔ:**tisi:z] — кора
  adrenal ~ [ədr**i:**nl] — кора надпочечника
  cerebral ~ [s**e**ribrəl] — кора головного мозга
  occipital ~ [ɔksipitəl] — зрительная зона коры (головного мозга)
cortical [k**ɔ:**tikl] — корковый
corticosteroid [k**ɔ:**tikɔust**i**ərɔid] — кортикостероид
cortisol [k**ɔ:**tizɔl] — кортизол

cosmetics [kɔzm**e**tiks] — косметические средства
cost [kɔst] — стоимость
cotton [kɔtən] — вата
~ **wool** [kɔtnw**u**l] — вата
cough [kɔf] — кашлять
cough (away) — откашливать
cough [kɔf] — кашель
dry ~ [dr**ai**] — сухой кашель
loose ~ [l**u:**s] — свободный кашель
productive ~ [prədʌktiv] — кашель с мокротой, влажный кашель
regular ~ [r**e**gjulə] — постоянный кашель
uncomfortable ~ [ʌnkʌmfətəbl] — беспокоящий кашель
unproductive ~ [ʌnprədʌctiv] — непродуктивный кашель, кашель без мокроты, сухой кашель
whooping ~ [h**u:**piŋ] — коклюш
council [k**au**nsl] — совет
counseling [k**au**nsəliŋ] — консультирование, консультация
genetic ~ [dʒin**e**tik] — медико-генетическое консультирование
count [k**au**nt] — полагать, считать
count [k**au**nt] — подсчет
Addis ~ [ædis] — число Аддиса
blood ~ [blʌd] — анализ крови
differential blood ~ [difer**e**nʃl blʌd] — клинический анализ крови
simple blood ~ [s**i**mpl blʌd] — общий анализ крови
counter [k**au**ntə] — счетчик
Geiger ~ [g**ai**gə] — счетчик Гейгера
scintillation ~ [s**i**ntil**ei**ʃn] — сцинтилляционный счетчик
counterstain [k**au**ntəst**ei**n] — контрастное окрашивание
country [kʌntri] — страна
advanced industrialized ~ [ədv**a:**nst indʌstriəlaizd] — промышленно развитая страна
county [k**au**nti] — графство
~**borough** [bʌrə] — город свыше 50 тыс. чел., выделенный в самостоятельную административную единицу
couple [kʌpl] — пара
course [k**ɔ:**z] — ход, течение
booster ~ [b**u:**stə] — лицензионный курс, специальный курс
cover [kʌvə] — закрывать, покрывать, охватывать, включать
~**slip** [sl**i**p] — покровное стекло
cowpox [k**au**pɔks] — коровья оспа
coxa, *pl.* **coxae** [kɔksə, k**ɔ**ksi:] — бедро, таз
cracked [krækt] — растрескавшийся
cramp [kræmp] — спазм, судорога
cranial [kr**ei**niəl] — черепной
craniotomy [kr**ei**ni**ɔ**təmi] — краниотомия
cranium, *pl.* **crania** [kr**ei**niəm, kr**ei**niə] — череп
crave [kr**ei**v] — страстно желать, умолять, просить
craving [kr**ei**viŋ] — тяга
cream [kr**i:**m] — крем, мазь
crepitation [kr**e**pit**ei**ʃn] — крепитация, хрипы (в легких)
crest [kr**e**st] — гребень, гребешок
neural ~ [nj**u**ərəl] — нервный валик, ганглионарная пластинка
cretin [kr**e**tin] — кретин
cretinism [kr**e**tinizm] — кретинизм
criminal [kr**i**minl] — преступник
habitual ~ [hʌb**i**tjuəl] — закоренелый преступник
cripple [kr**i**pl] — калечить, лишать трудоспособности
critical [kr**i**tikl] — критический, решающий
croak [kr**ɔu**k] — хрипение
epileptic ~ [epil**e**ptik] — эпилептическое хрипение
crop (up) [krɔpʌp] — возникать

cross [krɔs] — перекрещивать(ся), пересекать(ся)
cross-match [krɔsmætʃ] — проверять кровь на совместимость, соответствие
cross-wire [krɔswaiə] — переплетать
crown [kr**a**un] — коронка
  anatomical ~ [ænətɔmikl] — анатомическая коронка
  clinical ~ [kl**i**nikl] — клиническая коронка
  jacket ~ [dʒækit] — жакетная коронка зуба
  post ~ [pɔ**u**st] — коронка Ричмонда, штифтовой зуб с наружным кольцом
  veneer ~ [vəni**ə**] — защитная коронка зуба
crucible [kr**u:**sibl] — тигель
crush [krʌʃ] — дробить, раздрабливать
crust [krʌst] — корка
cry [kr**a**i] — крик
  epileptic ~ [epil**e**ptik] — эпилептический крик
crystal [kr**i**stl] — кристалл
crystalline [kr**i**stəlain] — кристаллический
cube [kj**u:**b] — кубик
cubic [kj**u:**bik] — кубический
  ~ millimetre, mm³ [milim**i:**tə] — кубический миллиметр
cubital [kj**u:**bitl] — локтевой
cubitus [kj**u:**bitəs] — локоть
culminate [kʌlmineit] — завершаться, достигать кульминации
cumulative [kj**u**mjələtiv] — кумулятивный, совокупный
curable [kj**u**ərəbl] — излечимый
curdle [kə**:**dl] — свертываться
curdy [kə**:**di] — свернувшийся
curettage [kjur**e**tidʒ] — выскабливание
curette [kjuər**e**t] — кюретка
curious [kj**u**əriəs] — любознательный, странный, любопытный
current [kʌrənt] — ток
  electric ~ [il**e**ktrik] — электрический ток
curse [kə**:**s] — проклятие
curvature [kə**:**vətʃə] — кривизна
  greater ~ [gr**ei**tə] — большая кривизна
  lateral ~ [lætərəl] — боковая кривизна
  lesser ~ [l**e**sə] — малая кривизна
curve [kə**:**v] — изгибаться
curve [kə**:**v] — изгиб
  lateral ~ [lætərəl] — боковой изгиб
cusp [kʌsp] — кончик зуба
cuspid [kʌspid] — клык
cut (off) — прерывать, отрезать
cutaneous [kju:t**ei**niəs] — кожный
cutis [kj**u:**tis] — кожа
  ~ vera [v**i**ərə] — дерма
cutter [kʌtə] — режущий инструмент
  stitch ~ [st**i**tʃ] — инструмент для снятия швов
cyanosis [saiən**ɔu**sis] — цианоз
cyanotic [saiənɔtik] — цианотичный
cystitis [sist**ai**tis] — цистит
  acute ~ [əkj**u:**t] — острый цистит
  chronic ~ [krɔnik] — хронический цистит
  primary ~ [pr**ai**məri] — первичный цистит
  secondary ~ [s**e**kəndəri] — вторичный цистит
cylinder [s**i**lində] — цилиндр
  measuring ~ [m**e**ʒəriŋ] — мерный цилиндр
cylindrical [sil**i**ndrikl] — цилиндрический
cyst [s**i**st] — киста
  dermoid ~ [də:m**ɔi**d] — дермоидная киста
  marginal ~ [m**a:**dʒinəl] — маргинальная киста

cystadenoma [s**i**stædin**əu**mə] — цистаденома
papillomatous ~ [pæpil**əu**mətəs] — папилломатозная цистаденома
cystic [s**i**stik] — кистозный, пузырьковый
~ naevus [ni:vəs] — кистозный невус
cystoscope [s**ai**təsk**əu**p] — цистоскоп
cystoscopy [sistəskəpi] — цистоскопия
cytologist [saitələdʒist] — цитолог
cytology [saitələdʒi] — цитология
cytoplasm [s**ai**təplæzm] — цитоплазма
cytosine [s**ai**təusi:n] — цитозин
cytotoxic [saitətəksik] — цитотоксический

D

dacryoadenitis [dækri**əu**ædin**ai**tis] — дакриоаденит
daily [d**ei**li] — ежедневно
damage [dæmidʒ] — повреждать; повреждение, нарушение
damp [dæmp] — влажный
danger [d**ei**ndʒə] — опасность, риск
imminent ~ [**i**minənt] — нависшая опасность
date (back to) — уходить корнями (к), относиться (к)
day[d**ei**] — день
~ nursery — дневные ясли
deaf [d**e**f] — глухой
~ -mute [mj**u:**t] — глухонемой
~ -muteness [mj**u**tnəs] — глухонемота
deafness [d**e**fnəs] — глухота
congenital ~ [kəndʒ**e**nitl] — врожденная глухота
nerve ~ [nə**:**v] — нервная глухота
deal [d**i:**l] **(with), delt, dealt** [delt] — иметь дело (с)
death [d**e**θ] — смерть
sudden ~ [sʌdn] — внезапная смерть
debilitate [dib**i**liteit] — ослаблять
debilitating [dib**i**liteitiŋ] — ослабляющий, подрывающий силы
debilitation [dibilit**ei**ʃn] — ослабление, истощение
debridement [dibr**i:**dmənt, dibr**i:**dmint] — хирургическая обработка раны, санация полости раны
debris [d**e**bri, d**ei**bri] — осколки, обломки
decade [d**e**keid] — декада, десятилетие
decay [dik**ei**] — гниение
dental ~ [d**e**ntl] — гниение зубов
decide [dis**ai**d] — решать
decision [dis**i:**ʒən] — решение
decomposition [d**i:**kɔmpəz**i**ʃən] — разложение, гниение
decortication [d**i**kɔ:tik**ei**ʃn] — декортикация, лущение
decrease [dikr**i:**s] — снижать, уменьшать
decreased [dikr**i:**zd] — пониженный
~ force [fɔ**:**s] — пониженная сила
deep [d**i:**p] — глубокий
defect [d**i**fekt] — дефект, недостаток, порок
biochemical ~ [b**ai**ɔuk**e**mikəl] — биохимическое нарушение
congenital ~ [kəndʒ**e**nitl] — врожденное нарушение, врожденный порок
congenital heart ~ [kəndʒ**e**nitəl h**a:**t] — врожденный порок сердца
cosmetic ~ [kɔzm**e**tik] — косметический дефект
hereditary ~ [hir**e**ditəri] — наследственный дефект
defective [dif**e**ctiv**]** — нарушенный, поврежденный
defervescence [d**i:**fəv**e**səns] — падение, понижение температуры

deficiency [difiʃənsi] — дефицит, недостаток, недостаточность
mental ~ [mentl] — умственная отсталость
deficient [difiʃənt] — недостающий, недостаточный
deficient (in) [difiʃnt] — лишенный (чего-либо)
define [difain] — определять
definitely [definətli] — несомненно
definition [definiʃən] — определение
deflect [diflekt] — отклоняться
deformity [difɔ:məti] — дефект, нарушение, деформация
degenerate [didʒenərit] — вырождаться
degeneration [didʒenəreiʃən] — дегенерация, вырождение
myocardial ~ [maiɔuka:diəl] — дегенерация миокарда
degenerative [didʒenərətiv] — дегенеративный
degrade [digreid] — разрушать
degree [digri:] — степень
dehiscence [dihisns] — расхождение краев раны, расхождение (швов)
dehydrate [di:haidreit] — дегидрировать, обезвоживать
dehydration [di:haidreiʃn] — обезвоживание
dehydrogenase [dihaidrɔdʒəneiz] — дегидрогеназа
delay [dilei] — задержка
undue ~ [ʌndju:] — неоправданная задержка
delay [dilei] — замедлять, задерживать
delivery [dilivəri] — роды
delude [dilu:d] — галлюцинировать
delusion [dilu:ʒn] — галлюцинация
demarcate [di:ma:keit] — отличать, разграничивать
demented [dimentid] — сумасшедший
dementia [dimenʃə] — слабоумие
praecox ~ [pri:kɔks] — раннее слабоумие
senile ~ [si:nail] — старческое слабоумие
demonstration [demənstreiʃən] — показ, демонстрация
dendrite [dendrait] — дендрит
denial [dinaiəl] — отказ
denominator [dinɔmineitə] — определитель
dense [dens] — плотный, густой
density [densiti] — плотность
dentine [denti:n] — дентин
dentist [dentist] — зубной врач, дантист
dentition [dentiʃən] — зубной ряд
denture [dentʃə] — зубной протез
denude [dinju:d] — оголять, обнажать
denuded [dinju:did] — обнаженный, открытый
deny [dinai] — отрицать
deoxygenate [dezɔksidʒəneit] — дезоксигенировать
deoxyribose [diɔksiraibɔuz] — дезоксирибоза
department [dipa:tmənt] — отделение
~ (of) physiotherapy [fiziɔuθerəpi] — отделение физиотерапии
blood transfusion ~ [trænsfju:ʒn] — отделение переливания крови
casualty ~ [kæʒjuəlti] — отделение скорой помощи
ear, nose, throat (E.N.T.) ~ — отделение уха, горла, носа (в больнице)
fever ~ [fi:və] — инфекционное отделение
inpatient ~ [inpeiʃənt] — стационарное отделение
outpatient ~ [autpeiʃənt] — амбулаторное отделение
psychiatric ~ [saikiætrik] — психиатрическое отделение

rehabilitation ~ [r**i:**əbilit**ei**ʃn] — отделение реанимации
X-ray ~ [**e**ksrei] — рентгенологическое отделение
depend (on) [dip**e**nd] — зависеть (от)
dependent (on) [dip**e**ndənt] — зависящий (от)
deplete [dipl**i:**t] — истощать
depolarization [d**i:**p**ə**ul**ə**raiz**ei**ʃən] — деполяризация
deposit [dip**ɔ**zit] — откладывать(ся)
deposit [dip**ɔ**zit] — осадок, отложение
deposition [d**e**p**ə**z**i**ʃən] — отложение
depressed [dipr**e**st] — подавленный
depression [dipr**e**ʃən] — депрессия
endogenous ~ [ind**ɔ**dʒ**ə**nəs] — эндогенная депрессия
reactive ~ [riæktiv] — реактивная депрессия
depressive [dipr**e**siv] — депрессивный
depth [d**e**pθ] — глубина
deputy [d**e**pjuti] — заместитель, помощник, исполняющий обязанности
deranged [dir**ei**ndʒd] — душевнобольной
derangement [dir**ei**ndʒmənt] — нарушение, расстройство
mental ~ [m**e**ntəl] — психическое расстройство
personality ~ [pə:sənæliti] — расстройство личности
derivative [dir**i**vətiv] — производное, дериват
derive (from) [dir**ai**v] — происходить, получать
dermatitis [d**ə:**mət**ai**tis] — дерматит
constitutional ~ [kɔnstitj**u:**ʃənl] — конституциональный дерматит
contact ~ [k**ɔ**ntækt] — контактный дерматит
endogenous ~ [end**ɔ**dʒ**ə**nəs] — эндогенный дерматит
exogenous ~ [eks**ɔ**dʒ**ə**nəs] — экзогенный дерматит
industrial ~ [ind**ʌ**striəl] — профессиональный дерматит
dermatology [də:mət**ɔ**lədʒi] — дерматология
dermatosis [də**:**mət**ɔu**sis] — дерматоз
dermis [d**ə:**mis] — дерма
dermoid [d**ə:**mɔid] — дермоид
epibulbar ~ [**e**pib**ʌ**lbə] — эпибульбарный дермоид
describe [discr**ai**b] — описывать
descriptive [diskr**i**ptiv] — описательный
deserve [diz**ə:**v] — заслуживать
desiccator [d**e**sikeitə] — сушильная печь
design [diz**ai**n] — предназначать, разрабатывать
desire [dis**ai**ə] — хотеть, желать
despondent [disp**ɔ**ndənt] — угнетенный, подавленный
destroy [distr**ɔi**] — уничтожать, разрушать
destruction [distr**ʌ**kʃən] — разрушение, уничтожение
detach [ditætʃ] — отсоединять, отделять
detached [ditætʃt] — отсоединенный, отслоившийся
~ **retina** [r**e**tinə] — отслоенная сетчатка
detachment [ditætʃmənt] — отстраненность, отключение
detail [d**i:**teil, USA: dit**ei**l] — деталь, подробность
detect [dit**e**kt] — выявлять
detectable [dit**e**ktəbl] — обнаруживаемый, видимый
deteriorate [dit**i**əriəreit] — распадаться, портиться
deterioration [dit**i**əriər**ei**ʃən] — ухудшение, порча
determination [ditə**:**min**ei**ʃən] — детерминация

determine [ditə:min] — определять
development [diveləpment] — развитие; разработка
mental ~ [mentl] — умственное развитие
residential ~ [rezidenʃl] — развитие городского строительства
developmental [diveləpmentəl] — относящийся к развитию
device [divais] — прибор, устройство, аппарат
devise [divaiz] — разрабатывать
diabetes [daiəbi:ti:z] — диабет
~ insipidus [insipidəs] — несахарный диабет
~ mellitus [melitəs] — сахарный диабет
diabetic [daiəbetik] — диабетический
diadermic [daiədə:mik] — диадерматический
diagnosis [daiəgnəusis] — диагноз
reliable ~ [rilaiəbl] — достоверный диагноз
diagnostic [daiəgnəustik] — диагностический
diagnostics [daiəgnəstiks] — диагностика
diameter [daiæmitə] — диаметр
diaphragm [daiəfræm] — диафрагма
iris ~ [airis] — ирисовая диафрагма
diaphragmatic [daiəfrægmætik] — диафрагмальный, относящийся к диафрагме
diaphysis, *pl.* **diapheses** [daiæfisis, daiæfisi:z] — диафиз
diarrhoea [daiəriə] — диарея, понос
diastole [daiæstəli] — диастола
diastolic [daiæstəlik] — диастолический
die [dai] — умирать, погибать
diet [daiət] — диета
bland ~ [blænd] — щадящая диета
sloppy ~ [slɔpi] — жидкая диета
dietitian [daiətiʃn] — диетолог
difference [difrəns] — разница
different [difrənt] — отличный, различный, разный
differentiate [difərenʃieit] — отличать, дифференцировать
differentiated [difərenʃieitid] — дифференцированный
differentiation [difərenʃieiʃən] — дифференциация
difficulty [difikəlti] — трудность
diffraction [difrækʃn] — дифракция, преломление
diffuse [difju:s] — диффузный, рассеянный, распространенный
diffuse [difju:z] — распространять(ся)
digest [daidʒest] — переваривать
digestion [daidʒestʃən, didʒestʃn] — пищеварение
digestive [didʒestiv] — пищеварительный
~ disorder [disɔ:də] — нарушение пищеварения
Digitalis folium [didʒitelis fəuliəm] — дигиталис
dilantin [dailæntin] — дилантин
dilatation [dailətei∫n] — дилатация, расширение
dilate [daileit] — расширять
dilated [daileitid] — расширенный
dilute [dailu:t] — разбавлять
dilution [dailjuʃən] — разбавление, разведение
diminish [diminiʃ] — снижать, уменьшать
dimness [dimnəs] — слабость
dioxide [daiɔksaid] — двуокись
diphtheria [difθiəriə] — дифтерия
diplopia [diplɔupiə] — диплопия
direct [direct] — направлять, управлять, руководить
directly [direktli] — прямо, непосредственно
dirt [də:t] — грязь

disability [dɪsəbɪliti] — бессилие, беспомощность, инвалидность, нетрудоспособность
disaccharide [daisækʌraid] — дисахарид
disadvantage [disədvɑ:ntidʒ] — недостаток
disaster [dizɑ:stə] — бедствие
  natural ~ [nætʃrəl] — природное бедствие
disk [dɪsk] — диск
  optic ~ [ɔptik] — диск зрительного нерва
discharge [distʃɑ:dʒ] — выделение, выход, выпуск, сброс
  electrical ~ [ilektrikl] — электрический разряд
  ~ neuronal [njuərɔunl] — нейрональное выделение
discharge [dɪstʃa:dʒ] — выделять, выбрасывать; выписывать (из клиники)
disciform [dɪsifɔ:m] — дисковидный
discipline [dɪsəplin] — дисциплина, предмет
discontinuation [dɪskəntinjueɪʃən] — прекращение
discourage [diskʌridʒ] — не одобрять, не поощрять
discovery [diskʌvəri] — открытие
discrimination [diskrɪmineɪʃən] — установление различия, дифференциация
disease [dizi:z] — болезнь
  Addison's ~ [ædisn] — болезнь Аддисона
  Basedow's ~ [bʌsədɔuz] — базедова болезнь (токсический зоб)
  Bornholm ~ [bɔ:nhɔum] — болезнь Борнхольма
  cardiovascular ~ [kɑ:diɔuvæskjulə] — сердечно-сосудистое заболевание
  coeliac ~ [si:liæk] — заболевания органов брюшной полости, целиакия
chest~ [tʃest] — заболевание органов грудной клетки
communicable ~ [kəmju:nikəbl] — инфекционное заболевание
congenital heart ~ [kədʒenitl hɑ:t] — врожденный порок сердца
contagious ~ [kənteiʒes] — инфекционное заболевание
coronary ~ [kɔrənəri] — коронарная болезнь сердца
Crohn's ~ [krɔunz] — болезнь Крона
cysteine storage ~ [sisti:n stɔridʒ] — цистиноз
debilitating ~ [dibiliteitiŋ] — изнуряющая болезнь
degenerative ~ [didʒenərətiv] — дегенеративное заболевание
disfiguring ~ [difigəriŋ] — обезображивающее заболевание
fatal ~ [feitl] — смертельное заболевание
fibrocystic ~ [faibrəsistik] — болезнь Шиммельбуша, фиброкистозное заболевание
glycogen storage ~ [glaikɔudʒən stɔ:ridʒ] — гликогеноз
granulomatous ~ [grænjuləmətəs] — гранулёматозное заболевание
Graves ~ [greivz] — болезнь Грейвса (токсический зоб)
heart ~ [hɑ:t] — болезнь сердца
hereditary ~ [hireditəri] — наследственное заболевание
Hodgkin's ~ [hɔdʒkinz] — болезнь Ходжкина
hydatid ~ [haidætid] — эхинококковая болезнь
infectious ~ [infekʃəs] — инфекционное заболевание
insidious ~ [insidiəs] — коварная болезнь
ischemic heart ~ (IHD) [iski:mik hɑ:t] — ишемическая болезнь сердца

killer- ~ [k**i**lə] — смертельная болезнь
Little's ~ [**l**itlz] — болезнь Литтла
Meniere's ~ [m**ei**niəz] — болезнь Меньера
progressive ~ [prəugr**e**siv] — прогрессирующее заболевание
psychosomatic ~ [**sa**ikəusəumæ-tik] — психосоматическое заболевание
pulmonary ~ [pʌlmənəri] — заболевание легких
Simmonds' ~ [s**i**məndz] — болезнь Симмондса
Tay-Sachs ~ [te**i:**zæks] — ранняя детская амаврогическая идиотия, болезнь Тея — Сакса
venereal ~ [vən**i**əriəl] — венерическое заболевание
wasting ~ [w**ei**stiŋ] — изнурительное заболевание
Weil's ~ [v**ai**lz] — болезнь Вейля
disfigure [disf**i**gə] — обезображивать
dish [di**ʃ**] — посуда
disinfection [d**i**sinf**e**kʃən] — дезинфекция
disinfestation [d**i**sinfest**ei**ʃn] — дезинсекция
disintegration [d**i**sintegr**ei**ʃn] — распад
disk [d**i**sk] — диск
optic ~ [**ɔ**ptik] — зрительный диск
prolapsed inter-vertebral ~ [pr**ɔu**læpst **i**ntəv**ə:**tibrəl] — выпадение межпозвонкового диска
dislocation [dislək**ei**ʃn] — смещение, вывих
disorder [dis**ɔ:**də] — нарушение, расстройство
functional ~ [fʌŋkʃənəl] — функциональное нарушение
haematological ~ [himətɔlɔdʒikəl] — гематологическое нарушение
hereditary ~ [hir**e**ditəri] — наследственное нарушение
mental ~ [m**e**ntl] — умственное нарушение
personality ~ [pə**:**sənæliti] — расстройство личности
wasting ~ [w**ei**stiŋ] — истощающее заболевание, дистрофия
dispensation [d**i**spens**ei**ʃn] — распределение, распространение
dispense [disp**e**ns] — отпускать (по рецепту в аптеке)
dispersion [dispə**:**ʃn] — дисперсия, рассеивание
displace [displ**ei**s] — вытеснять, замещать
displacement [displ**ei**smənt] — смещение
disposal [disp**ɔu**zəl] — устранение, удаление
waste ~ [weist] — удаление отходов
dispute [dispj**u:**t] — спор, разногласие
disregard [d**i**srig**a:**d] — пренебрегать, игнорировать
disruption [disrʌpʃən] — разрыв
dissolve [diz**ɔ**lv] — растворять
dissolved [dis**ɔ**lvd] — растворенный
distal [d**i**stəl] — дистальный
distend [dist**e**nd] — растягивать, расширять, увеличивать
distensible [dist**e**nsibl] — растяжимый
distension [dist**e**nʃn] — растяжение, расширение
distill [dist**i**l] — дистиллировать
distillation [distil**ei**ʃn] — дистилляция
distinct [d**i**stiŋkt] — определенный, отдельный; отличный, различный
distinction [dist**i**ŋkʃn] — различие
distinctive [dist**i**ŋkiv] — отличительный, характерный
distinguish [dist**i**ŋgwiʃ] — отличать, различать

distinguishing [dist**i**ŋgwiʃiŋ] — отличительный, характерный
distress [distr**e**s] — нарушать
distress [distr**e**s] — расстройство, нарушение
  foetal ~ [fi:tl] — нарушение плода
distribute [distr**i**bju:t] — распространять
distribution [d**i**trib**u:**ʃən] — распространение
disturb [dist**ə:**b] — нарушать
disturbance [dist**ə:**bəns] — нарушение, повреждение
  mental ~ [m**e**ntl] — умственное расстройство
disturbing [dist**ə:**biŋ] — волнующий, беспокоящий
diurnal [dai**ə:**nəl] — дневной
diverse [daiv**ə:**s] — разнообразный
diversity [daiv**ə:**siti] — разнообразие, многообразие
diverticulosis [d**ai**və:tikjul**əu**sis] — дивертикулёз
divide (into) [div**ai**d] — делить (на); делить(ся)
division [div**i**ʒən] — деление, разделение
  reduction ~ [ridʌkʃn] — редукционное деление
documentation [dɔkjəment**ei**ʃən] — документация, информация
dominant [dɔminənt] — главный, основной; доминантный, преобладающий; доминантный признак
donor [d**əu**nə] — донор
dopamin [d**əu**pəmin] — допамин
dormant [dɔ:mənt] — бездействующий, неактивный
dorsal [dɔ:sl] — дорсальный, спинной
dorsiflexion [dɔ:sifl**e**kʃən] — тыльное сгибание
dorsum [dɔ:səm] — спина
dosage [d**əu**sidʒ] — дозировка, доза
dose [d**əu**z] — доза
  median lethal ~ [m**i:**diən l**i:**θl] — средняя летальная доза
double [dʌbl] — двойной; удваиваться
doubling [dʌbliŋ] — удвоение
doubtful [d**au**tful] — неясный, сомнительный
downgrowth [d**au**ngrəuθ] — прорастание
downward [d**au**nwəd] — нисходящий
downwards [d**au**nwədz] — вниз
drain [dr**ei**n] — дренировать; просачиваться, сочиться
drain (away) [dr**ei**nəw**ei**] — стекать
drainage [dr**ei**nidʒ] — дренаж; дренирование
draining [dr**ei**niŋ] — отсасывание, фильтрование
dramatic [drəmætik] — яркий, волнующий, существенный
dramatically [drəmætikəli] — резко
draw [drɔ:] — получать, вытягивать, извлекать
draw (on) [drɔ:] — обнадеживать
dreaded [dr**e**did] — страшный, ужасный
dress [dr**e**s] — перевязывать
  ~ wounds [w**u:**ndz] — перевязывать раны
dressing — перевязка, повязка
dribble [dr**i**bl] — капля; ток, поток
drink [dr**i**ŋk] — питье
drop [drɔp] — исключать, не произносить
droplet [drɔplit] — капелька
drops [drɔps] — капли
  nasal ~ [n**ei**zl] — капли в нос
dropsy [drɔpsi] — водянка, отёк
  abdominal ~ [əbdɔ:minl] — брюшная водянка
drug [drʌg] — лекарство
  ~ addict [ædikt] — наркоман

habit-forming ~ [hæbit-f**ɔ:**miŋ] — лекарство, вызывающее зависимость
synthetic ~ [sinθ**e**tik] — синтетическое лекарство
wonder ~ [wʌndə] — чудодейственное лекарство
drug-taker [drʌg**ei**kə] — принимающий лекарства
dry [dr**ai**] — сухой
dry (out) [dr**ai**] — высыхать, сохнуть
drying [dr**ai**iŋ] — высушивание
dryness [dr**ai**nis] — сухость
dual [dj**u**əl] — двойственный
dual-purpose [dj**u:**əlpə**:**pəs] — имеющий двойное назначение
duct [dʌkt] — проток
~ **of Wirsung** [dʌktevvə**:**suŋ] — Вирсунгов проток
common bile ~ [kɔmən b**ai**ldʌkt] — общий желчный проток
cystic ~ [s**i**stik] — пузырный проток
hepatic ~ [hipætik] — печеночный проток
sweat ~ [sw**e**t] — проток потовой железы
ductile [dʌktail] — гибкий, эластичный
dull [dʌl] — глухой, тупой
dulled [dʌld] — притупленный
dullness [dʌlnis] — притупление
duodenal [dj**u:**ɔd**i:**nl] — относящийся к двенадцатиперстной кишке
duodenectomy [dj**u:**ɔudi:n**e**kətmi] — дуоденэктомия
duodenum [dj**u:**ɔd**i:**nəm] — двенадцатиперстная кишка
dust [dʌst] — пыль
duty [dj**u**ti] — обязанность, работа
dwarf [dwɔ**:**f] — карлик
dwarfism [dwɔ**:**fizm] — карликовость
pituitary ~ [pitj**u**itəri] — гипофизарная карликовость
dwindle [dw**i**ndl] — сокращать, уменьшать
dye [d**ai**] — краска, краситель, окраска
dysentery [d**i**sntri] — дизентерия
amoebic ~ [əm**i:**bik] — амебная дизентерия
dysfunction [disfʌnkʃn] — дисфункция
dysmature [d**i**smətj**u**ə] — недоношенный (ребенок)
dysmenorrhea [d**i**smenər**i:**ə] — дисменорея
dyspepsia [disp**e**psiə] — диспепсия
dyspnoea |dispn**i**ə] — одышка
dystrophy [d**i**strəfi] — дистрофия
muscular ~ [mʌskjulə] — мышечная дистрофия

E

E.C.G. — EKG **electrocardiogram** [il**e**ktrɔuk**a:**diəgræm] — электрокардиограмма (ЭКГ)
E.E.G. — **electroencephalogram** [il**e**ktrɔuens**e**fələugræm] — электроэнцефалограмма (ЭЭГ)
ear [**i**ə] — ухо
external ~ [ekstə**:**nl] — наружное ухо
inner ~ [**i**nə] — внутреннее ухо
internal ~ [intə**:**nl] — внутреннее ухо
middle ~ [m**i**dl] — среднее ухо
outer ~ [**au**tə] — внешнее ухо
protruding ~ [prətr**u:**diŋ] — лопоухость
earache [**e**ər**ei**k] — оталгия (боль в ухе)
ear-drum [**i**ədrʌm] — барабанная перепонка
ear-wax [**i**əwæks] — ушной воск
ease [**i:**s] — легкость, простота
easily [**i:**zili] — легко
easy [**i:**si] — легкий

ecchymosis, *pl.* **ecchymoses** [ekim**ɔu**sis] — кровоподтек
echocardiography [**e**kɔuk**a:**di-**ɔu**grəfi] — эхокардиография
eclampsia [iklæmpsiə] — эклампсия
ecological [**i:**kələdʒikəl] — экологический
ecology [ikɔ**l**ɔdʒi] — экология
economic [**e**kən**ɔ**mik] — экономический
ectoderm [**e**ktədə:m] — эктодерма
ectodermal [ektɔd**ə:**məl] — эктодермальный
ectropion [əktr**ɔu**piən] — эктропион, выворот века
eczema [**e**kzi:mə] — экзема
eczematous [eks**e**mətəs, ekz**e**mətəs] — экзематозный
edge [**e**dʒ] — край
effect [if**e**kt] — влиять
effect [if**e**kt] — влияние
  somatic ~ [sɔmætik] — соматический эффект
effector [if**e**ktə] — эффектор
efferent [**e**fərənt] — эфферентный
efficiency [ifi**ʃ**nsi] — эффективность
efficient [ef**i**ʃnt] — эффективный, продуктивный
effluent [**e**fluənt] — сток, сточные воды
effort [**e**fət] — усилие
  joint ~s [dʒ**ɔi**nt] — совместные усилия
  ~ syndrome [s**i**ndroum] — синдром нагрузки
effusion [if**u:**ʒn] — излияние, истечение, извержение
  pericardial ~ [perik**a:**diəl] — перикардиальный выпот
  pleural ~ [pl**u**ərəl] — плевральный выпот
either [**ai**ðə] — каждый
either ... or [**ai**ðə**ɔ:**] — или ... или
eject [idʒ**e**kt] — выбрасывать, извергать, бить струей
elaboration [əlæbər**ei**ʃn] — выработка; уточнение
elastic [ilæstik] — эластический, эластичный
elasticity [**e**læst**i**siti] — эластичность
elbow [**e**lbɔu] — локоть
  ~ tennis [t**e**nnis] — локоть теннисиста
elderly [**e**ldəli] — пожилой (человек), старый
electric [il**e**ktrik] — электрический
electrocardiography (ECG) [il**e**ktrɔuka:di**ɔ:**gra:fi] — электрокардиография
electrode [ilektrɔud] — электрод
  implanted ~ [impl**a:**ntid] — вживленный электрод
electroencephalogram [il**e**ktrɔuens**e**fələugr**æ**m] — электроэнцефалограмма
electroencephalography [il**e**ktrɔuens**e**fəl**ɔ**grəfi] — электроэнцефалография
electrolyte [il**e**ktrɔulait] — электролит
electrolytic [ilektr**ɔu**litik] — электролитический
electromyogram [il**e**ktrɔum**ai**ɔugræm] — электромиограмма
electron [il**e**ktrɔn] — электрон
electrotechnics [il**e**ktrɔut**e**kniks] — электротехника
element [**e**limənt] — элемент
  trace ~s [tr**ei**s] — следовые элементы
elementary [elim**e**ntəri] — простой
elevate [eliv**ei**t] — поднимать
eliminate [il**i**mineit] — уничтожать, ликвидировать, устранять, искоренять
elsewhere [**e**lsweə] — где-то в другом месте
emaciation [im**ei**ʃi**ei**ʃən] — истощение, изнурение
embed [imb**e**d] — внедрять, вставлять, помещать, заключать

embolism [**e**mbəlizm] — эмболия
embolus, *pl.* emboli [**e**mbələs, **e**mbəlai] — эмбол
  air ~ [**eə**] — воздушная эмболия, воздушный эмбол
embrace [imbr**ei**s] — охватывать
embryo [**e**mbriəu] — эмбрион, зародыш
embryonic [**e**mbri**ɔ**nik] — эмбриональный
emergency [im**ə:**dʒənsi] — крайний случай, авария; критическое состояние, крайность
emergency [im**ə:**dʒənsi] — неотложный
emission [im**i**ʃn] — выпуск, эмиссия
emit [im**i**t] — выделять, испускать, излучать
emotion [im**əu**ʃən] — эмоция
emphasis [**e**mfəsis] — акцент, особое внимание
emphysema [emfis**i:**mə] — эмфизема
  compensatory ~ [kəmp**e**nsətəri] — компенсаторная эмфизема
  obstructive ~ [əbstr**ʌ**ktiv] — обструктивная эмфизема
  pulmonary ~ [p**ʌ**lmənəri] — легочная эмфизема
employ [empl**ɔi**] — применять
employment [impl**ɔi**mənt] — применение, использование
empty [**e**mpti] — опорожняться
emulsion [im**ʌ**lʃn] — эмульсия
enable [in**ei**bl] — обеспечивать, делать возможным, позволять
enamel [in**æ**ml] — (зубная) эмаль
  brittle ~ [br**i**tl] — хрупкая эмаль
  gnarled ~ [n**a:**ld] — грубая эмаль
enclose [inkl**əu**z] — заключать, окружать
enclosed [inkl**əu**zd] — окруженный
encounter [enk**au**ntə] — встречаться, столкнуться, натолкнуться
encourage [ink**ʌ**ridʒ] — поощрять
encroach (on) [inkr**əu**tʃ] — вторгаться, внедряться
endemic [end**e**mic] — эндемичный, эндемический
ending [**e**ndiŋ] — окончание
endlessly [**e**ndlisli] — бесконечно, постоянно
endocarditis [**e**ndɔuka:d**ai**tis] — эндокардит
endocardium [**e**ndɔuk**a:**diəm] — эндокард
endocrine [**e**nd**ɔ**ukr**a**in] — эндокринный
endocrinology [**e**ndɔukrinɔlɔdʒi] — эндокринология
endodental [**e**ndɔd**e**ntl] — эндодентальный
endodermic [**e**ndɔdə**:**mik] — эндодермальный
endogenous [end**ɔ**dʒenəs] — эндогенный
endometriosis [**e**ndɔmetri**əu**sis] — эндометриоз
endometritis [**e**ndɔmetr**ai**tis] — эндометрит
endometrium [**e**ndɔm**i:**triəm] — эндометрий
endoplasm [**e**ndɔuplæzm] — эндоплазма
endoplasmic [**e**ndɔuplæzmik] — эндоплазматический
endoscope [**e**ndəsk**əu**p] — эндоскоп
endoscopic [əndəsk**ɔ**pik] — эндоскопический
endow (with) [ind**a**u] — обеспечивать, наделять
enema [**e**nimə] — клизма
  barium ~ [b**e**əriəm] — бариевая клизма
energy [**e**nədʒi] — энергия
  radiant ~ [r**ei**djənt] — энергия излучения
enforce [inf**ɔ:**s] — принуждать, заставлять
engage [ing**ei**dʒ] — вовлекать

engagement [ing**ei**dʒmənt] — вовлечение
engorge [ing**ɔ:**dʒ] — набухать
engorgement [eng**ɔ:**dʒmənt] — закупорка, набухание, застой
  venous ~ [**vi:**nəs] — венозный застой
engulf [ingʌlf] — поглощать, заглатывать
enlarge [inl**a:**dʒ] — увеличивать, увеличиваться
enlargement [enl**a:**dʒmənt] — увеличение
enough [inʌf] — достаточно
ensheath [ənʃ**i:**θ] — окружать, заключать
ensue [insj**u:**] — наступать, случаться
ensure [inʃ**u**ə] — обеспечивать, гарантировать; убедиться, убеждаться
entail [int**ei**l] — закреплять
enter [**e**ntə] — входить, поступать
enterprise [**e**ntəpraiz] — предпринимательство
entire [int**ai**ə] — весь, целый
entirely [int**ai**əli] — полностью
entitle [int**ai**tl] — иметь право
entrance [**e**ntrəns] — вход
entropion [əntr**əu**piən] — энтропион
envelop [inv**e**ləp] — окружать
envelope [**e**nvələup] — оболочка
environment [inv**ai**ərənmənt] — окружающая среда, окружение
environmental [inv**ai**ərəm**e**ntl] — окружающий
envisage [inv**i**zidʒ] — предвидеть; рассматривать (вопрос)
enzyme [**e**nzaim] — фермент, энзим
eosin [**i:**əsin] — эозин
eosinophil [i:əus**i**nəfil] — эозинофил
epibulbar [**e**pibʌlbə] — эпибульбарный
epicondyle [epik**ɔ**nd**i**l] — надмыщелок
epidemic [epid**e**mik] — эпидемия
epidemiology [**e**pidemi**ɔ**lədʒi] — эпидемиология
epidermic [epidə**:**mik] — эпидермический
epidermis [epidə**:**mis] — эпидерма
epidural [epidj**u:**rəl] — эпидуральный
epigastrium [epigæstriəm] — эпигастрий
epiglottis [epiglətis] — надгортанник
epilepsy [**e**pilepsi] — эпилепсия
  focal ~ [f**əu**kl] — фокальная эпилепсия
  idiopathic ~ [idiəpæθik] — идиопатическая эпилепсия
  Jacksonian ~ [dʒæksɔun**i**ən] — корковая эпилепсия
  symptomatic ~ [s**i**mptəm**æ**tik] — симптоматическая эпилепсия
epileptic [epil**e**ptik] — эпилептический
epinephrine [epin**e**frin] — эпинефрин
epiphysis, *pl.* **epiphyses** [ep**i**fisis, ep**i**fisi:z] — эпифиз
episclera [**e**pisklиərə] — эписклера
episcleritis [**e**pisklиər**ai**tis] — эписклерит
episiotomy [epizi**ɔ**təmi] — эпизиотомия, рассечение промежности
epistaxis [**e**pistæksis] — носовое кровотечение
epithelial [**e**piθ**i:**liəl] — эпителиальный
epithelioma [**e**piθi:li**ɔu**mə] — эпителиома
epithelium [**e**piθ**i:**liəm] — эпителий
  conjuctival ~ [kɔndʒʌnktivəl] — конъюнктивальный эпителий
  corneal ~ [k**ɔ:**niəl] — роговичный эпителий
  germinal ~ [dʒə**:**minl] — зародышевый эпителий, зачатковый эпителий, поверхностный эпителий яичника

epoch-making [**i:**pək-m**ei**kiŋ] — эпохальный
equal [**i:**kwəl] — равный, одинаковый
equal [**i:**kwəl] — равняться
equilibrium [**e**kvili**i**briəm] — равновесие, сбалансированность
equip [ikw**i**p] — снабжать, оборудовать
equipment [ikw**i**pmənt] — оборудование
  stock ~ [st**ɔ**k] — основное оборудование
eradicate [iræ**d**ikeit] — искоренять
erase [ir**ei**z] — вычеркивать (из памяти)
erect [ir**e**kt] — прямо
erect [ir**e**kt] — прямой
error [**e**rə] — ошибка, погрешность, порок
erupt [irʌpt] — высыпать
eruption [irʌpʃən] — высыпание; прорезывание зубов
  premature ~ [premətj**u**ə] — преждевременное прорезывание зубов
  tardy ~ [t**a:**di] — запоздалое прорезывание зубов
erythematous [eriθ**i:**mətəs] — эритематозный
erythroblastosis [eri**θ**rɔublæst**ɔu**sis] — эритробластоз
  ~ **foetalis** [fi:t**ei**lis] — эритробластоз плода, фетальный эритробластоз
erythrocyte [ər**i**θrɔusait] — эритроцит
erythropoietin [eri**θ**rɔupɔi**i:**tin] — эритропоэтин
escape [isk**ei**p] — выход
escape [isk**ei**p] — выходить, избегать
essence [**e**sens] — существо
essential [is**e**nʃəl] — важный, существенный, необходимый, основной
essentially [is**e**nʃəli] — главным образом, в основном, по существу
essentials [is**e**nʃəlz] — жизненно необходимые элементы
establish [istæbliʃ] — устанавливать, определять
establishment [istæbliʃmənt] — создание, учреждение, становление, закрепление
esteem [ist**i:**m] — почет
ester [**e**stə] — сложный эфир
esterase [**e**stəreiz] — эстераза
esterify [ist**e**rif**ai**] — эстерифицировать
estimate [**e**stimeit] — оценивать
estimate [**e**stimeit] — оценка
ether [**i:**θə] — эфир
ethylene [**e**θili:n] — этилен
eupnoea [ju:pn**i:**ə] — нормальное дыхание
evaporate [iv**æ**pəreit] — выпаривать
evaporation [iv**æ**pər**ei**ʃən] — выпаривание
eventually [iv**e**ntʃəli] — со временем, в конце концов
eversion [iv**ə:**ʃn] — выворачивание
evert [iv**ə:**t] — выворачивать
evidence [**e**vidəns] — доказательство
evoke [iv**ɔu**k] — вызывать
exact [igz**æ**kt] — точный
exaggerate [igz**æ**dʒəreit] — преувеличивать
examination [igzæmin**ei**ʃn] — обследование
  bedside ~ [b**e**ds**ai**d] — больничный осмотр
  postmortem ~ [p**ɔu**stm**ɔ:**təm] — вскрытие
  radiological ~ [r**ei**diələdʒikl] — рентгенологическое обследование
exanthem [iksænθəm] — экзантема, кожная сыпь
except [iks**e**pt] — за исключением, кроме

exception [iks**e**pʃən] — исключение
excess [iks**e**s] — избыток
excessive [iks**e**siv] — избыточный, чрезмерный
exchange [ikstʃ**ei**ndʒ] — обмен
excise [eks**ai**z] — вырезать, удалять, исекать
excision [eks**i**ʒən] — вырезание, удаление (хирургическое), иссечение
excitement [iks**ai**tmənt] — возбуждение
excrement [**e**kskrimənt] — испражнения, экскременты
excrete [ekskr**i:**t] — выделять, экскретировать
excretion [ikskr**i:**ʃn] — выделение
excretory [ikskr**i:**təri] — выделительный
executive [igz**e**kjutiv] — исполнительный
exemption [igz**e**mpʃn] — освобождение (от налога)
exercise [**e**ksəsaiz] — выполнять
exertion [igz**ə:**ʃən] — напряжение, усилие; утомление, усталость
exfoliation [eksf**əu**li**ei**ʃn] — расслоение
exhale [eksh**ei**l] — выдыхать
exhaust [egz**ɔ:**st] — выхлопной
exhausted [igz**ɔ:**stid] — отработанный
exhibit [igz**i**bit] — проявлять
exist [igz**i**st] — существовать
existence [igz**i**stəns] — существование
exocrine [**e**ksəukrain] — экзокринный
exostosis [eksɔst**əu**sis] — экзостоз
expand [ikspænd] — расширяться
expansion [ikspænʃən, ekspænʃn] — расширение, увеличение
expectant [iksp**e**ktənt] — ожидающий
expectoration [iksp**e**ktər**ei**ʃn] — отхаркивание
expedient [iksp**i:**diənt] — целесообразный
expel [iksp**e**l] — выбрасывать, выталкивать
expert [**e**kspə:t] — эксперт
expiration [**e**kspiər**ei**ʃn] — выдох
expiratory [ekspi**ə**rətɔri] — экспираторный
expire [ekspa**ai**ə] — терять силу
explode [iksplə**u**d] — взрываться
exploit [iksplɔ**i**t] — пользоваться, использовать
exploratory [**e**kspləɔr**ei**təri] — пробный
explore [iksplɔ**:**] — исследовать, обследовать, зондировать
explorer [iksplɔ**:**rə] — зонд, зубодесневый зонд
explosion [iksplə**u**ʒən] — взрыв
expose (to) [iksp**əu**z] — обнажать, подвергать
exposure [iksp**əu**ʒə] — воздействие, обнажение
express [ikspr**e**s] — выражать, представлять
expressing [ikspr**e**siŋ] — выжимание, выдавливание
expression [ikspr**e**ʃən] — выражение
expulsion [ikspʌlʃn] — выталкивание, изгнание
extend [ikst**e**nd] — удлинять(ся), вытягивать, продлевать, простираться, тянуться, расширять(ся)
external [ikstə**:**nəl] — внешний
externally [ikstə**:**nəli] — снаружи, наружно
extra [**e**kstrə] — дополнительный
extract [**e**kstrækt] — вытяжка, экстракт
  alcoholic ~ [ælkəhɔlik] — спиртовой экстракт
extraction [ikstrækʃən] — выделение, удаление
extractor [ikstræktə] — экстрактор

vacuum ~ [vækjuəm] — вакуум-экстрактор, вакуумный экстрактор
extreme [ikstr**i:**m] — крайний, чрезвычайный, экстремальный
extremely [ikstr**i:**mli] — чрезвычайно, в крайней степени
extremity [ikstr**e**miti] — конечность
lower ~ [l**ɔu**ə] — нижняя конечность
upper ~ [ʌpə] — верхняя конечность
extrovert [**e**kstrɔuv**ə:**t] — экстраверт
extrusion [ekstr**u:**ʒn] — вытеснение, смещение
exudate [**e**ksjudeit] — экссудат
purulent ~ [pj**u**ərulənt] — гнойный экссудат
eye [**ai**] — глаз
congested ~ [kəndʒ**e**stid] — налитые кровью глаза
naked ~ [n**ei**kid] — невооруженный глаз
unaided ~ [ʌn**ei**did] — невооруженный глаз
tilted ~s [t**i**ltidais] — смещенные глаза
eyeball [**ai**bɔ:l] — глазное яблоко
eyebrow [**ai**brau] — бровь
eyelid [**ai**lid] — веко
lower ~ [ləuə] — нижнее веко
upper ~ [ʌpə] — верхнее веко
eye-piece [**ai**pi:s] — окуляр
eye-tooth [**ai**tu:θ] — глазной зуб

F

face [f**ei**s] — лицо, поверхность
face [f**ei**s] — сталкиваться
facial [f**ei**ʃl] — лицевой
facilitate [fəs**i**liteit] — облегчать
facilities [fəs**i**litiz] — средства
factor [fæktə] — фактор
aetiological ~ [**i:**tiələdʒikl] — этиологический фактор
hereditary ~ [hir**e**ditəri] — наследственный фактор
intrinsic ~ [intr**i**nsic] — внутренний фактор
faculty [fækəti] — факультет
faeces [f**i**si:z] — фекалии, каловые массы
black-tarry ~ [blækt**a:**ri] — черный дегтевый стул
clay-coloured ~ [kleikʌləd] — стул глиняного цвета
copious ~ [kɔ**u**piəs] — обильный стул
hard ~ [h**a:**d] — твердый стул
loose ~ [l**u:**s] — рыхлый стул
porridge-like ~ [pəridʒl**ai**k] — кашеобразный стул
rice-water-coloured ~ [r**ai**swətə kʌləd] — рисовый стул
scanty ~ [sk**æ**nti] — скудный стул
fail [f**ei**l] — быть неспособным, не удаваться
failure [f**ei**liə] — недостаток, отсутствие; невозможность, неспособность, недостаточность
backward ~ [b**æ**kwəd] — задняя недостаточность
congestive heart ~ [kəndʒ**e**stiv h**a**:t] — застойная недостаточность сердца
forward ~ [fɔ**:**wəd] — передняя недостаточность
heart ~ [h**a:**t] — сердечная недостаточность
right-sided heart ~ [r**ai**ts**ai**did h**a:**t] — левосторонняя сердечная недостаточность
faint [f**ei**nt] — обморок
faint [feint] — слабый
fair [f**eə**] — четкий, ясный
fairly [f**eə**li] — довольно, достаточно
falange [fælændʒ] — фаланга
fall [fɔ:l] — падение

fall-out [fɔ:laut] — осадки
radioactive ~ [r**ei**diɔæktiv] — радиоактивные осадки
false [fɔ:ls] — ложный
family [fæmili] — семья
  extended ~ [ikst**e**ndid] — большая семья
famine [fæmin] — голод
fascinate [fæsineit] — очаровывать
fast [fa:st] — поститься
fasting [fa:stiŋ] — пост
fat [fæt] — жир
  saturated ~ [sætʃəreitid] — насыщенный жир
  split ~ [spl**i**t] — расщепленный жир
  subcutaneous ~ [sʌbkju:t**ei**niəs] — подкожный жир
  total ~ [t**ɔu**tl] — общий жир
  unsplit ~ [ʌnspl**i**t] — нерасщепленный жир
  wool ~ [w**u**l] — ланолин
fatal [f**ei**tl] — фатальный, смертельный
fatiguability [fat**i:**gəbiliti] — утомляемость
fatigue [fət**i:**g] — усталость
fauces [fɔ:si:z] — зев, горло, рот, ротоглотка
faucial [fɔ:siəl] — горловой
faultily [fɔ:ltili] — неправильно
faulty [fɔ:lti] — неправильный, ошибочный
favourable [f**ei**vərəbl] — благоприятный
fear [f**i**ə] — страх, боязнь
febrile [f**i:**brail] — фебрильный, лихорадочный, лихорадящий
  highly ~ [h**ai**li] — сильно лихорадящий
  moderately ~ [mɔdərətli] — умеренно лихорадящий
  slightly ~ [sl**ai**tli] — слегка лихорадящий
feedback [f**i:**dbæk] — обратная связь
feeding [f**i:**diŋ] — питание, кормление
  artificial ~ [a:tif**i**ʃl] — искусственное кормление
  breast ~ [br**e**st] — кормление грудью
feel [f**i:**l] — чувствовать
feeling [f**i:**liŋ] — чувство
follow [fɔlɔu] — сопровождать, следовать
female [f**i:**meil] — женский
female [f**i**meil] — женщина
femoral [f**e**mərəl] — бедренный
  ~ head [h**e**ad] — головка бедра
femur [f**i:**mə] — бедро, бедренная кость
fenestra vestibuli [fin**e**strə vest**i**bjulai] — овальное окно, окно преддверия
ferrous [f**e**rəs] — железный
fertility [fɔ:t**i**liti] — способность к деторождению, фертильность
fertilization [fə:tiliz**ei**ʃn] — оплодотворение
fertilize [f**ɔ:**tilaiz] — оплодотворять
fetal [f**i:**təl] — зародышевый, фетальный
fever [f**i:**və] — жар, лихорадка
  childbed ~ [tʃ**ai**ldbed] — родильная горячка
  continued ~ [kənt**i**nju:d] — длительный
  enteric ~ [ent**e**rik] — брюшной тиф
  fluctuating ~ [flʌktu**ei**tiŋ] — колеблющаяся лихорадка
  glandular ~ [glændjulə] — воспаление гланд
  hay ~ [h**ei**] — сенная лихорадка
  intermitent ~ [intəm**i**tent] — перемежающаяся лихорадка
  jail ~ [dʒ**ei**l] — тюремная лихорадка
  relapsing ~ [rilæpsiŋ] — рецидивирующая лихорадка

remittent ~ [rimɪtənt] — перемежающаяся лихорадка
rheumatic ~ [ru:mætik] — ревматизм
scarlet ~ [skɑ:lit] — скарлатина
spotted ~ [spɔtid] — сыпной тиф
typhoid ~ [taifɔid] — брюшной тиф
typhus ~ [taifəs] — сыпной тиф
yellow ~ [jeləu] — желтая лихорадка
feverish [fi:vəriʃ] — лихорадочный
fiber, fibre [faibə] — волокно
conducting ~ [kɔdʌktiŋ] — проводящее волокно
fine ~ [fain] — тонкое волокно
motor ~ [mɔutə] — двигательное волокно
muscle ~ [mʌsl] — мышечное волокно
fibrillation [fibrileiʃn] — фибрилляция
~ **atrial** [eitriəl] — фибрилляция предсердий
auricular ~ [ɔrikjulə] — фибрилляция предсердий
ventricular ~ [ventrikjulə] — фибрилляция желудочков
fibrin [faibrin] — фибрин
fibrinogen [faibrinɔudʒen] — фибриноген
fibrinous [faibrinəs] — фиброзный
fibroid [faibrɔid] — фиброзный
fibromyoma [faibrɔumaiɔumə] — фибромиома
benign ~ [binain] — доброкачественная фибромиома
fibrosis [faibrɔusis] — фиброз
cystic ~ [sistik] — муковисцидоз
fibrous [faibrəs] — фиброзный, волокнистый
fibula [fi:bjulə] — малая берцовая кость
field [fi:ld] — поле, область
~ **of vision** [fi:ldəvviʒn] — поле зрения
operative ~ [ɔpərətiv] — операционное поле
fierce [fiəs] — свирепый
fight [fait] — бороться, сражаться
fill [fil] — наполнять
filling [filiŋ] — пломба
film [film] — снимок
filter [filtə] — фильтровать
filtering [filtəriŋ] — фильтрование
filter-passing [filtəpɑ:siŋ] — проходящий через фильтр, фильтрующийся
filter-pump [filtərʌmp] — фильтрующий насос
filterable [filtrəbl] — фильтрующийся
filtrate [filtreit] — фильтрат
finally [fainəli] — в конечном счете, в конце концов
finding [faindiŋ] — данные
objective ~ [əbdʒektiv] — объективные данные
fine [fain] — мелкий, тонкий
finger [fiŋgə] — палец (на руке)
finger-nail [fiŋgəneil] — ноготь пальца руки
finger-tip [fiŋgətip] — кончик пальца
finite [fainait] — конечный, ограниченный
fire [faiə] — выбрасывать
fire [faiə] — огонь, жар, лихорадка
firm [fə:m] — крепкий, прочный, твердый, сильный
fish [fiʃ] — рыба
~ **-bone** [fiʃbɔun] — рыбная кость
fishy [fiʃi] — рыбный
fissure [fiʃə] — борозда, складка, трещина
longitudinal ~ [lɔndʒitju:dinəl] — продольная борозда
palpebral ~ [pælpibrəl] — глазная щель
fist-sized [fistsaizd] — размером с кулак

fit (in) [fit] — подходить, приспосабливаться, сливаться; (together) соединяться
fix [fiks] — фиксировать, устанавливать
fixation [fiks**ei**ʃn] — фиксация
fixative [fiksətiv] — фиксатор
fixed [fikst] — неподвижный, фиксированный
flaccid [flæksid] — слабый, вялый
flaccidity [flæks**i**diti] — вялость, слабость
flake [fl**ei**k] — шелушиться
flake [fl**ei**k] — хлопья
flame [fl**ei**m] — пламя
flap [flæp] — лоскут
flare-up [fl**e**ʌp] — вспыхнуть, начаться (внезапно)
flare-up [fl**e**ərʌp] — вспышка, приступ
flask [fl**a:**sk] — колба
flat [flæt] — плоский, ровный
flatness [flætnis] — плоскость; однообразие
flatten [flætn] — расправлять, уплощать
flatulence [flætjuləns] — скопление газов, метеоризм
flatus [fl**ei**təs] — кишечные газы
flea [fl**i:**] — блоха
fleeting [fl**i:**tiŋ] — скоротечный, стремительный
flex [fl**e**ks] — сгибать
flexible [fl**e**ksibl] — эластичный, гибкий
flexion [fl**e**kʃən] — изгиб, сгибание
  planter ~ [plæntə] — плантарное сгибание
flexure [fl**e**kʃə] — изгиб
float [fl**əu**t] — плавать
flock [fl**ɔ**k] — стадо
flood [flʌd] — наводнение
flood [flʌd] — наводнять, наполнять
florid [flɔrid] — цветущий (о сыпи), покрасневший
floriferous [flɔ:r**i**fərəs] — цветоносный
flow [fl**əu**] — течение, ток, поток
flow [fl**əu**] — течь
flower [fl**au**ə] — цветок
flu [fl**u:**] — грипп
fluctuating [flʌktjueitiŋ] — колеблющийся
flue [flj**u:**] — воздухоотводная труба
  ventilating ~ [v**e**ntileitiŋ] — вентиляционная труба, вентиляционное отверстие
fluid [fl**u:**id] — жидкость
  amniotic ~ [æmni**ɔ**tik] — амниотическая жидкость, околоплодные воды
  Bouin's ~ [bw**a:**nz] — раствор Боуина
  cerebrospinal ~ [s**e**ribrəusp**ai**nl] — цереброспинальная (спинномозговая) жидкость
  tissue ~ [tisj**u:**] — тканевая жидкость
flutter [flʌtə] — мерцание, трепетание
fly [fl**ai**] — муха
  fruit ~ [fr**u:**t] — дрозофила, плодовая муха
foaming [f**əu**miŋ] — образование пены
focal [f**əu**kl] — очаговый, фокальный
focus [f**əu**kəs] — фокусировать
focus, *pl.* **foci** [f**əu**kəs, f**əu**sai] — фокус, очаг
foetal [**fi:**tl] — плодный, фетальный
foetus [**fi:**təs] — зародыш, плод
foil [f**ɔi**l] — разрушать (планы)
fold [f**əu**ld] — собираться в складки
fold [f**əu**ld] — складка
folding [f**əu**ldiŋ] — образование складок, сворачивание
foliferous [fəul**i**fərəs] — листоносный

follicle [fɔlikl] — фолликул
Graafian ~ [gr**ei**fiən] — пузырчатый яичниковый фолликул
lash ~ [læʃ] — фолликула ресницы
ovarian ~ [ɔuv**e**əriən] — фолликул яичника
follicular [fɔl**i**kjulə] — фолликулярный
follow [fɔlɔu] — сопровождать, следовать (за), походить (на)
follower [fɔlɔuə] — последователь
following [fɔlɔuiŋ] — после, вслед за
following [fɔlɔuiŋ] — следующий
follow-up [fɔlɔuʌp] — следить, наблюдать
follow up [fɔlɔuʌp] — наблюдение
formation [fɔ:m**ei**ʃən] — образование
reticular ~ [rit**i**kjulə] — ретикулярная формация
fomites [f**ɔu**miti:z] — фомиты
food [f**u:**d] — пища
foolish [f**u:**liʃ] — безрассудно, неразумно
foot [f**u:**t] — ступня, нога
club~ [klʌb] — эквиноварусная деформация стопы, выворот внутрь и подошвенное сгибание стопы, (косолапая стопа), косолапость, деформированная стопа
flat~ [flæt] — плоская стопа
foot-drop [f**u:**tdrɔp] — волочащаяся походка
force [f**ɔ:**s] — выталкивать, нагнетать
force [fɔ:s] — сила
vertical compression ~ [v**ə:**tikl kəmpr**e**ʃən] — вертикальная сила сжатия
forceps [f**ɔ:**sips] — пинцет, щипцы, зажим
obstetric ~ [ɔbst**e**tric] — акушерские щипцы
forcible [f**ɔ:**sibl] — насильственный, сильный
forearm [f**ɔ:**ra:m] — предплечье
forehead [f**ɔ:**rid] — лоб
foreign [fɔrin] — инородный
foresee, **foresaw, foreseen** [fɔs**i:**, fɔs**ɔ:**, fɔs**i:**n] — предвидеть
forever [fɔr**e**və] — всегда, вечно
forewarn [fɔ:w**ɔ:**n] — предупреждать
forewarning [fɔ:w**ɔ:**niŋ] — предупреждение
forgetfulness [fəg**e**tfulnis] — забывчивость; пренебрежение, невнимательность
fork [f**ɔ:**k] — разветвление, раздвоение
tuning ~ [tj**u:**niŋ] — камертон
form [f**ɔ:**m] — форма, образовывать
resting ~ [r**e**stiŋ] — остаточная форма
formalin [f**ɔ:**məlin] — формалин
formally [f**ɔ:**məli] — официально
forthwith [fɔ:θw**ið**] — немедленно, тотчас
fossa, *pl.* **fossae** [fɔsə, fɔsi:] — ямка
posterior ~ [pɔst**i**əriə] — задняя ямка
foul [f**au**l] — вонючий, отвратительный, неприятный
foul [f**a**ul] — портить, загрязнять
found [f**au**nd] — основывать
foundation [f**au**nd**ei**ʃən] — основание, фундамент
founder [f**au**ndə] — основатель
fovea centralis [f**ɔu**viə sentr**a:**lis] — центральная ямка (в глазном яблоке)
foxglove [fɔksglʌv] — наперстянка
fracture [fræktʃə] — перелом
artificial ~ [**a:**tifi**i**ʃəl] — искусственный перелом
average ~ [**æ**vridʒ] — средний перелом
comminuted ~ [kɔminju:tid] — осколочный перелом
compound ~ [kɔmpaund] — открытый перелом, сложный перелом

greenstick ~ [gr**i:**nstik] — надлом, неполный перелом, перелом по типу «зеленой веточки»
impacted ~ [impæktid] — перелом от удара
incomplete ~ [**i**nkəmpl**i:**t] — неполный перелом, трещина кости
pathological ~ [pæθələdʒikəl] — патологический перелом
simple ~ [s**i**mpl] — закрытый перелом
spiral ~ [sp**ai**ərəl] — спиральный перелом
stress ~ [str**e**s] — усталостный перелом
fragile [frædʒail] — ломкий, хрупкий
fragilitasossium [frədʒ**i**litəsɔsiəm] — несовершенный остеогенез
fragility [frədʒ**i**ləti] — хрупкость, ломкость
fragment [frægmənt] — обломок, осколок
free [fr**i:**] — свободный, вольный
freeze [fr**i:**z] — замораживание
deepfreeze — низкотемпературное замораживание
freeze-dry [fr**i:**zdr**ai**] — сублимировать
frenectomy [fren**e**ktəmi] — удаление уздечки
frenotomy [frenɔtəmi] — френотомия
frenum, *pl.* **frena** [fr**i:**nəm, fr**i:**nə] — уздечка
frequency [fr**i:**kwənsi] — частота
frequent [fr**i:**kwənt] — частый
frequently [fr**i:**kwəntli] — часто
friction [fr**i**kʃən] — трение
pleural ~ [pl**u**ərəl] — плевральное трение
frontal [frʌntl] — лобный
frostbite [frɔstbait] — обморожение
frothy [frɔθi] — пенистый
fructose [fr**u**ktəuz] — фруктоза
fruit [fr**u:**t] — плод
fuel [fj**u**əl] — топливо
fume [fj**u:**m] — дым, пар
exhaust ~ [igzɔ**:**st] — выхлопные газы
function [fʌŋkʃən] — функция
motor ~ [m**əu**tə] — двигательная функция
functional [fʌŋkʃənəl] — функциональный
functioning [fʌŋkʃəniŋ] — функционирование
fundamental [fʌndəm**e**ntl] — основной
fundus [fʌndəs] — дно
~ **of the eye** — глазное дно
fungus, *pl.* **fungi** [fʌŋgs, fʌŋgai] — грибок
funnel [fʌnl] — воронка
funnel-shaped [fʌnəlʃ**ei**pt] — воронкообразный, похожий на воронку
furnace [fə**:**nis] — печь
further [fə**:**ðə] — дальнейший
furuncle [fj**u**ərʌŋkl] — фурункул
fuse [fj**u:**z] — сливаться, соединяться
fusion [fj**u:**ʒən] — слияние, сращение, соединение

G

gain [gein] — получать, приобретать
gait [g**ei**t] — походка
ataxic ~ [ətæksik] — атактическая походка
drunken ~ [drʌnkən] — пьяная походка
high-steppage ~ [h**ai**-st**e**pidʒ] — походка с высоко поднимающимися ногами
reeling ~ [r**i:**liŋ] — заплетающаяся походка
scissor ~ [s**i**zə] — ножницеобразная походка
shuffling ~ [ʃʌfliŋ] — шаркающая походка

wooden-block ~ [w**u**dn-blɔk] — походка как в колодках
galactosaemia [gəlæktɔus**i:**miə] — галактоземия
galactose [gəlæktɔuz] — галактоза
gall [g**ɔ:**l] — желчь
~ stone [st**ɔu**ne] — камень желчного пузыря
gallbladder [g**ɔ:**lblædə] — желчный пузырь
gamma [gæmə] — гамма
ganglion, *pl.* **ganglia** [gængliən, gængliə] — ганглий
basal ~ [b**ei**zəl] — базальный ганглий
gangrene [gæŋgri:n] — гангрена
gas ~ [gæz] — газовая гангрена
garbage [g**a:**bidʒ] — отбросы, отходы
gas [gæz] — газ
gaseous [gæsiəs] — газообразный
gastrectomy [gæstr**e**ktəmi] — гастрэктомия
gastric [gæstrik] — желудочный
gastritis [gæstr**ai**tis] — гастрит
gastroenteritis [gæstrɔu**e**ntər**ai**tis] — гастроэнтерит
gastroenterologist [gæstrɔuentər**ɔ**lədʒist] — гастроэнтеролог
gastroenterology [gæstrɔuentər**ɔ**lədʒi] — гастроэнтерология
gastroenterostomy [gæstrɔuentər**ɔ**stəmi] — гастроэнтеростомия
gastroscopy [gæstr**ɔ**skəpi] — гастроскопия
gather [gæðə] — собирать
gauze [g**ɔ:**z] — марля
wire ~ [w**ai**ə] — металлическая сетка
gear [g**i**ə] — направлять, приспосабливаться
gelatin [dʒ**e**lətin] — желатин
gene [dʒ**i:**n] — ген
mutant ~ [mj**u:**tənt] — мутантный ген
general [dʒ**e**nərəl] — общий, обычный
generalized [dʒ**e**nərəlaizd] — генерализованный
generally [dʒ**e**nərəli] — обычно
generation [dʒ**e**nər**ei**ʃən] — поколение; порождение
genetic [dʒin**e**tik] — генетический
~ counseling [k**au**nsəliŋ] — генетическая консультация
~ make-up [m**ei**kʌp] — генетический состав
geneticist [dʒin**e**tisist] — генетик
genetics [dʒin**e**tiks] — генетика
genital [dʒ**e**nitl] — половой
genitals [dʒ**e**nitlz] — половые органы, гениталии
external ~ [ikst**ə:**nnl] — внешние половые органы
internal ~ [int**ə:**nl] — внутренние половые органы
gently [dʒ**e**ntli] — осторожно
genu [dʒ**i:**nju:] — колено
~ valgum [vælgə] — вальгусная деформация коленных суставов, Х-образное искривление ног, Х-образные ноги, отведенное колено
~ varum [v**e**ərəm] — варусная деформация коленных суставов, кривоногий, О-образное искривление ног, О-образные ноги, приведенное колено
germ [dʒ**ə:**m] — зародыш, эмбрион, микроб
pathogenic ~ [pæθədʒ**e**nik] — патогенный микроб
germinal [dʒ**ə:**minəl] — зародышевый
gerontologist [dʒ**e**rɔntɔlədʒist] — геронтолог
gerontology [dʒ**e**rɔntɔlədʒi] — геронтология
gestation [dʒest**ei**ʃn] — беременность, период беременности
giddiness [g**i**dinəs] — головокружение

gigantism [dʒaigæntizm] — гигантизм
gingiva, *pl.* **gingivae** [dʒ**i**ndʒivə, dʒ**i**ndʒivi:] — десна
gingival [dʒ**i**ndʒivl] — десневой
gingivectomy [dʒ**i**ndʒiv**e**ktəmi] — гингивэктомия
gingivitis [dʒ**i**ndʒiv**ai**tis] — гингивит
acute ~ [əkj**u:**t] — острый гингивит
chronic ~ [krɔnik] — хронический гингивит
diffuse ~ [difj**u:**s] — диффузный гингивит
generalized ~ [dʒ**e**nərəlaizd] — генерализованный гингивит
localized ~ [l**əu**kəlaizd] — локализованный гингивит
marginal ~ [m**a:**dʒinəl] — маргинальный гингивит
papillary ~ [pəp**i**ləri] — папиллярный гингивит
recurrent ~ [rikʌrənt] — рецидивирующий гингивит
subacute ~ [sʌbəkj**u:**t] — подострый гингивит
gingivoplasty [dʒindʒ**i**vɔuplæsti] — гингивопластика
girdle [g**ə:**dl] — пояс
pectoral ~ [p**e**ktərəl] — плечевой пояс
pelvic ~ [p**e**lvic] — тазовый пояс
shoulder ~ [ʃ**əu**ldə] — плечевой пояс
give (rise) — вызывать
give in [g**i**vin] — сдаваться, отказываться
give off [g**i**vɔf] — отказаться
glamorous [glæmərəs] — эффектный
gland [glænd] — железа
adrenal ~ [ædr**i:**nəl] — железа надпочечника, надпочечник
apocrine ~ [æpɔkr**ai**n] — апокринная железа
buccal ~ [bʌkl] — щечная слюнная железа
cutaneous ~ [kjut**ei**niəs] — кожная железа
eccrine ~ [**e**krain] — экзокринная железа
endocrine ~ [**e**ndəukrain] — эндокринная железа
exocrine ~ [**e**ksɔukrain] — экзокринная железа
mammary ~ [mæməri] — молочная железа
parathyroid ~ [pærəθ**ai**rɔid] — околощитовидная железа
parotid ~ [pərətid] — околоушная слюнная железа
parotid salivery ~ [sælivəri] — околоушная слюнная железа
pituitary ~ [pitj**u**itəri] — гипофиз
prostate ~ [prɔsteit] — простата, простатическая железа
salivary ~ [sælivəri] — слюнная железа
sebaceous ~ [sib**ei**ʃəs] — сальная железа
sex ~ [s**e**ks] — половая железа
sublingual ~ [səbliŋgwəl] — подъязычная слюнная железа
sublingual salivary ~ [sælivəri] — подъязычная слюнная железа
submaxillary salivary ~ [sʌbmæksiləri] — подчелюстная слюнная железа
sweat ~ [sw**e**t] — потовая железа
thyroid ~ [θ**ai**rɔid] — щитовидная железа
Meibomian ~s [maib**əu**miən] — железы хряща века
glandular [glændjulə] — железистый, относящийся к железе
glass [gl**a:**s] — стекло
magnifying ~ [mægnifaiiŋ] — увеличительное стекло
glassware [gl**a:**sweə] — стеклянная посуда
glaucoma [glɔ:k**əu**mə] — глаукома

glide [gl**ai**d] — скользить
globe [gl**ɔu**b] — глазное яблоко
globin [gl**ɔu**bin] — глобин
globulin [glɔbjulin] — глобулин
glomerulonephritis [glɔm**e**rələunifr**ai**tis] — гломерулонефрит
glomerulus, *pl.* **-i** [glɔm**e**rələs, glɔm**e**rəlai] — клубочек
glottis [glɔtis] — надгортанник
glucagon [gl**u:**kəgɔn] — глюкагон
glucose [gl**u:**kəuz] — глюкоза
gluten [gl**u:**tən] — глютен
gluten-free — безглютеновый, не содержащий глютен
glycerine [gl**i**sərin] — глицерин
glycerol [gl**i**sərɔl] — глицерин
glycine [gl**ai**si:n] — глицин
glycogen [gl**ai**kədʒen] — гликоген
glycoside [gl**ai**kɔusaid] — гликозид
glycosuria [gl**ai**kɔusj**u**əriə] — глюкозурия
gnawing [nɔ**:**iŋ] — ноющий
go berserk [bə:sə**:**k] — сойти с ума, взбеситься
goal [gɔ**u**l] — цель
goiter [gɔ**i**tə] — зоб
  simple ~ [s**i**mpl] — простой зоб
  exophthalmic ~ [eksɔufθælmik] — экзофтальмический зоб
  toxic ~ [tɔksik] — токсический зоб
gonad [gɔ**u**næd] — гонада
gonadal [gɔnədl] — гонадный
govern [gʌvn] — контролировать, управлять
gradual [grædjuəl] — постепенный
gradually [grædjuəli] — постепенно
graduated [grædjueitid] — калиброванный
graft [gr**a:**ft] — трансплантировать
graft [gr**a:**ft] — трансплантат
  free ~ [fr**i:**] — свободный трансплантат
  split ~ [spl**i**t] — расщепленный трансплантат
  split skin ~ [skin] — расщепленный кожный трансплантат
grafting [gr**a:**ftiŋ] — пересадка
  bone ~ [b**ɔu**n] — пересадка кости
grand mal [gr**a:**ŋmæl] — большая эпилепсия
grandchildren [græntʃ**i**ldren] — внуки
granulocyte [grænjulɔs**ai**t] — гранулоцит
granular [grænjələ] — гранулированный, зернистый
granule [grænju:l] — гранула
granulomatous [grænjul**ɔu**mətəz] — гранулёматозный
graphically [græfikəli] — графически
grasp [gr**a:**sp] — крепкое сжатие
grave [gr**ei**v] — тяжелый, серьезный
gravity [grævəti] — тяжесть
  specific ~ (S.G.) [spis**i**fik] — удельный вес
gray [gr**ei**] — седой
greatly [gr**ei**tli] — значительно, в значительной степени
greenish [gr**i:**niʃ] — зеленоватый
grimace [grim**ei**s] — гримаса
grimacing [grim**ei**siŋ] — гримасничанье
grind, ground, ground [gr**ai**nd, gr**au**nd] — растирать, толочь
grit [gr**i**t] — гравий, песок
groin [grɔ**i**n] — пах
gross [grɔ**u**s] — большой, крупный
grossly [grɔsli] — избыточно, значительно
group [gr**u:**p] — группировать
growth [grɔ**u**θ] — рост
  malignant ~ [mə**l**ignənt] — злокачественный рост
guanine [gwæni:n] — гуанин
guard [g**a:**d] — контролировать, охранять
guaze [gɔ**:**z] — сетка
guidance [g**ai**dəns] — руководство

guide [g**ai**d] — руководство
guilt [gi**l**t] — вина
gullet [gʌlit] — пищевод
gum [gʌm] — десна; камедь
gut [gʌt] — пищеварительный канал
gymnastics [dʒimnæstiks] — гимнастика
  remedial ~ [rim**i:**diəl] — лечебная физкультура
gynaecological [g**ai**nikələdʒikl] — гинекологический
gynaecology [g**ai**nik**ɔ**lədʒi] — гинекология

H

habit [hæbit] — привычка
habitual [hæbitʃuəl] — обычный, пристрастившийся
haem, heme [h**i:**m] — гем
haemangioma [h**i:**mændʒi**əu**mə] — гемангиома
haematocolpos [h**i:**mətɔuk**ɔ**lpəs] — гематокольпос
haematology [h**i:**mət**ɔ**lədʒi] — гематология
haematoma [h**i:**mət**əu**mə] — гематома
haematoxylin [h**i:**mət**ɔ**ksilin] — гематоксилин
haematuria [h**i:**mətj**u:**riə] — гематурия
haemocytometer [h**i:**məusait**ɔ**mitə] — гемоцитометр
haemodynamic [h**i:**məudainæmik] — гемодинамический
haemoglobin [h**i:**məgl**əu**bin] — гемоглобин
haemolysis [hi:m**ɔ**lisis] — гемолиз
haemolytic [h**i:**mɔl**i**tik] — гемолитический
haemophilia [h**i:**məuf**i**liə] — гемофилия
haemophiliac [h**i:**məf**i**liæk] — гемофилик, больной гемофилией
haemopoiesis [h**i:**məupɔi**i:**sis] — гемопоэз
haemorrhage [h**e**məridʒ] — кровотечение
haemorrhagic [h**e**mərædʒik] — геморрагический
haemostasis [hi:m**əu**st**ei**sis] — гемостаз
haemostatic [h**i:**məustætik] — гемостатический
haemotogenous [h**i:**mətɔdʒinəs] — гематогенный
hair [h**e**ə] — волосы
  pubic ~ [pj**u:**bik] — лобковые волосы
half, *pl.* **halves** [h**a:**f, h**a:**vz] — половина
halfmoon [h**a:**fmu:n] — полулуние
hallucination [həl**u:**sin**ei**ʃn] — галлюцинация
hallucinatory [həl**u:**sinətəri] — вызывающий галлюцинации
hallucinogen [hæl**u:**sinədʒen] — галлюциноген
hallux, *pl.* **halluces** [hæləks-hæləsi:z] — большой палец ноги (у человека), первый палец ноги (у животного)
  ~ rigidus [r**i**dʒidəs] — негнущийся большой палец ноги
  ~ valgus [v**æ**lgəs] — вальгусная деформация первого пальца стопы
halogen [hælədʒən] — галоген
halt [h**ɔ:**lt] — остановка
hamper [hæmpə] — препятствовать
hand [hænd] — рука (кисть)
handle [hændl] — работать, иметь дело, манипулировать, держать в руках, обрабатывать
hang [hæŋ] — висеть
haphazard [hæphæzəd] — случайность
harbour [h**a:**bə] — носить, быть носителем

hard [h**a:**d] — прочный, твердый
hardening [h**a:**dəniŋ] — отвердение, затвердевание
hardly [h**a:**dli] — едва
hardness [h**a:**dnis] — твердость
hard-of-hearing [h**a:**dəvh**i**əriŋ] — едва слышимый; тугой на ухо
hare-lip [h**e**əlip] — заячья губа
harmful [h**a:**mful] — вредный
harmonize [h**a:**mənaiz] — согласовывать
harmony [h**a:**məni] — соответствие, гармония
hazard [hæzəd] — риск, опасность
  health ~ [h**e**lθ] — риск (опасность) для здоровья
head [h**e**d] — возглавлять
head [h**e**d] — голова
  ~ mirror [m**i**rə] — лобный рефлектор, лобное зеркало
  ~ physician [fiz**i:s**n] — главный врач
  ~ surgeon [s**ə:**dzən] — главный врач
  femoral ~ [f**i:**mərəl] — головка бедра
headache[h**e**deik] — головная боль
heading [h**e**diŋ] — надпись, заглавие, название
headquarters [h**e**dkw**ɔ:**təz] — штаб
heal [h**i:**l] — заживать
healing [h**i:**liŋ] — заживление
health [h**e**lθ] — здоровье
  ill ~ [**i**l] — нездоровье, недомогание
hearing [h**i**əriŋ] — слух
  ~ threshold [θr**e**ʃəuld] — порог слышимости
heart [h**a:**t] — сердце
heat [hi:t] — жар
heavy [h**e**vi] — насыщенный
hebephrenic [h**i:**bəfr**e**nik] — гебефренический
heel [h**i:**l] — пятка
hemisphere [h**e**misfiə] — полушарие
hemp [h**e**mp] — конопля
  Indian ~ [**i**ndiən] — кендырь коноплевый
hence [h**e**ns] — поэтому, следовательно
heparin [h**e**pərin] — гепарин
hepatic [hipætik] — печеночный
hepatitis [h**e**pət**ai**tis] — гепатит
  infectious ~ [inf**e**kʃəs] — инфекционный гепатит
  infective ~ [inf**e**ktiv] — инфекционный гепатит
  serum ~ [s**i**ərəm] — сывороточный гепатит
hepatocellular [h**e**pətəus**e**ljulə] — гепатоцеллюлярный
hepatomegaly [h**e**pətəm**e**gəli] — гепатомегалия
herald [h**e**rəld] — извещать, возвещать, предсказывать, указывать
herb [h**ə:**b] — трава, растение
herbaceous [hə:b**ei**ʃəs] — травяной, растительный
herbicide [h**ə:**bisaid] — гербицид
hereditary [hər**e**ditəri] — наследственный
heredity [hir**e**diti] — наследственность
hermaphrodite [hə:mæfrədait] — гермафродит
hermaphroditism [hə:mæfrəd**ai**tizm] — гермафродитизм
hernia [h**ə:**niə] — грыжа
herpes [h**ə:**pi:z] — герпес
  ~ ophthalmicus [ɔfθæmikəs] — офтальмологический герпес
  ~ zoster [z**ɔ**stə] — опоясывающий лишай
heterocyclic [h**e**tərəus**ai**klik] — гетероциклический
heterozygote [h**e**tərəuz**ai**gəut] — гетерозигота
heterozygous [h**e**tərəuz**ai**gəs] — гетерозиготный
hexose [h**e**ksəuz] — гексоза
highseas [h**ai**si:z] — открытое море
highlight [h**ai**lait] — веха

highlights [h**ai**laits] — основные факты
high-pitched [h**ai**pitʃt] — высокий, высокочастотный, пронзительный (о звуке)
high-power [h**ai**p**au**ə] — мощный
hilar [h**ai**lə] — воротной
hilum, *pl.* **hila** [h**ai**ləm, hailə] — ворота органа
hilus, *pl.* **hili** [h**ai**ləs, h**ai**lai] — ворота
hinge [h**i**ndʒ] — шарнир
hip [h**i**p] — бедро
hippocampus [h**i**pəkæmpəs] — гиппокамп
hissing [h**i**siŋ] — шипение
histodifferentiation [histəd**i**fərenʃi**ei**ʃn] — гистодифференциация
histological [histələ**ɔ:**dʒikl] — гистологический
histologist [hist**ɔ**lədʒist] — гистолог
histology [hist**ɔ**lədʒi] — гистология
histone [h**i**stəun] — гистон
history [h**i**stəri] — история
  family ~ [fæmili] — семейный анамнез
  past ~ [p**a:**st] — предыстория
hoarse [h**ɔ:**s] — хриплый, охрипший, осипший
hoarseness [h**ɔ:**snis] — охриплость
hobby [hɔbi] — хобби, любимое занятие
hoe [h**əu**] — стоматологический экскаватор
  ~ scaler [sk**ei**lə] — стоматологический экскаватор
hold [h**əu**ld] — держать
holder [h**əu**ldə] — держатель
  needle ~ [n**i:**dl] — иглодержатель
hollow [hɔləu] — полость
hollow [hɔləu] — полый
home [h**əu**m] — дом, жилище
  children convalescent ~ [kɔnvəl**e**sənt] — детский реабилитационный центр
  convalescent ~ [kɔnvəl**e**snt] — реабилитационный центр
  infants' ~ [**i**nfənts h**əu**m] — детский дом
homozygote [həməuz**ai**gəut] — гомозигота
homozygous [həməuz**ai**gəs] — гомозиготный
honour [**ɔ**nə] — честь
hood [h**u**d] — вытяжной шкаф, вытяжной зонд, дефлектор
  ventilation ~ [ventil**ei**ʃn] — вытяжной шкаф
hope [h**əu**p] — надеяться
horizontal [hɔriz**ɔ**ntl] — горизонтальный
hormonal [hɔ:m**əu**nəl] — гормональный
hormone [hɔ:məun] — гормон
  adrenocorticotropic ~ [ædr**i:**nəukɔ:tikɔutr**ɔ**pik] — адренокортикотропный гормон
  antidiuretic ~ (ADH) [æntid**ai**juər**e**tik] — антидиуретический гормон
  follicle-stimulating ~ [f**ɔ**liklstimjul**ei**tiŋ] — фолликулостимулирующий гормон
  gonadotropic ~ [g**ɔ**nədɔutr**ɔ**pik] — гонадотропный гормон
  growth ~ [gr**əu**θ] — гормон роста
  lactogenic ~ [læktɔudʒ**e**nik] — лактогенный гормон
  luteinizing ~ [l**u:**ti:in**ai**ziŋ] — лютеинизирующий гормон
  luteotropic ~ [l**u:**tiɔutr**ɔ**pik] — лютеотропный гормон
  pituitary ~ [pit**jui**təri] — гормон гипофиза
  sex ~ [s**e**ks] — половой гормон
  somatotropic ~ [s**ɔu**mətɔutr**ɔ**pik] — соматотропный гормон, гормон роста
  thyroid-stimulating ~ [θ**ai**roidstimjul**ei**tiŋ] — тиреотропный гормон

thyrotropic ~ [θ**ai**ərɔutrɔpik] — тиреотропный гормон
vital ~ [v**ai**tl] — жизненно важный гормон
horn [hɔ**:**n] — рог, роговидный отросток
anterior ~ [ænt**i**əriə] — передний рог
horny [hɔ**:**ni] — роговой
hospital [hɔspitl] — больница
children ~ [tʃ**i**ldrən] — детская больница
general ~ [dʒ**e**nərəl] — больница общего профиля
maternity ~ [mətɔ**:**nitil] — родильный дом
mental ~ [m**e**ntl] — психиатрическая больница
psychiatric ~ [s**ai**kiætrik] — психиатрическая больница
teaching ~ [t**i:**tʃiŋ] — учебная больница
host [hɔust] — хозяин
house [h**au**s] — помещение
~ **physician** [fizi**ʃ**ən] — старший интерн больницы
~ **surgeon** [sɔ**:**dʒən] — старший интерн больницы
housecleaning [h**au**skli:niŋ] — очистка организма
houseman [h**au**smæn] — врач-стажер, живущий при больнице
however [hau**e**və] — однако
human [hj**u:**mən] — человеческий
humanitarian [hjumæni**te**əriən] — гуманитарный
humerous [hj**u:**mərəs] — плечевая кость
humoral [hj**u:**mərəl] — гуморальный
humour [hj**u:**mə] — жидкость (телесная)
aqueous ~ [**ei**kwiəs] — водянистая жидкость
hunger [hʌŋgə] — голод
hydrocarbon [h**ai**drɔuk**a:**bən] — углеводород
hydrocephalus [h**ai**drɔuk**e**fələs] — гидроцефал
hydrocolpos [h**ai**drɔk**ɔ**lpəs] — гидрокольпос
hydrocortisone [h**ai**drɔuk**ɔ:**tizɔun] — гидрокортизон
hydrogen [h**ai**drədʒən] — водород
hydrolysis [haidr**ɔ**lisis] — гидролиз
hydrophobia [h**ai**drɔuf**ɔu**biə] — гидрофобия
hydroxide [h**ai**drɔks**ai**d] — гидроксид
hydroxyl [h**ai**drɔuksil] — гидроксил
hygiene [h**ai**dʒi:n] — гигиена
hygienic [haidʒ**i:**nik] — гигиенический
hymen [h**ai**mən] — гимен, девственная плева
hyperaemia [h**ai**pər**i:**miə] — гиперемия
hyperchlorhydria [h**ai**pəklɔ:h**ai**driə] — гиперхлоргидрия
hyperfunction [h**ai**pəfʌnkʃn] — гиперфункция
hyperglycaemia [h**ai**pəglais**i:**miə] — гипергликемия
hypermetropia [h**ai**pəmetr**ɔu**piə] — гиперметропия, дальнозоркость
hyperpnoea [h**ai**pəpn**i**ə] — гиперпноэ
hypersecretion [h**ai**pəsikr**i:**ʃn] — гиперсекреция
hypersensitive [h**ai**pəs**e**nsitiv] — легковозбудимый
hypertension [h**ai**pət**e**nʃn] — гипертония
arterial ~ [a:t**i**əriəl] — артериальная гипертония
hypertrophied [h**ai**pətr**ɔu**faid] — гипертрофированный
hypertrophy [h**ai**pɔ:tr**ɔu**fi] — гипертрофия
hypochondrium [h**ai**pək**ɔ**ndriəm] — гипохондрий
hypodermic [h**ai**pɔudɔ**:**mik] — подкожный

hypofunction [h**ai**pɔufʌnkʃn] — гипофункция
hypoglycaemia [h**ai**pɔuglais**i:**miə] — гипогликемия
hypospadia [h**ai**pɔusp**ei**diə] — гипоспадия
hypotension [h**ai**pɔute**n**ʃən] — гипотензия
hypothalamus [h**ai**pɔuθæləməs] — гипоталамус
hypothetical [h**ai**pɔuθ**e**tikl] — гипотетический
hypotrophy [h**ai**pɔutr**ɔu**fi] — гипотрофия
hypoxia [haipɔksiə] — гипоксия
hysteria [hist**i**əriə] — истерия

I

ideally [aid**i**əli] — в идеале, в идеальном случае
indefinitely [ind**e**finətli] — неограниченно
identical [aid**e**ntikəl] — идентичный
identity [aid**e**ntəti] — идентичность
idiopathic [idiəpæθik] — идиопатический
ignore [ign**ɔ:**] — игнорировать, пренебрегать
ileal [**i**liəl] — относящийся к подвздошной кишке
ileum [**i**liəm] — подвздошная кишка; подвздошная кость
ileus [**i**liəs] — илеус
  paralytic ~ [pærəl**i**tik] — паралитический илеус
ill [**i**l] — больной
  mentally ~ [m**e**ntəli] — душевнобольной
illness [**i**lnəs] — болезнь, заболевание
  mental ~ [m**e**ntl] — психическое расстройство
imbalance [imbæləns] — нарушение баланса, дисбаланс
immaturity [**i**mətj**u**əriti] — недоношенность
immediate [im**i:**diət] — немедленный, незамедлительный, непосредственный
immediately [im**i:**diətli] — немедленно, непосредственно, сразу
immobility [im**ɔu**biliti] — неподвижность
immobilization [im**ɔu**bəlaiz**ei**ʃən] — иммобилизация, обездвиживание
immortal [im**ɔ:**təl] — бессмертный
immortality [imɔ:tæliti] — бессмертность
immunisation [imj**u**naiz**ei**ʃən] — иммунизация
immunity [imj**u:**nəti] — иммунитет
  life-long ~ [l**ai**flɔŋ] — пожизненный иммунитет
  ~ reaction [riækʃn] — иммунная реакция
immunological [imj**u**nələdʒikəl] — иммунологический
immunology [imjunɔlədʒi] — иммунология
impair [imp**e**ə] — нарушать, ослаблять, повреждать
impaired [imp**e**əd] — ослабленный
impairment [imp**e**əmənt] — ухудшение, нарушение
  sensory ~ [s**e**nsəri] — ухудшение чувствительности
imperative [imp**e**rətiv] — обязательный
imperfect [impɔ**:**fikt] — неполный
imperforate [impɔ**:**fərit] — непроницаемый, закрытый, заращенный
impetigo [**i**mpət**ai**gɔu] — импетиго
impinge (against, on) [imp**i**ndʒ] — ударяться (обо что-либо), давить, надавливать
implant [impl**a:**nt] — имплантировать, вживлять

implantation [**i**mpla:nt**ei**ʃn] — имплантация
implication [**i**mplik**ei**ʃən] — следствие, последствие
imply [impl**ai**] — подразумевать, предполагать
important [impɔ:tənt] — важный
impose [impɔ**u**z] — накладывать
impossible [impɔsəbl] — невозможный
impressive [impr**e**siv] — впечатляющий
improve [impr**u:**v] — улучшать, устранять
improved [impr**u:**vd**]** — улучшенный
impulse [**i**mpʌls] — импульс
  automatic ~ [ɔtəmætik] — автоматический импульс
  electrical ~ [il**e**ktrikl] — электрический импульс
  nerve ~ [nə**:**v] — нервный импульс
impure [impj**u**ə] — загрязненный, нечистый
in utero [inj**u:**tərɔu] — в утробе
inability [**i**nəb**i**liti] — неспособность
inaccurately [inækjurətli] — ошибочно
inactivate [inæktiveit] — инактивировать
inactive [inæktiv] — инертный, пассивный
inborn [**i**nbɔ**:**n] — врожденный
incidence [**i**nsidəns] — частота, степень (заболеваемости)
incipient [ins**i**piənt] — начинающийся, начальный
incisal [ins**ai**sl] — резаный
incise [ins**ai**z] — разрезать
incision [ins**i**ʒn] — надрез, разрез
  perineal ~ [perin**i**əl] — перинеальный разрез
incisor [ins**ai**zə] — резец
include [inkl**u:**d] — включать
including [inkl**u**:diŋ] — включая
income [**i**nkʌm] — доход
incompatibility [**i**nkɔmpætib**i**liti] — несовместимость
incompatible [**i**nkəmpætibl] — несовместимый
incompetence [inkɔmpitəns] — недостаточность
  mitral ~ [m**ai**trəl] — недостаточность митрального клапана
  myocardium ~ [m**ai**ɔuk**a:**diəm] — недостаточность миокарда
incorporate [inkɔ**:**pəreit] — включать
incorporated [inkɔ**:**pəreitid] — объединенный
increase [inkr**i:**s] — возрастать
increasingly [inkr**i:**siŋly] — все в большей степени
incubation [inkjub**ei**ʃn] — инкубация, инкубационный период
incubator [**i**ŋkjubeitə] — инкубатор
incus [**i**ŋkəs] — наковальня (среднего уха)
indeed [ind**i:**d] — в самом деле, действительно
independent [**i**ndip**e**ndənt] — независимый, самостоятельный
independently [**i**ndip**e**ndəntli] — независимо
index [**i**ndeks] — индекс, показатель
  cardiac ~ [k**a:**diæk] — сердечный индекс
  stroke ~ [str**ɔu**k] — индекс удара
  stroke work ~ [str**ɔu**k w**ɔ:**k] — показатель рабочего удара
indicate [**i**ndikeit] — показывать, служить признаком, указывать
indication [**i**ndik**ei**ʃən] — показание
indicative (of) [ind**i**kətiv] — указывающий, показывающий
indicator [**i**ndikeitə] — показатель, индикатор

indigestion [indidʒestʃən] — расстройство желудка
indirectly [indirektli] — косвенно, опосредованно
indispensable [indispensəbl] — незаменимый, неотъемлемый, необходимый, обязательный
indistinctness [indistiŋktnis] — нечеткость
induce [indju:s] — вызывать
induction [indʌkʃn] — индукция, вызывание, стимулирование, наведение
industry [indəstri] — промышленность
inefficient [inifiʃənt] — неэффективный, плохо действующий
inert [inə:t] — инертный
inevitable [inevitəbl] — неизбежный
inevitably [inevitəbli] — неизбежно
infancy [infənsi] — младенчество
infant [infənt] — детский, младенческий
infant [infənt] — младенец, ребенок (до 7 лет)
  full-term ~ [fultə:m] — ребенок, рожденный в срок
  premature ~ [prematjuə] — недоношенный ребенок
infarction [infa:kʃən] — инфаркт
  acute myocardial ~ [əkju:t maiəuka:di:əl] — острый инфаркт миокарда
  myocardial ~ [maiəuka:diəl] — инфаркт миокарда
infection [infekʃən] — инфекция
  chest ~ [tʃest] — инфекция органов грудной клетки
  microbiological ~ [maikrəubaiələdʒikəl] — микробиологическая инфекция
  nail-bed ~ [neilbed] — инфекция ногтевого ложа
  streptococcal ~ [streptəukɔkl] — стрептококковая инфекция
  syphilitic ~ [sifilitik] — сифилитическая инфекция
  viral ~ [vaiərəl] — вирусная инфекция
  wound ~ [wu:nd] — раневая инфекция
inferior [infiəriə] — нижний; плохой, худший (по качеству)
infertility [infətiliti] — бесплодие
inflame [infleim] — воспалять(ся)
inflamed [infleimd] — воспаленный
inflammation [infləmeiʃn] — воспаление
  chronic ~ [krɔnik] — хроническое воспаление
inflammatory [inflæmətəri] — воспалительный
inflation [infleiʃən] — вздутие, вспучивание
influence [influəns] — влияние
influenza [influenzə] — грипп, инфлюэнца
infrabony [infrəbəuni] — подкостный
infusion [infju:ʒn] — инфузия
  intravenous ~ [intrəvi:nəs] — внутривенная инфузия
ingest [indʒest] — глотать, проглатывать
ingestion [indʒestʃn] — прием пищи
ingredient [ingri:diənt] — составная часть, компонент
inhale [inheil] — вдыхать, дышать
inharmony [inha:məni] — несоответствие
inheritance [inheritəns] — наследственность, наследование
  Mendelian ~ [məndeliən] — менделирующая наследственность
inhibit [inhibit] — ингибировать, подавлять, тормозить, сдерживать
inhibition [inhibiʃn] — ингибирование, угнетение, торможение
initial [iniʃl] — исходный, начальный

initiate [in**i**ʃieit] — вызывать, стимулировать
initiation [iniʃi**ei**ʃn] — введение, зарождение
injection [indʒ**e**kʃən] — инъекция, введение
  hypodermic ~ [h**ai**pɔud**ə:**mik] — подкожная инъекция
  intramuscular ~ [**i**ntrəmʌskjələ] — внутримышечная инъекция
  intravenous ~ [**i**ntrə**vi:**nəs] — внутривенная инъекция
injure [**i**ndʒə] — повреждать
injurious [indʒ**u**əriəs] — вредный, повреждающий
injury [**i**ndʒəri] — повреждение, травма
  birth ~ [b**ə:**θ] — родовая травма
  intracranial ~ [**i**ntrəkr**ei**niəl] — внутричерепная травма
  minor ~ [m**ai**nə] — незначительное повреждение
  penetrating ~ [p**e**nitreitiŋ] — проникающее повреждение
inlay [**i**nlei] — зубная пломба
restoration [r**e**stər**ei**ʃn] — пломбирование, вкладка для пломбирования (полости зуба); пломба; трансплантат; имплантат
inlet [**i**nlet] — вход, входное отверстие
inner [**i**nə] — внутренний
innervate [**i**nəveit] — иннервировать
innocuous [in**ɔ**kjuəs] — безвредный, безопасный
inoculation [inɔkju**lei**ʃən] — прививка, вакцинация
inpatient [inp**ei**ʃənt] — стационарный больной
insane [ins**ei**n] — душевнобольной
insect [**i**nsekt] — насекомое
insecticide [ins**e**ktisaid] — инсектицид
insert [insə**:**t] — помещать, накладывать, наносить, вводить, вставлять
insertion [insə**:**ʃən] — введение, включение; наложение (швов)
inside [**i**n**sai**d] — внутри
insidious [ins**i**diəs] — скрытый, коварный
insight [**i**nsait] — понимание
insist (on) [ins**i**st] — настаивать
insistence [ins**i**stəns] — настойчивость, настойчивое требование
insoluble [insɔljubl] — нерастворимый
insomnia [insɔmniə] — бессонница
inspect [insp**e**kt] — обследовать
inspection [insp**e**kʃn] — обследование, осмотр
inspector [insp**e**ktə] — инспектор, контролер
  sanitary ~ [sænitəri] — санитарный врач
instability [**i**nstəb**i**ləti] — неустойчивость, нестабильность
  emotional ~ [im**əu**ʃənəl] — эмоциональная неустойчивость
instance [**i**nstəns] — случай
instant [**i**nstənt] — немедленный
instead (of that) [inst**e**d] — вместо (того)
instil [inst**i**l] — вливать (по капле)
institutionalized [**i**nstitj**u**ʃənə-l**ai**zd] — узаконенный
instruction [instrʌkʃən] — инструкция
  genetic ~ [dʒən**e**tik] — генетическое указание
instrument [**i**nstrəmənt] — инструмент
insufficiency [insəf**i**ʃənsi] — недостаточность
  mitral ~ [m**ai**trəl] — недостаточность митрального клапана
  placental ~ [pləs**e**ntəl] — плацентарная недостаточность
insufficient [**i**nsəfiʃənt] — недостаточный
insufflate [**i**nsʌfleit] — обдувать, дуть

insufflating [**i**nsʌfl**ei**tiŋ] — нагнетание
insulate [**i**nsjuleit] — изолировать
insulin [**i**nsjulin] — инсулин
insurance [in**ʃu**ərəns] — страхование
intact [intækt] — нетронутый, целый, интактный
intake [int**ei**k] — поглощение, прием
integer [**i**ntidʒə] — целое, нечто целое
integral [**i**ntigrəl] — интеграл; целый, полный
intend [int**e**nd] — предназначать
interact [intərækt] — взаимодействовать
interchangeable [**i**ntətʃ**ei**ndʒbl] — взаимозаменяемый
intercommunication [**i**ntəkəmnj**u**nik**ei**ʃn] — связь, сообщение
interconnected [**i**ntəkən**e**ktid] — взаимосвязанный
intercostal [**i**ntəkɔstl] — межреберный
interdependent [**i**ntədip**e**ndənt] — взаимозависимый
interfere [**i**ntəf**i**ə] — быть помехой, вмешиваться
intergovernmental [**i**ntəgʌvnm**e**ntl] — межгосударственный
interim [**i**ntərim] — временный, промежуточный; промежуток времени
interior [int**i**əriə] — внутренняя часть
intermediate [**i**ntəm**i:**diət] — промежуточный
intermingle [**i**ntəm**i**ngl] — перемежаться, смешиваться, перемешиваться
intermittent [**i**ntəm**i**tənt] — перемежающийся, прерывистый, скачкообразный
internal [intə**:**nəl] — внутренний
internally [intə**:**nəli] — изнутри, внутрь
international [**i**ntənæʃənəl] — международный
interproximal [**i**ntəprɔksiml] — межпроксимальный
interrelated [**i**ntəril**ei**tid] — взаимосвязанный
interrelationship [**i**ntəril**ei**ʃənʃip] — взаимосвязь
intersexuality [**i**ntəseksjuæliti] — гермафродитизм, бисексуальность
interstitial [**i**ntəst**i**ʃl] — интерстициальный
interval [**i**ntəvəl] — интервал
intervertebral [**i**ntəvə**:**tibrəl] — межпозвоночный
interview [**i**ntəvju:] — интервью, беседа, опрос
intestinal [int**e**stinl] — кишечный
intestine [int**e**stin] — кишечник, кишка
  large ~ [l**a:**dʒ] — толстая кишка
  small ~ [smɔ**:**l] — тонкая кишка
intolerable [intɔ**:**lərəbl] — невыносимый, непереносимый
intolerance [intɔlərəns] — непереносимость
intra-abdominal [**i**ntrə-ədɔminl] — интраабдоминальный, внутрибрюшной
intracranial [**i**ntrəkr**ei**niəl] — внутричерепной
intraepidermal [**i**ntrə**e**pidə**:**məl] — интраэпидермальный
intrahepatic [**i**ntrəhip**æ**tik] — внутрипеченочный
intramuscularly [**i**ntrəmʌskjuləli] — внутримышечно
intraocular [**i**ntrəɔkjulə] — внутриглазной
intravenous [**i**ntrəv**i:**nəs] — внутривенный
introduce [**i**ntrədj**u:**s] — вводить
introduction [**i**ntrədʌkʃən] — внедрение

introitus [intr**əu**itəs] — вход
vaginal ~ [vədʒ**ai**nəl] — вагинальное отверстие, вход во влагалище
introvert [**i**ntrəuv**ə:**t] — интроверт
intussusception [**i**ntəsəs**e**pʃn] — инвагинация, кишечная непроходимость
invade [inv**ei**d] — проникать, внедряться, вторгаться
invader [inv**ei**də] — внедряющийся элемент
invariably [inv**e**əriəbli] — неизменно, постоянно
invasion [inv**ei**ʒən] — вторжение, проникновение, инвазия
invention [inv**e**nʃən] — изобретение
inversion [inv**ə:**ʃən] — инверсия, обратное движение
inverted [inə**:**tid] — инвертированный
investigation [inv**e**stig**ei**ʃən] — исследование
investing [inv**e**stiŋ] — окружающий, покрывающий
invisible [inv**i**zəbl] — невидимый
involuntary [invə**l**əntəri] — непроизвольный
involution [invəlj**u:**ʃn] — инволюция, втяжение
involve [invə**l**v] — вовлекать, включать
involvement [invə**l**vmənt] — вовлечение
inwards [**i**nwədz] — внутрь
iodinated [**ai**əudin**ei**tid] — йодированный
iodine [**ai**ədi:n] — йод
ion [**ai**ən] — ион
ionization [**ai**ənaiz**ei**ʃn] — ионизация
ionize [**ai**ənaiz] — ионизировать
iridocyclitis [**ai**əridəusaikl**ai**tis] — иридоциклит
acute ~ [əkj**u:**t] — острый иридоциклит
iridodialysis [**ai**əridəudaiælisis] — иридодиализ
iris [**ai**əris] — радужная оболочка
iron [**ai**ən] — железо
irradiation [ir**ei**di**ei**ʃn] — облучение
irrational [iræʃənl] — беспричинный
irregular [ir**e**gjələ] — неправильный, неправильной формы
irregularity [ir**e**gjulæriti] — нерегулярность, нарушение
irregularly [ir**e**gjələli] — нерегулярно
irrelevant [ir**e**ləvənt] — нерелевантный, не относящийся к делу, несущественный
irrespective [irisp**e**ktiv] — независимо от
irreversible [irivə**:**səbl] — необратимый
irritability [**i**ritəb**i**liti] — раздражительность
irritable [ir**i**təbl] — раздражительный
irritate [**i**riteit] — раздражать
irritation [irit**ei**ʃən — раздражение
ischaemia [isk**i:**miə] — ишемия
postural ~ [pəstʃərəl] — постуральная ишемия
ischaemic [isk**i:**mik] — ишемический
ischial [**i**skiəl] — седалищный
ischium [**i**skiəm] — седалищная кость
islets of Langerhans [**ai**litsəvlæŋgəhæns] — островки Лангерганса
isolation [**ai**sə**lei**ʃən] — изоляция, выделение
isoniazid [**ai**sən**ai**əzid] — изониазид
isotope [**ai**səutəup] — изотоп
itch [**i**tʃ] — зуд, чесотка
itch [**i**tʃ] — вызывать зуд; зудеть
item [**ai**təm] — пункт, параграф, статья; услуга
ivory [**ai**vəri] — слоновая кость

J

jar [dʒ**a:**] — склянка, сосуд, банка, кувшин
wide-mouth ~ [w**ai**d mauθ] — склянка с широким горлом
jaundice [dʒ**ɔ:**ndis] — желтуха
catarrhal ~ [kət**a:**rəl] — катаральная желтуха
haemolytic ~ [himəl**i**tik] — гемолитическая желтуха
hepatocellular ~ [h**e**pətəus**e**ljulə] — гепатоцеллюлярная желтуха
jaw [dʒ**ɔ:**] — челюсть
jejunal [dʒidʒ**u:**nəl] — относящийся к тонкой кишке
jejunum [dʒidʒ**u:**nəm] — тощая кишка
jerk [dʒ**ə:**k] — рефлекс
absent knee ~ [æbsənt n**i:**] — отсутствующий коленный рефлекс
ankle ~ [æŋkl] — лодыжечный рефлекс
brisk knee ~ [br**i**skn**i:**] — резкий коленный рефлекс
knee ~ [n**i:**] — коленный рефлекс
pendular knee ~ [p**e**ndjulə n**i:**] — маятниковый коленный рефлекс
sluggish knee ~ [slʌgiʃ n**i:**] — вялый коленный рефлекс
sustained knee ~ [səst**ei**nd n**i:**] — устойчивый коленный рефлекс
job [dʒɔb] — работа
join [dʒ**ɔi**n] — вступать, объединять, соединять, присоединять
joint [dʒ**ɔi**nt] — сустав, сочленение
acromioclavicular ~ [ækr**əu**mi:əukləv**i**kjulə] — акромиально-ключичный сустав
hinge ~ [h**i**ndʒ] — подвижный сустав
hip ~ [h**i**p] — тазобедренный сустав
knee ~ [n**i:**] — коленный сустав
plane ~ [pl**ei**n] — плоский сустав, тугоподвижный сустав
joint [dʒ**ɔi**nt] — совместный
judge [dʒʌdʒ] — судить
judgement [dʒʌdʒmənt] — суждение, заключение
juice [dʒ**u:**s] — сок
gastric ~ [gæstrik] — желудочный сок
pancreatic ~ [pæŋkriætik] — сок поджелудочной железы
junction [dʒʌŋkʃən] — соединение
corneo-scleral ~ [k**ɔ:**niɔusklˈ**i**ərəl] — роговично-склеральное соединение
dentino-enamel ~ [d**e**ntinəinæməl] — линия дентиноэмалевого соединения коронки зуба
just [dʒʌst] — точно

K

keep [k**i:**p] — держать, поддерживать
keratin [k**e**rətin] — кератин
keratinization [k**e**rətiniz**ei**ʃən] — кератинизация
keratinize [k**e**rətin**ai**z] — кератинизировать
keratinocyte [kirætinəus**ai**t] — кератиноцит
keratitis [k**e**rət**ai**tis] — кератит
~ **sicca** [s**i**kə] — сухой кератит
disciform ~ [d**i**sifɔ:m] — дисковидный кератит
interstitial ~ [**i**ntəst**i**ʃəl] — интерстициальный кератит
superficial ~ [sj**u:**pəf**i**ʃəl] — поверхностный кератит
keratoconus [k**e**rətəuk**ɔu**nəs] — кератоконус
kernel |k**ə:**nəl] — зернышко, сердцевина
ketone [k**i:**təun] — кетон
kidney [k**i**dni] — почка
kiln [k**i**ln] — печь для обжига и сушки

kind [k**ai**nd] — вид, тип
kitchinette [kitʃin**e**t] — небольшая кухня
knee [n**i:**] — колено
knowledge [nɔlidʒ] — знание
kyphosis [kif**ɔu**sis] — кифоз

L

label [l**ei**bl] — метить
labium, *pl.* **labia** [l**ei**biəm, l**ei**biə] — губа
labia major [l**ei**biə mædʒ**ɔ:**rə] — большие половые губы
labia minora [l**ei**biə min**ɔ:**rə] — малые половые губы
labial [l**ei**bjəl] — губной
laboratory [ləb**ɔ**rətəri, USA: læbərətri] — лаборатория
labour [l**ei**bə] — роды
  complicated ~ [kɔmlikeitid] — осложненные роды
labyrinth [læbərinθ] — лабиринт
labyrinthine [læbir**i**nθain] — имеющий форму лабиринта
  ~ nistagmus [nistægməs] — лабиринтный нистагм
lack [læk] — отсутствие, недостаток
lacrimation [lækrim**ei**ʃn] — слезотечение
lactate [lækt**ei**t] — лактат
lactate dehydrogenase [lækteit dih**ai**drədʒen**ei**s] — лактатдегидрогеназа
lactation [lækt**ei**ʃn] — лактация
lacteal [læktiəl] — молочный, млечный
lactose [læktɔuz] — лактоза
lamina [læminə] — пластинка
laminectomy [læmin**e**ctəmi] — ламинэктомия
lancet [l**a:**nsit] — ланцет
lanolin [lænəlin] — ланолин
laparoscopy [læpərɔskəpi] — лапароскопия
laparotomy [læpərɔtəmi] — лапаротомия
largely [l**a:**dʒli] — в основном, главным образом
laryngeal [læriŋdʒ**i**əl] — глоточный, гортанный
laryngitis [lærindʒ**ai**tis] — ларингит
laryngoscope [lər**i**ŋgəskɔup] — ларингоскоп
larynx [læriŋks] — глотка, гортань
lash [læʃ] — ресница
lasting [l**a:**stiŋ] — длительный
lateral [lætərəl] — боковой, латеральный
laterally [lætərəli] — в сторону
launch [l**ɔ:**ntʃ] — запускать, запустить
law [lɔ:] — закон
  Starling's ~ [st**a:**linz] — закон Старлинга
lay (laid, laid) down [l**ei** d**a**un] — устанавливать
layer [l**e**ə] — слой
  basal ~ [b**ei**sl] — основной, базальный слой
  basal-cell ~ [b**ei**sl] — слой базальных клеток
  granular ~ [grænjulə] — гранулярный слой
  horny ~ [hɔ:ni] — роговистый слой
  outer ~ [**a**utə] — внешний слой
  prickle-cell ~ [pr**i**kl] — слой шиповидных клеток
  subcutaneous ~ [sʌbkju:t**ei**njəs] — подкожный слой
  surface ~ [sɔ:fis] — поверхностный слой
L-dopa [eld**ɔu**pə] — Леводопа
lead [l**e**d] — свинец
lead [l**i:**d] — вести, приводить; отвод (при ЭГ)
leak [l**i:**k] — протекать
leakage [l**i:**kidʒ] — протечка, утечка, просачивание
learned [l**ɔ:**nd] — ученый

leave [li:v] — оставлять; отпуск
maternity ~ [mətə:niti] — декретный отпуск, отпуск по уходу за ребенком
lecithin [lesiθin] — лецитин
leg [leg] — нога
lower ~ [ləuə] — голень
scissor ~s [sisə] — ножницеобразные ноги
legislation [ledʒislеiʃən] — законодательство
leiomyoma [leiɔmaiəumə] — лейомиома
lens [lenz] — линза, хрусталик
leprosy [leprəsi] — проказа
lesion [li:ʒn] — повреждение
inflammatory ~ [inflæmətəri] — воспалительное поражение
musculo-tendinous ~ [mʌskjuləutendənəs] — мышечно-сухожильное повреждение
lethal [li:θl] — летальный
leucine [lju:si:n] — лейцин
leuk(c)ocyte [lu:kəsait] — лейкоцит
leukaemia [lju:ki:miə] — лейкемия
chronic ~ [krɔnik] — хроническая лейкемия
chronic lymphatic ~ [krɔniklimfætik] — хроническая лимфатическая лейкемия
chronic myelogenous ~ [krɔnikmaiələdʒinəs] — хроническая миелогенная лейкемия
monocytic ~ [mənəsaitik] — моноцитарная лейкемия
myelogenous ~ [maiələdʒinəs] — миелогенная лейкемия
leukocyte [lju:kəsait] — лейкоцит
polymorphonuclear ~ [pəlimɔ:fəunju:kliə] — полиморфоядерный лейкоцит
leukopenia [lu:kəupi:niə] — лейкопения
leukoplasm [lu:kəplæzm] — лейкоплазма
liability (to) [laiəbiliti] — подверженность
liable (to) [laiəbl] — подверженный; очень вероятный, очень возможный
library [laibrəri] — библиотека, хранилище
reference ~ [refrəns] — картотека
lid [lid] — веко
drooping ~ [dru:piŋ] — опущение века
lower ~ [ləuə] — нижнее веко
lie [lai] — лежать; положение (плода)
life [laif] — жизнь
~ expectancy [ikspektənsi] — вероятная продолжительность жизни
~ span [spæn] — продолжительность жизни
wild ~ [waild] — дикая природа, живая природа
lifesaving [laifseiviŋ] — спасение жизни
ligament [ligəmənt] — связка
collateral ~ [kəlætərəl] — боковая связка
ligamental [ligəmənt] — связочный, относящийся к связкам
like [laik] — подобно, так же как
like [laik] — похожий
likely [laikli] — вероятно
lily-of-the-valley [lili əv ðe væli] — ландыш
limb [lim] — конечность
limber [limbə] — гибкий, мягкий
limbic [limbik] — лимбический
limb-lead [limled] — отводная конечность
limbus [limbəs] — лимб
limit [limit] — ограничивать
limited [limitid] — ограниченный
line [lain] — выстилать
lineage [liniidʒ] — линия, происхождение, родословная
linen [lainən] — лен

lingual [liŋgwəl] — язычный
lining [l**ai**niŋ] — выстилка
link — связь
link [l**i**ŋk] — связывать, соединять
linkage [l**i**nkidʒ] — связь, соединение, сцепление
lipase [l**i**peiz] — липаза
lipid [l**i**pid] — липид
lipoid [l**i**pɔid] — липоид, липид
liquefy [l**i**kwifai] — разжижать
liquid [l**i**kwid] — жидкий
liquid [l**i**kwid] — жидкость
list [l**i**st] — список
listless [l**i**stlis] — апатичный, вялый, безразличный
lithotomy [liθ**ɔ**tɔmi] — литотомия
liver [l**i**və] — печень
load [l**əu**d] — грузить, нагружать
load [ləud] — нагрузка
lobe [l**əu**b] — доля
  anterior ~ [ænt**i**əriə] — передняя доля
  frontal ~ [frʌntl] — лобная доля
  occipital ~ [ɔks**i**pitl] — затылочная доля
  parietal ~ [pər**ai**ətl] — теменная доля
  posterior ~ [pɔst**i**əriə] — задняя доля
  temporal ~ [t**e**mpərəl] — височная доля
lobule [ləbjul] — долька
local [l**əu**kəl] — местный, локальный
localized [l**əu**kəlaizd] — локализованный
locally [l**əu**kəli] — локально
location [ləuk**ei**ʃn] — положение
lochia [l**əu**kiə] — послеродовые выделения, лохи
locomotor [l**əu**kəm**əu**tə] — двигательный, опорно-двигательный
locum (tenens) [l**əu**kəmt**i:**nənz] — врач, временно замещающий другого врача
lodge [lɔdʒ] — застрять, поселяться, откладываться
lodged [lɔdʒd] — отложившийся
loin [l**ɔi**n] — поясница
long [lɔŋ] — длинный
long-acting [lɔŋæktiŋ] — долгодействующий, длительного действия
longevity [lɔndʒ**e**viti] — долголетие
long-lived [lɔŋ**li**vd] — долголетний, долгоживущий
loop [l**u**:p] — петля
  Henle's ~ [h**e**nliz] — петля Хенле
loose [l**u:**s] — рыхлый, несформированный, свободный
loosen [l**u:**sn] — ослаблять
looseness [l**u:**snəs] — слабость
lordosis [lɔ:d**əu**sis] — лордоз, искривление позвоночника вперед
lose [l**u:**z] — терять, утрачивать
loss [lɔs] — потеря, утрата
louse, *pl.* **lice** [l**au**s, l**ai**s] — вошь
low [ləu] — низкий
lower [l**əu**ə] — нижний
  ~ leg [l**e**g] — голень
lubricate [l**u:**brikeit] — смазывать
luckily [lʌkili] — к счастью
lumbar [lʌmbə] — поясничный
lumbo-sacral [lʌmbɔus**ei**krəl] — пояснично-крестцовый
lumen, *pl.* **lumena** [lj**u:**mən, lj**u:**minə] — просвет (сосуда, органа)
lump [lʌmp] — масса, ком
lung [lʌŋ] — легкое
lustre [lʌstə] — блеск
lymph [l**i**mf] — лимфа
lymphadenoma [limfædin**əu**mə] — лимфаденома
lymphatic [limf**æ**tik] — лимфатический
lymph-node [l**i**mfn**əu**d] — лимфатический узел
lymphoblastoma [l**i**mfɔublæst**əu**mə] — лимфобластома
lymphocyte [l**i**mfəsait] — лимфоцит
lymphoma [limf**əu**mə] — лимфома
lysine [l**ai**si:n] — лизин
lysosome [l**ai**səsɔum] — лизосома

M

maceration [mæsər**ei**ʃn] — вымачивание
macrocyte [mækrəs**ai**t] — макроцит
macrocytic [mækrəus**i**tik] — макроцитарный
macroscopic [mækrəsk**ɔ**pik] — макроскопический
macula, *pl.* **maculae** [mækjulə, mækjuli:] — пятно
  ~ **lutae** [lj**u:**tiə] — жёлтое пятно
magnify [mægnifai] — увеличивать
main [m**ei**n] — основной
main, mains [m**ei**nz] — питающая сеть, сетевая розетка
  electricity ~ [ilektr**i**citi m**ei**nz] — электросеть
mainly [m**ei**nli] — главным образом
maintain [meint**ei**n] — поддерживать, удерживать
maintenance [m**ei**ntənəns] — поддержание
major [m**ei**dʒə] — основной
make (up) [m**ei**kʌp] — составлять
  ~ **bed** [b**e**d] — застилать койку
malabsorption [mæləbs**ɔ:**pʃn] — нарушение абсорбции
malaise [mæl**ei**z] — недомогание
malaria [mələ**eə**riə] — малярия
  clinical ~ [kl**i**nikl] — клиническая малярия
male [m**ei**l] — мужской
male [m**ei**l] — мужчина, мужская особь
malformation [mælfɔ:m**ei**ʃə] — порок развития, уродство, нарушение
  foetal ~ [f**i:**tl] — порок развития зародыша
  valvular ~ [vælvjulə] — нарушение клапана
malignant [məl**i**gnənt] — злокачественный
malleable [mæliəbl] — вязкий
malleus [mæliəs] — молоточек среднего уха
malocclusion [mæləkl**u:**ʒn] — аномалия прикуса
malposition [mælpəz**i**ʃən] — неправильное положение
malpresentation [mælprezənt**ei**ʃn] — неправильное предлежание плода
maltose [m**ɔ:**ltəuz] — мальтоза
malunion [mælj**u:**niən] — неправильное срастание
manage [mænidʒ] — выполнять, вести больных, лечить
manageable [mænidʒəbl] — поддающийся изменению
management [mænidʒmənt] — лечение; решение (проблем)
mandatory [mændətəri] — обязательный
mandibular [mændi**b**bju:lə] — нижнечелюстной
mania [m**ei**niə] — мания
maniac [m**ei**niæk] — маниакальный
maniacal [mən**ai**əkl] — маниакальный
manic-depressive [mænikdipr**e**siv] — маниакально-депрессивный
manifest [mænifest] — проявляться
manifestation [mænifest**ei**ʃn] — проявление
  subjective ~ [sʌbdʒ**e**ctiv] — субъективное проявление
mannerism [mænərizm] — манерность, изощренность
manufacture [mænjəfæktʃə] — производство, изготовление
marasmus [məræzməs] — маразм
margin [m**a:**dʒin] — граница, край
marginal [m**a:**dʒinl] — пограничный, краевой
marihuana [mærihw**a:**nə] — марихуана
mark [m**a:**k] — отличать, характеризовать; выражать, ознаменовывать
marking [m**a:**kiŋ] — метка, маркер
  lung~ [lʌŋ] — легочный маркер

marrow [mærəu] — костный мозг
mask-like [m**a:**sklaik] — маскообразный
masticate [mæstikeit] — жевать
mastication [mæstik**ei**ʃn] — жевание
mastoid [mæstɔid] — сосцевидный отросток
~ **antrum** [æntrəm] — мастоидная полость
mastoidectomy [mæstɔid**e**ktɔmi] — мастоидэктомия
mater [m**ei**tə] — оболочка мозга
arachnoid ~ [əræknɔid] — паутинная оболочка
dura ~ [dj**u**ərə] — твердая мозговая оболочка
pia ~ [p**ai**ə] — мягкая мозговая оболочка
material [mət**i**əriəl] — материал
foreign ~ [f**ɔ**rin] — инородный материал
genetic ~ [dʒən**e**tik] — генетический материал
non-viable ~ [nɔnv**ai**əbl] — нежизнеспособный материал
suture ~ [sj**u:**tʃə] — шовный материал
maternal [mət**ə:**nəl] — материнский
matrix, *pl.* **matrices** [mætriks, mætriksi:z] — матрикс
calcified ~ [kælsifaid] — кальцифицированный матрикс
fluid ~ [fl**u:**id] — жидкий матрикс
intercellular ~ [intəs**e**ljulə] — межклеточный матрикс
matron [m**ei**trən] — старшая медсестра
assistant ~ [əs**i**stənt] — помощник старшей медсестры
deputy ~ [d**e**pjuti] — заместитель старшей медсестры
matter [mætə] — вещество; вопрос
colouring ~ [k**ʌ**ləriŋ] — краситель
grey ~ [gr**ei**] — серое вещество мозга
living ~ [l**i**viŋ] — живое существо
solid~ [sɔlid] — твердое вещество
white~ [w**ai**t] — белое вещество мозга
matter-of-fact [mætərəvfækt] — само собой разумеющийся факт
maturation [mætjər**ei**ʃən] — созревание
mature [mətj**u**ə] — созревать
maturity [mətj**u**ərəti] — зрелость
maxillary [mæks**i**ləri] — верхнечелюстной
~ **sinuse** [s**i**nus] — верхнечелюстная пазуха
meal [m**i:**l] — пища
barium ~ [b**e**əriəm] — бариевая каша, бариевая взвесь
meaningful [m**i:**niŋfəl] — значимый, многозначительный
means (sg. + *pl.***)** [m**i:**nz] — средство, способ
measles [m**i:**zlz] — корь
German ~ [dʒ**ə:**mən] — краснуха
measure [m**e**ʒə] — измерять, мерить
measure [m**e**ʒə] — мера
resuscitatory ~ [risʌsit**ei**təri] — реанимационная мера
meatus [mi**ei**təs] — отверстие, проход
mechanical [mik**æ**nikl] — механический
~ **engineering** [**e**ndʒini**ə**riŋ] — машиностроение
mechanism [m**e**kənizm] — механизм
blood clotting ~ [blʌdkl**ɔ**tiŋ] — механизм свертывания крови
mechanization [m**e**kənaiz**ei**ʃən] — механизация
medium, *pl.* **media** [m**i:**diəm, m**i:**diə] — среда
contrast ~ [k**ɔ**ntra:st] — контрастная среда
liquid ~ [l**i**kwid] — жидкая среда

otitis ~ [ɔut**ai**tis] — воспаление среднего уха
pustula obitis ~ [pʌstjələ] — гнойное воспаление среднего уха
medial [m**i:**diəl] — средний, срединный
medication [m**e**dik**ei**ʃən] — лечение, лекарство
medicine [m**e**dsin] — лекарство
medulla [mədʌlə] — мозговое вещество
~ **oblongata** [ɔblɔŋg**a:**tə] — продолговатый мозг
adrenal ~ [ədr**i:**nlmədʌlə] — мозговой слой надпочечника
medullar(y) [m**e**dələri] — мозговой, медуллярный
meet [m**i:**t] — соединяться
meeting [m**i:**tiŋ] — встреча
megacolon [m**e**gək**ɔu**lən] — мегаколон
meiosis, *pl.* **meioses** [mai**ɔu**sis] — мейоз
melancholic [m**e**lənkɔlik] — меланхолический
melanocyte [m**e**lənɔus**ai**t] — меланоцит
melanoma [m**e**lən**ɔu**mə] — меланома
melt [m**e**lt] — таять, плавить
member [m**e**mbə] — член
membrane [m**e**mbrein] — мембрана, оболочка
basement ~ [b**ei**smənt] — базальная мембрана
covering ~ [kʌvəriŋ] — покрывающая оболочка
lining ~ [l**ai**niŋ] — выстилающая оболочка, выстилка
pseudo ~ [sj**u**də] — псевдомембрана
smooth ~ [sm**u:**θ] — гладкая оболочка
tympanic ~ [timpænik] — барабанная перепонка
memory [m**e**məri] — память
menace [m**e**nis] — угроза
Mendelian [mend**i:**liən] — менделевский
meningeal [m**e**nindʒ**i**əl] — менингеальный
meninx [m**e**ninks] — оболочка головного и спинного мозга
meninges, *pl.* [m**e**nindʒi:z] — оболочки мозга
meningitis [m**e**nindʒ**ai**tis] — менингит
tuberculous ~ [tjub**ə:**kjuləs] — туберкулезный менингит
menopause [m**e**nəp**ɔ:**z] — менопауза
menorrhagia [m**e**nər**ei**dʒiə] — меноррагия
menstrual [m**e**nstruəl] — менструальный
menstruation [m**e**ntru**ei**ʃən] — менструации
mental [m**e**ntl] — умственный
mentally [m**e**ntəli] — умственно
mercury [mə**:**kjəri] — ртуть
mercurial [mə:kj**u**əriəl] — ртутный
mercy [mə**:**si] — милосердие
merely [m**i**əli] — просто, только
merit [m**e**rit] — достоинство
mescaline [m**e**skəlin] — мескалин
mesenteric [mesənt**e**rik] — брыжеечный
mesentery [m**e**səntri] — брыжейка
mesial [m**i:**zjəl] — медиальный, средний
mesoderm [m**e**zɔdə**:**m] — мезодерма
mesodermal [m**e**sɔudə**:**məl] — мезодермальный
message [m**e**sidʒ] — информация
genetic ~ [dʒən**e**tik] — генетическая информация
messenger [m**e**sindʒə] — передатчик
RNA ~ [**a:enei**] — передатчик (переносчик) РНК
metabolic [m**e**təbɔlik] — метаболический

metabolism [mitæbəlism] — метаболизм
metacarpal [metəkɑ:pəl] — пястная кость
metaphase [metəfeiz] — метафаза
metatarsal [metətɑ:səl] — плюсневая кость
metastasis, *pl.* **metastases** [mitæstəsis, mitæstəsi:z] — метастаз
metastasize [metæstəsaiz] — метастазировать
metastatic [metəstætik] — метастатический
metatarsalgia [metətɑ:sældʒiə] — метатарзалгия
methylene [meθili:n] — метилен
  ~ **blue** [blu:] — метилен голубой
metropolitan [metrəpɔlitən] — относящийся к большому городу
metrorrhagia [metrəureidʒiə] — метроррагия
microscope [maikrəskəup] — микроскоп
  electron ~ [ilectrən] — электронный микроскоп
  high-power ~ [hai pauə] — микроскоп с большим увеличением
  light ~ [lait] — световой микроскоп
microscopic [maikrəskɔpik] — микроскопический
microscopy [maikrəskəpi] — микроскопия
microtome [maikrətəum] — микротом
microvillus, *pl.* **microvilli** [maikrəviləs, maikrəvilai] — микроворсинка
micturition [miktjuəriʃən] — мочеиспускание
midbrain [midbrein] — средний мозг
midwife [midwaif] — акушерка
  domiciliary ~ [dɔmisiliəri] — домашняя акушерка
migraine [mi:grein] — мигрень
migration [maigreiʃn] — миграция
mild [maild] — легкий, слабый
milestone [mailstəun] — веха
millimetre [milimi:tə] — миллиметр
mimic [mimik] — имитировать
minimize [minimaiz] — сводить к минимуму
minimum [miniməm] — минимум
minor [mainə] — незначительный
minute [mainju:t] — мельчайший
minutely [minitli] — ежеминутно
mirror [mirə] — зеркало
  head ~ [hed] — лобный рефлектор, лобное зеркало
miscarriage [miskæridʒ] — выкидыш
miscellaneous [misileinjəs] — разнообразный
miss [mis] — пропускать
missing [misiŋ] — недостающий, отсутствующий
mistake [mistеik] — принимать по ошибке
mite [mait] — клещ
  itch ~ [itʃ] — саркоптес, чесоточный клещ
mithramycin [miθrəmaisin] — митрамицин
mitochondria (*pl.*) [maitɔukɔndriə] — митохондрия
mitosis, *pl.* **mitoses** [maitəusis, maitəusi:z] — митоз
mitotic [maitɔtik] — митотический
mitral [mitrəl] — митральный
mixture [mikstʃə] — смесь
mobile [məubail] — подвижный
mobility [məubiliti] — подвижность
moderate [mɔdərət] — умеренный
moderately [mɔdəritli] — умеренно
modern [mɔdən] — современный
modify [mɔdifai] — изменять, видоизменять, трансформировать, модифицировать
moiety [mɔiəti] — часть, компонент; половина, доля
moist [mɔist] — влажный
moisten [mɔisn] — увлажнять

moistening [mɔ**i**səniŋ] — увлажнение
moisture [mɔ**i**stʃə] — влага
molar [mɔ**u**lə] — моляр
mole [mɔ**u**l] — родинка, родимое пятно
molecular [mɔl**e**kjulə] — молекулярный
molecule [mɔlikjul] — молекула
molluscum contagiosum [mɔlʌskəm kənteidʒi**ɔu**zəm] — заразительный [контагиозный] моллюск
mongolism [mɔngəlizm] — монголизм
monocyte [mɔnəsait] — моноцит
monosaccharide [mɔnɔusækəraid] — моносахарид
monoxide [mənɔksaid] — моноксид
mons veneris [mɔnzv**i:**nəris] — лобковое возвышение, лонный холм
mood [m**u:**d] — настроение
morbidity [mɔ:b**i**diti] — заболеваемость, болезненность
morbilli [mɔ:b**i**lai] — корь
morphine [mɔ**:**fi:n] — морфий
morphodifferentiation [mɔ**:**fɔd**i**fərenʃi**ei**ʃn] — морфодифференциация
mortality [mɔ:tæliti] — смертность
mortar [mɔ**:**tə] — ступа, ступка
mosquito [mɔsk**i:**tɔu] — москит, комар
mother [mʌθə] — мать
  expectant ~ [ikspektənt] — будущая мать
motherhood [mʌðəhud] — материнство
motor [mɔ**u**tə] — двигательный
mould [mɔ**u**ld] — формировать
moulding [mɔ**u**ld] — ставить в положение
mount [m**au**nt] — помещать
mouse, *pl.* **mice** [m**au**s, m**ai**s] — мышь
mouth [m**au**θ] — рот
movable [m**u:**vəbl] — подвижный
move [m**u:**v] — перемещать, помещать
movement [m**u:**vmənt] — движение
  athetoid ~ [æθətoid] — атетоидные движения
  choreiform ~ [kɔur**i:**fɔ:m] — хореоподобные движения
  jerky ~ [dʒə**:**ki] — резкие движения
  pin-rolling ~ [p**i**nrəliŋ] — качающиеся движения
mucilage [mj**u:**silidʒ] — клейкое вещество, слизь
mucogingival [mj**u:**kɔdʒ**i**ndʒivl] — мукогингивальный
mucoid [mj**u:**kɔid] — слизистый
mucopurulent [mj**u**kəp**ju**ərulent] — слизисто-гнойный
mucous [mj**u:**kəs] — слизистый
mucoviscidosis [mj**u:**kɔuvisid**ɔu**sis] — муковисцидоз
mucus [mj**u:**kəs] — слизь
multiple [mʌltipl] — множественный
multiplication [mʌltiplik**ei**ʃn] — размножение, умножение
multiply [mʌltiplai] — размножаться, увеличиваться в числе
multitude [mʌltitju:d] — множество
mumps [mʌmps] — свинка
municipal [mju:n**i**sipəl] — муниципальный, городской
muscle [mʌsl] — мышца
  buccal ~ [bʌkl] — щечная мышца
  cardiac ~ [k**a:**diək] — сердечная мышца
  contractile ~ [kəntr**æ**tail] — сократительная мышца
  eye ~ [ai] — глазная мышца
  intercostal ~ [**i**ntəkɔstəl] — межреберная мышца
  involuntary ~ [invɔləntəri] — непроизвольная мышца
  orbicularis ~ [ɔ:b**i**kjuləris] — круговая мышца глаза
  respiratory ~ [resp**ai**ərətəri] — дыхательная мышца

voluntary ~ [vɔləntəri] — произвольная мышца
muscular [mʌskjulə] — мышечный
musculo-tendinous [mʌskjulɔutendinəs] — сухожильно-мышечный
mutant [mju:tənt] — мутант
mutant [mju:tənt] — мутантный
mutate [mju:teit] — мутировать
mutation [mju:teiʃən] — мутация
myelin [maiilin] — миелин
myeloma [maiələumə] — миелома
myometrium [maiɔumi:triəm] — миометрий
myopia [maiəupiə] — миопия, близорукость
myxoedema [miksidi:mə] — микседема, слизистый отек
myxoma [miksəumə] — миксома

N

naevus, *pl.* **naevi** [ni:vəs, ni:vai] — родинка
nail [neil] — ноготь
nail bed [neil bed] — ногтевое ложе
namely [neimli] — а именно
naphthalene [næfθəli:n] — нафталин
narcotics [na:kətiks] — наркотики
narrow [nærɔu] — сужаться
narrow [nærɔu] — узкий
narrowing [nærɔuiŋ] — сужение
sclerotic ~ [skliərətik] — склеротическое сужение
nasal septum [neizl septəm] — носовая перегородка
nasopharynx [neizɔufæriŋks] — носоглотка
nasty [na:sti] — отвратительный
nationality [næʃənæləti] — национальность
natural [nætʃrəl] — естественный
nausea [nɔ:siə] — тошнота
navel [neivl] — пупок
necessary [nesəsəri] — необходимый
necessitate [nəsesiteit] — делать необходимым
neck [nek] — шея, шейка
necrosis [nekrəusis] — некроз
necrotic [nekrətik] — некротический
need [ni:d] — нужда, потребность, необходимость
need [ni:d] — нуждаться, требоваться
needle [ni:dl] — игла
atraumatic ~ [ətrɔ:mætik] — атравматическая игла
negative [negətiv] — отрицательный
neighbour [neibə] — сосед
neighbourhood [neibəhud] — соседство
neighbouring [neibəriŋ] — соседний
neonatal [niəuneitl] — неонатальный
neonate [niəuneit] — новорожденный
neoplasm [ni:ɔuplæzm] — неоплазма, новообразование
epithelial cell ~ [epiθiliəl sel] — неоплазма эпителиальных клеток
malignant ~ [məlignənt] — злокачественное новообразование
neoplastic [ni:ɔuplæstik] — неопластический
nephritis [nefraitis] — нефрит
chronic ~ [krɔnik] — хронический нефрит
nephrotic ~ [nefrɔtik] — нефротический нефрит
simple ~ [simpl] — простой нефрит
nephroblastoma [nefrɔublæstəumə] — нефробластома
nephroma [nefrəumə] — нефрома
nephron [nefrɔn] — нефрон
nerve [nə:v] — нерв
~ deafness [nə:v defnəs] — нервная глухота

abducent ~ [æbdj**u:**sənt] — отводящий нерв
accessory ~ [əks**e**səri] — добавочный нерв
afferent ~ [**æ**fərənt] — афферентный нерв
auditory ~ [**ɔ:**ditəri] — слуховой нерв
cranial ~ [kr**ei**niəl] — черепной нерв
efferent ~ [**e**fərənt] — эфферентный нерв
facial ~ [f**ei**ʃəl] — лицевой нерв
glossopharyngeal ~ [gl**ɔ**sɔfær**i**ndʒiəl] — языкоглоточный нерв
hypoglossal ~ [h**ai**pɔugl**ɔ**səl] — подъязычный нерв
motor ~ [m**ɔu**tə] — двигательный нерв
oculomotor ~ [**ɔ**kjuləm**ɔu**tə] — глазодвигательный нерв
olfactory ~ [ɔlf**æ**ktəri] — обонятельный нерв
optic ~ [**ɔ**ptik] — зрительный нерв
parasympathetic ~ [pærəsimpəθ**e**tik] — парасимпатический нерв
recurrent ~ [rik**ʌ**rənt] — возвратный нерв
secretory ~ [sikr**i**təri] — секреторный нерв
sensory ~ [s**e**nsəri] — чувствительный нерв
spinal ~ [sp**ai**nl] — спинномозговой нерв
spinal accessory ~ [æks**e**səri] — спинной дополнительный нерв
sympathetic ~ [s**i**mpəθ**e**tik] — симпатический нерв
trigeminal ~ [traidʒ**e**minəl] — тройничный нерв
trochlear ~ [trɔkli:ə] — блоковый нерв
trophic ~ [trɔfik] — трофический нерв
vagus ~ [v**ei**gəs] — блуждающий нерв
vasoconstrictor ~ [v**ei**zɔukənstr**i**ktə] — сосудосуживающий нерв
vestibulocochlear ~ [vəst**i**bjuləukɔkliə] — преддверно-улитковый нерв
nerve-ending [nə**:**v **e**ndiŋ] — нервное окончание
nervous [nə**:**vəs] — нервный
nervousness [nə**:**vəsnis] — нервозность
network [n**e**twə:k] — сеть
neural [nj**u**ərəl] — нейтральный
neurasthenia [nj**u**ərəsθ**i:**niə] — неврастения
neurite [njuər**ai**t] — неврит, аксон
neuritis [njuər**ai**tis] — неврит
optic ~ [ɔptik] — неврит зрительного нерва, оптический неврит
neuroblastoma [nj**u**ərɔublæst**ɔu**mə] — нейробластома
neuroectodermal [nj**u**ərɔuektɔudə**:**ml] — нейроэктодермальный
neurofibroma [nj**u**ərəfaibr**ɔu**mə] — нейрофиброма
neuroglia [njuərɔgliə] — нейроглия
neurohypophysis [nj**u**ərɔuhaipɔfisis] — нейрогипофиз
neurological [nj**u**ərələdʒikl] — неврологический
neurologist [n**ju**ərɔlədʒist] — невропатолог
neuron [nj**u**ərɔn] — нейрон
motor ~ [m**ɔu**tə] — двигательный нейрон
neurosis [njuərɔusis] — невроз
anxiety ~ [æŋgz**ai**əti] — невроз тревоги, невроз страха
obsessional ~ [ɔbs**e**ʃənl] — навязчивый невроз
neurosurgery [nj**u**ərəsə**:**dʒəri] — нейрохирургия
neurosyphilis [nj**u**ərɔus**i**filis] — нейросифилис

neurotic [njuərɔtik] — невротический, невротик, неврастеник
neurotropic [nj**u**ərɔutr**ɔu**pik] — нейротропный
neutral [nj**u:**trəl] — нейтральный
neutralization [nj**u**trəlaiz**ei**ʃn] — нейтрализация
neutron [nj**u:**trən] — нейтрон
neutrophil [nj**u:**trɔfil] — нейтрофил
newborn [nj**u:**bɔ:n] — новорожденный
newly [nj**u:**li] — недавно
nicotine [n**i**kəti:n] — никотин
nipple [n**i**pl] — сосок
  cracked ~ [kr**æ**kt] — трещина соска
  flat ~ [flæt] — плоский сосок
  inverted ~ [inv**ɔ:**tid] — плоский сосок, втянутый сосок
  sore ~ [s**ɔ:**] — воспаленный сосок
nitrate [n**ai**treit] — нитрат
nitric [n**ai**trik] — азотный
nitrogen [n**ai**trədʒən] — азот
nitrogenous [naitrədʒinəs] — азотистый
nitrous [n**ai**trəs] — азотный
nocturia [nɔktj**u**əriə] — ноктурия
nocturnal [nɔkt**ɔ:**nəl] — ночной
nod [nɔd] — качать (головой)
node [n**ɔu**d] — узел
  sinoatrial ~ (SA node) [s**ai**nɔu**ei**triəl (**es**e**i**n**ɔu**d)] — синоатриальный узел
nodular [nɔdjulə] — узелковый
nodulated [nɔdjuleitid] — узловатый
nodule [nɔdju:l] — узелок
noise [n**ɔi**z] — шум
nomenclature [nɔum**e**nklətʃə] — номенклатура
non-nucleated [nɔnnj**u:**kli**ei**tid] — безъядерный
non-suppurative [nɔnsʌpjur**ei**tiv] — негнойный
non-union [nɔnj**u:**niən] — несрастание
non-viable [nɔn-v**ai**əbl] — нежизнеспособный
noradrenaline [nɔ:rədr**e**nəlin] — эпинефрин, норадреналин
norepinephrine (US) [nɔ:rəpən**e**frin] — норэпинефрин
normal [nɔ:məl] — нормальный
normally [nɔ:məli] — обычно
nose [n**ɔu**z] — нос
  blocked ~ [blɔkt] — заложенный нос
nosebleeding [n**ɔu**zbl**i:**diŋ] — носовое кровотечение
nosepiece [n**ɔu**zpi:s] — револьверная головка микроскопа
nostril [nɔstrəl] — ноздря
notably [n**ɔu**təbli] — исключительно, особенно
note [n**ɔu**t] — тон, звук
  dull percussion ~ [dʌl pəkʌʃən] — тупой перкуссионный звук
  impaired percussion ~ [imp**e**əd pəkʌʃən] — ослабленный перкуссионный звук
noted [n**ɔu**tid] — известный, знаменитый
notice [n**ɔu**tis] — обращать внимание, замечать
noticeable [n**ɔu**tisəbl] — заметный
notifiable [n**ɔu**tifaiəbl] — подлежащий регистрации
notification [n**ɔu**tifik**ei**ʃn] — извещение
nourish [nʌriʃ] — питать
nourishment [nʌriʃmənt] — питание
noxious [nɔkʃəs] — вредный
nuclear [nj**u:**kliə] — ядерный
nucleic [njukl**i:**ik] — нуклеиновый
nucleolus, *pl.* **nucleoli** [nju:kli**ɔu**ləs, nju:kli**ɔu**lai] — нуклеоль, ядрышко
nucleoprotein [nj**u:**kl**i:**əpr**ɔu**ti:n] — нуклеопротеин
nucleotide [nj**u:**kl**i:**ɔutaid] — нуклеотид
nucleus, *pl.* **nuclei** [nj**u:**kliəs, nj**u:**kliai] — ядро

numb [nʌm] — онемелый, оцепенелый
number [nʌmbə] — насчитывать; число, количество
number of [nʌmbərəv] — ряд
numbness [nʌmnis] — онемение
nurse [nə:s] — выхаживать, выкармливать
nurse [nə:s] — медсестра
auxiliary ~ [ɔ:gziliəri] — вспомогательная медсестра
enrolled ~ [inrəuld] — зарегистрированная медсестра
head ~ [hed] — старшая медсестра
home ~ [həum] — медсестра-сиделка, домашняя медсестра
probationer ~ [prəbeiʃənə] — сестра-практикантка
staff ~ [sta:f] — штатная медсестра
staff enrolled ~ [sta:f inrəuld] — зарегистрированная медсестра
state registered ~ [steit redʒistəd] — зарегистрированная (лицензированная) медсестра
student ~ [stju:dənt] — сестра-практикантка
nursery [nə:səri] — детские ясли
day ~ [dei] — дневные ясли
residential ~ [residenʃl] — круглосуточные ясли
nursing [nə:siŋ] — уход (за больным)
~ **proper** [prəupə] — собственно уход (за больным)
nutrient [nju:triənt] — питательное вещество
nutrition [nju:triʃn] — питание
nymphomania [nimfəumeiniə] — нимфомания
nystagmus [nistægməs] — нистагм
labyrinthine ~ [læbərinθain] — лабиринтный нистагм

O

oat [əut] — овес
objective [əbdʒektiv] — объектив; цель
low-power ~ [ləupauə] — объектив с маленьким увеличением
high-power ~ [haipauə] — объектив с большим увеличением
objective [əbdʒektiv] — объективный
observe [əbzə:v] — наблюдать
obstetrician [ɔbstətriʃən] — акушерка
obstetrics [əbstetriks] — акушерство
obstruction [əbstrʌkʃən] — закупорка, непроходимость, препятствие
obtain [əbtein] — получать
obvious [ɔbviəs] — явный, очевидный
occipital [ɔksipitl] — затылочный
occiput [ɔksipʌt] — затылок
flattened ~ [flætənd] — плоский затылок
occlusion [əklju:ʒən] — закрытие, окклюзия, закупорка
occupation [ɔkjupeiʃən] — профессия
occupational [ɔkjəpeiʃənəl] — профессиональный
occupy [ɔkjupai] — занимать
occur [əkə:] — возникать, встречаться, находиться, происходить, иметь место
ocular [ɔkjulə] — окуляр
odd [ɔd] — далекий, отдаленный
odds [ɔdz] — шанс, надежда
odontoblast [ɔudɔntəbla:st] — одонтобласт
odour [əudə] — запах
oedema [i:di:mə] — отек
pitting ~ [pitiŋ] — точечный отек
oedematous [idi:mətəs] — отечный
oesophageal [i:sɔfædʒiəl] — пищеводный

oesophagus, *pl.* **oesophagi**, **oesophaguses** [i:sɔfəgəs, i:sɔfəgai, i:sɔfəgəsiz] — пищевод
oestrogen [**i:**strɔudʒən] — эстроген
offensive [əf**e**nsiv] — неприятный, противный
offer [**ɔ**fə] — предлагать
officer [**ɔ**fisə] — чиновник
  resident surgical ~ (R.S.O.) [r**e**zidənt s**ɔ:**dʒikl] — медицинский сотрудник, живущий при больнице
  resident medical ~ (R.M.O.) [r**e**zidənt m**e**dikl] — медицинский работник, живущий при больнице
official [əf**i**ʃəl] — должностное лицо
offshoot [**ɔ**fʃu:t] — боковой отросток
oil [**ɔ**il] — масло, нефть
  fixed ~ [f**i**kst] — нелетучее масло
  vegetable ~ [v**e**dʒitəbl] — растительное масло
  volatile ~ [vɔlət**ai**l] — летучее масло
oily [**ɔ**ili] — маслянистый
ointment [**ɔi**ntmənt] — мазь
old [**əu**ld] — старые времена; старый
olecranon [ɔul**e**krənɔn] — локтевой отросток
olfaction [ɔlfækʃn] — обоняние
olfactory [ɔlfæktəri] — обонятельный
oliguria [ɔligj**u**əriə] — олигурия
ominous [**ɔ**minəs] — зловещий
onset [**ɔ**nset] — наступление, начало
opacity [əpæsiti] — непрозрачность, помутнение
opaque [ɔup**ei**k] — непроницаемый, мутный
open-chain [ɔup**e**ntʃ**ei**n] — открытая цепочка
operation [**ɔ**pər**ei**ʃən] — процесс, работа
  Ramstead's ~ [ræmstedz] — операция Рамштеда
ophthalmic [ɔfθælmik] — глазной
ophthalmoscope [ɔfθælməsk**əu**p] — офтальмоскоп
opium [**əu**piəm] — опий
oppose [əp**əu**z] — сопротивляться, встречать сопротивление
opposite [**ɔ**pəzit] — противоположный
optical [ɔptikl] — оптический
optician [ɔpt**i**ʃən] — оптик
optics [**ɔ**ptiks] — оптика
orange [**ɔ**rindʒ] — оранжевый
orbit [**ɔ:**bit] — глазная впадина, орбита
orbital [**ɔ:**bitl] — орбитальный
ordinary [**ɔ:**dnri] — обычный
organ [**ɔ:**gən] — орган
  ~ of Corti [ɔvk**ɔ:**ti] — кортиев орган, спиральный орган
  abdominal ~ [ədɔminəl] — орган брюшной полости
  alveolar ~ [ælv**i**ələ] — альвеолярный отросток
  formative ~ [f**ɔ:**mətiv] — формирующий орган, образующий орган
  hollow ~ [h**ə**ləu] — полый орган
  otolith ~ [**əu**tɔuliθ] — отолит
  sense ~ [s**e**ns] — орган чувств
  viscus hollow ~ [v**i**skəs h**ə**ləu] — полый внутренний орган
organelle [**ɔ:**gən**e**l] — органелла
organism [**ɔ:**gənizm] — организм
  pathogenic ~ [pæθədʒ**e**nik] — патогенный организм, патоген
organize [ɔ:gənaiz] — организовывать
organizer [**ɔ:**gənaizə] — организатор
orient [**ɔ:**riənt] — ориентировать
orifice [**ɔ**rifis] — отверстие
  cardiac ~ [k**a:**diæk] — кардиальное отверстие желудка
  pyloric ~ [pail**ə**rik] — пилорическое отверстие, отверстие привратника желудка

vaginal ~ [vədʒ**ai**nəl] — вход во влагалище, влагалищное отверстие
origin [**ɔ**ridʒin] — начало, происхождение
original [ə**ri**dʒənəl] — оригинальный
oropharynx [**ɔ**rɔufæriŋks] — ротоглотка, ротовая часть глотки
orthodontic [**ɔ:**θɔud**ɔ**ntik] — ортодонтный
orthopaedics [**ɔ:**θɔup**i:**diks] — ортопедия
os, *pl.* **ora** [**ɔ**s, **ɔ**rə] — зев
os, *pl.* **ossa** [**ɔ**s, **ɔ**ssa] — кость
osseous [**ɔ**siəs] — костистый
ossicle [**ɔ**sikl] — косточка
osteoarthritis [ɔsti**ɔu**a:θr**ai**tis] — остеоартрит
osteochondroma [**ɔ**stiəukɔndr**ɔu**mə] — остеохондрома
osteogenesis [**ɔ**stiədʒ**e**nisis] — остеогенез
~ **imperfecta** [impə**fe**ktə] — несовершенный остеогенез
osteogenic [**ɔ**stiɔudʒ**e**nik] — остеогенный
osteoma [ɔsti**ɔu**mə] — остеома
osteomyelitis [**ɔ**stiɔumaiə**lai**tis] — остеомиелит
acute haematogenous ~ [ək**ju**t hi**:**mətədʒənəs] — острый гематогенный остеомиелит
chronic ~ [krɔnik] — хронический остеомиелит
osteoporosis [**ɔ**stiɔupərɔ**u**sis] — остеопороз
osteotomy [**ɔ**sti**ɔ**təmi] — остеотомия, удаление кости
otitis [ɔut**ai**tis] — отит
~ **media** [mi**:**diə] — воспаление среднего уха
otolaryngologist [**ɔ**tɔulæringɔlɔdʒist] — отоларинголог
otolaryngology [ɔ**u**tɔulæriŋgɔlɔdʒi] — оториноларингология
otosclerosis [ɔ**u**tɔusklerɔ**u**sis] — отосклероз
outer [**au**tə] — внешний
outgrow [autgr**ɔu**] — перерастать
outlet [**au**tlet] — выпуск, выход
outline [**au**tlain] — контур, очертание
outnumber [**au**tnʌmbə] — превосходить по численности
outpatient [autp**ei**ʃənt] — амбулаторный больной
output [**au**tput] — выброс, выделение, продукция, производство
cardiac ~ [k**a:**diæk] — сердечный выброс
low ~ [l**ɔu**] — низкий выброс
respiratory ~ [risp**ai**rətəri, risp**i**rətəri] — выдох
outside [**au**ts**ai**d] — внешняя часть
outside [**au**ts**ai**d] — снаружи
outstanding [**au**tstændiŋ] — выдающийся
outwards [**au**twədz] — наружу, за пределы
oval [**ɔu**vəl] — овальный
ovarian [ɔuv**e**əriən] — яичниковый
ovary [**ɔu**vəri] — яичник
oven [ʌvn] — печь
overactive [**ɔu**vəræktiv] — гиперактивный
overactivity [**ɔu**vəræktiviti] — гиперактивность
overall [**ɔu**vərɔ:l] — общий, целый, сводный
overcoming [**ɔu**vəkʌmiŋ] — преодоление
overcrowding [**ɔu**vəkr**au**diŋ] — перенаселение
overdue [**ɔu**vədj**u:**] — запоздалый
over-excitability [**ɔu**vəriks**ai**təb**i**liti] — чрезмерная возбудимость
overexposure [**ɔu**vəriksp**ɔu**ʒə] — чрезмерное воздействие
overground [**ɔu**vəgr**au**nd] — надземный

overhanging [**əu**vəhæŋiŋ] — свисающий
overlap [**ou**vəlæp] — частично совпадать
overlay [**əu**vəlei] — закрытие
overlook [**əu**vəluk] — просмотреть, пропустить
overnight [**əu**vən**ai**t] — в течение ночи
ovulation [ɔvjul**ei**ʃn] — овуляция
ovum, *pl.* **ova** [**əu**vəm, **əu**və] — яйцо, яйцеклетка
owe [**ou**] — быть должным, быть обязанным
owing (to) [**əu**iŋ] — вследствие, благодаря
own [**əu**n] — собственный
oxidation [ɔksid**ei**ʃn] — окисление
oxide [ɔksaid] — окисел, окись
oxidize [ɔsid**ai**z] — окислять
oxostosis [ɔksəst**əu**sis] — оксостоз
oxygen [**ɔ**ksidʒən] — кислород
oxygenation [**ɔ**ksidʒən**ei**ʃn] — оксигенация, насыщение кислородом
oxytocin [**ɔ**ksitəsin] — окситоцин

P

pacemaker [p**ei**sm**ei**kə] — водитель ритма
  electronic ~ [ilektrɔnik] — электронный водитель ритма
pack [pæk] — тампонировать
package [pækidʒ] — упаковывать
paediatric [p**i:**diætrik] — педиатрический
paediatrician [p**i:**diətr**i**ʃən] — педиатр
paediatrics [p**i:**diætriks] — педиатрия
pain [p**ei**n] — боль
  boring ~ [b**ɔ:**riŋ] — сверлящая боль
  chronic ~ [krɔnik] — хроническая боль
  constricting ~ [kənstr**i**ktiŋ] — сжимающая боль
  deep ~ [d**i:**p] — глубокая боль
  dull ~ [dʌl] — тупая боль
  gnawing ~ [n**ɔ:**iŋ] — мучительная боль
  lancinating ~ [lænsin**ei**tiŋ] — стреляющая боль
  lightning ~ [l**ai**tniŋ] — вспышкообразная боль
  precordial ~ [pri:k**ɔ:**diəl] — предсердная боль
  sharp ~ [ʃ**a:**p] — острая боль
  shooting ~ [ʃ**u:**tiŋ] — стреляющая боль
  superficial ~ [sj**u:**pəf**i**ʃl] — поверхностная боль
  throbbing ~ [θrɔbiŋ] — пульсирующая боль
  transitory ~ [trænsitəri] — преходящая боль
painful [p**ai**nful] — болезненный
painless [p**ei**nlis] — безболезненный
painlessly [peinlisli] — безболезненно
pair [p**e**ə] — пара
paired [p**e**əd] — парный
palatal [pælətl] — нёбный, палатальный
palate [pælit] — нёбо
  cleft ~ [kl**e**ft] — волчья пасть
  hard ~ [h**a:**d] — твердое нёбо
pale [p**ei**l] — бледный
pallor [pælə] — бледность
palm [p**a:**m] — ладонь
palpation [pælp**ei**ʃn] — пальпация
palpebra, *pl.* **palpebrae** [pælpibrə, pælpibri] — веко
palpebral [pælpibrəl] — относящийся к веку
palpitation [pælpit**ei**ʃn] — пальпитация, трепыхание
palsy [p**ɔ:**lzi] — паралич
  cerebral ~ [s**e**ribrəl] — церебральный паралич

Erb's ~ [**ə:**bz] — паралич Эрба
shaking ~ [ʃ**ei**kiŋ] — дрожательный паралич
pancreas [pæŋkreəs] — поджелудочная железа
pancreatic [pænkriætik] — панкреатический
pancreatitis [pænkriət**ai**tis] — панкреатит
pandemic [pænd**e**mik] — пандемия
pant [pænt] — задыхаться
paper [p**ei**pə] — бумага
absorbent ~ [əbs**ɔ:**bənt] — промокательная бумага
papilla, *pl.* **papillae** [pəp**i**lə, pəp**i**li:] — сосочек
~ of Vater [əvfətə] — сосочек Фатера
papillary [pəp**i**ləri] — сосковидный, папиллярный
papilloma [pæpil**əu**mə] — папиллома
papillomatous [pæpil**əu**mətəs] — папилломатозный
papular [pæpjulə] — папулёзный
papule [pæpju:l] — папула
paraffin [pærəfin] — парафин
paralysis [pərælisis] — паралич
general ~ of the insane (GPI) [dʒ**e**nərəl pərælisis əv ðə **i**nsein] — паралитическая деменция
~ agitans [ædʒitənz] — болезнь Паркинсона; дрожательный паралич
congenital spastic ~ [kəndʒ**e**nitl-spæstic] — врожденный спастический паралич
infantile ~ [**i**nfəntail] — детский полиомиелит
partial ~ [p**a:**ʃl] — частичный паралич
spastic ~ [spæstik] — спастический паралич
paralytic [pærəl**i**tik] — паралитический
paramedical [pærəm**e**dikl] — парамедицинский
paramount [pærəm**au**nt] — главный
paranasal [pærən**ei**zl] — паназальный
paranoic [pærənɔik], **paranoid** [pærən**ɔi**d] — параноидальный
parasite [pærəsait] — паразит
parasympathetic [pærəsimpəθ**e**tik] — парасимпатический
parathormone [pærəθ**ɔ:**məun] — паратгормон
parenchyma [pər**e**nkəmə] — паренхима
parent [p**e**ərənt] — родитель
parenthood [pærənthud] — отцовство, материнство
paresis [pær**i:**sis] — парез
parietal [pər**ai**atl] — париетальный
parkinsonism [p**a:**kinsənizm] — паркинсонизм
parliament [p**a:**ləmənt] — парламент
paranoia [pærənɔiə] — паранойя
paronychia [pærən**i**ki:ə] — латеральная паронихия, паронихия
parotitis [pærət**ai**tis] — свинка
paroxysm [pærəksizm] — приступ
paroxysmal [pærəks**i**zməl] — пароксизмальный, приступообразный
part [p**a:**t] — часть
private ~s [pr**ai**vit] — половые органы
partial [p**a:**ʃəl] — частичный
particular [pət**i**kjulə] — особый
particularly [pət**i**kjuləli] — в особенности, особенно
particulate [pət**i**kjulət] — сыпучий, частица
partnership [p**a:**tnəʃip] — партнерство
parturient [pa:tj**u**əriənt] — рожающая, роженица
parturition [p**a:**tjuər**i**ʃn] — родовой акт, роды

pass [p**a:**s] — вставлять, внедрять; пропускать; проходить; испускать (мочу)
passage [pæsidʒ] — проход, прохождение, перемещение
air ~s [**e**ə] — воздухоносные проходы, воздухоносные пути
passenger [pæsindʒə] — пассажир
pasteurization [pæstəraiz**ei**ʃn] — пастеризация
patch [pætʃ] — пятно
patella, *pl.* **patellae** [pət**e**lə, pət**e**li:] — коленная чашечка, надколенник
pathogenic [pæθədʒ**e**nik] — патогенный
pathological [pæθələdʒikl] — патологический
pathway [p**a:**θwei] — проводящий путь
patient [p**ei**ʃənt] — больной
list ~ [**li**st] — плановый больной
pattern [pætən] — образец, модель, способ
pavement [p**ei**vmənt] — выстилка, покрытие
phenylalanine [f**e**nil**ei**lənin] — фенилаланин
phenylketonuria [f**e**nilk**i:**tɔunj**u**əriə] — фенилкетонурия
pea [pi:] — горошина
peace [p**i:**s] — мир
pebble [p**e**bl] — галька, гравий
pectin [p**e**ktin] — пектин
peculiar [pikj**u:**ljə] — специфический
pellagra [pel**a:**grə] — пеллагра
pelvis [p**e**lvis] — таз
renal ~ [r**i:**nəl] — почечная лоханка
pending [p**e**ndiŋ] — надвигающийся
pendular [p**e**ndjulə] — неустойчивый
penetrate [p**e**nitreit] — проникать
penetration [p**e**nitr**ei**ʃn] — проникновение
penicillin [pen**i:**silin] — пенициллин
penis [p**i:**nis] — пенис
pentose [p**e**ntɔuz] — пентоза
pepsin [p**e**psin] — пепсин
peptide [p**e**ptaid] — пептид
percentile [p**ə:**sətil] — процентный
percolation [pə:kəl**ei**ʃn] — просачивание
percussion [pəkʌʃn] — перкуссия
~ note [n**ɔu**t] — перкуссионный звук
dull ~ [d**a**l] — глухая перкуссия
flat ~ [flæt] — плоская перкуссия
impaired ~ [imp**e**əd] — ослабленная перкуссия
resonant ~ [r**e**zənənt] — резонансная перкуссия
stony dull ~ [st**ɔu**nidʌl] — глухая каменноподобная перкуссия
perfection [pə:f**e**kʃn] — совершенствование
perfectly [p**ə:**fiktli] — отлично
perforate [p**ə:**fəreit] — перфорировать, проделывать отверстие, просверливать
perforation [p**ə:**fər**ei**ʃn] — перфорация, прободение
wound ~ [w**u:**nd] — перфорация раны
perform [pəf**ɔ:**m] — выполнять, проводить, осуществлять
performance [pəf**ɔ:**məns] — осуществление, выполнение, проведение
pericarditis [p**e**rika:d**ai**tis] — перикардит
pericardium [p**e**rik**a:**diəm] — перикард
perimetrium [p**e**rim**i:**triəm] — периметрий
perinatal [p**e**rin**ei**tl] — перинатальный

perineal [p**e**rini**ə**l] — перинеальный, промежностный
perinephric [p**e**rin**e**frik] — перинефрический
perineum [p**e**rini**:**əm] — промежность
period [pir**i:**əd] — период, цикл, фаза
~ **of validity** [væl**i**diti] — срок годности
breathing ~ [br**i:**ðiŋ] — период дыхания
incubation ~ [**i**nkjub**ei**ʃən] — инкубационный период
lying-in ~ [l**ai**iŋ in] — роды
prodromal ~ [prəudr**əu**ml] — продромальный период
periodontal [p**e**riəud**ə**ntl] — периодонтальный
periosteum [peri**ə**stiəm] — надкостница
peripheral [pər**i**fərl] — периферический
periphery [pər**i**fəri] — периферия
peristalsis [p**e**ristælsis] — перистальтика
peristaltic [p**e**ristæltik] — перистальтический
peritoneal [p**e**ritəun**i:**əl] — брюшинный
peritoneum [p**e**ritəun**i:**əm] — брюшина
peritonitis [p**e**ritəun**ai**tis] — перитонит
perivalvular [p**e**rivælvjulə] — периклапанный
permanent [p**ə:**mənənt] — постоянный
permeable [p**ə:**miəb1] — проницаемый
permit [p**ə:**mit] — позволять
pernicious [pə:ni**ʃ**əs] — злокачественный, вредный
peroxide [pərɔksaid] — перекись
persecution [p**ə:**sikj**u:**ʃn] — преследование
persist [pəs**i**st] — сохраняться
persistent [pəs**i**stənt] — устойчивый, упорный, персистирующий
personality [p**ə:**sənæliti] — личность
psychopathic ~ [s**ai**kɔupæθik] — психопатическая личность
personnel [p**ə:**sən**e**l] — персонал
paramedical ~ [pærəm**e**dikl] — вспомогательный персонал
perspiration [p**ə:**spər**ei**ʃən] — потоотделение
perspire [pəsp**ai**ə] — потеть
pertain [pə:t**ei**n] — относиться
pertussis [pətʌsis] — коклюш
Haemophilus ~ [hi:məfiləs] — гемофильный коклюш
pervert [p**ə:**və:t] — извращенец, извращенный человек
pes, *pl.* **pedes** [p**ei**z, p**ei**s, p**i:**di:z] — стопа, нога
~ **cavus** [k**ei**vəs] — приведенная стопа
~ **planus** [pl**ei**nəs] — плоская стопа
~ **vulgus** [vʌlgəs] — вальгусная стопа
pestle [p**e**sl] — пестик
petechia (*pl.*) [pit**i:**kiə] — петехия, точечное кровоизлияние, петехиальное кровоизлияние
petit mal [pət**i:** m**a:**l] — малая эпилепсия
petrolatum [p**e**trəl**ei**təm] — вазелин
patch [pætʃ] — пятно, бляшка
Peyer's ~s [p**ai**əz] — бляшки Пейера
pH [pi:**ei**tʃ] — водородный показатель
phagocyte [fægəsait] — фагоцит
phagocytic [fægəs**i**tik] — фагоцитарный
pharmacist [f**a:**məsist] — фармацевт
pharmacology [f**a:**məkɔlədʒi] — фармакология
pharmacopoeia [f**a:**məkəp**i:**ə] — фармакопея

pharmacy [f**a:**məsi] — фармация, аптечное дело, аптека
pharyngeal [færindʒ**i**əl] — глоточный
pharyngitis [færindʒ**ai**tis] — фарингит
pharynx [færiŋks] — глотка, зев
  laryngeal ~ [lærindʒ**i:**əl] — гортаноглотка
phase [f**ei**z] — фаза, период
phenacetin [finæsitin] — фенацетин
phenobarbitone [f**i:**nɔub**a:**bitɔun] — фенобарбитон
phenol [f**i:**nɔl] — фенол
phenolphthalein [f**i:**nɔlfθæil:in] — фенолфталеин
phenylalanine [f**e**nilæləni:n] — фенилаланин
phenylketone [f**e**nilk**i:**tɔun] — фенилкетон
phenylketonuria [f**e**nilk**i:**tɔunj**u**əriə] — фенилкетонурия
phenytoin [f**e**nit**ɔu**in] — фенитоин
phosphatase [fɔsfeit] — фосфат
phosphatide [fɔsfətaid] — фосфатид
photophobia [fɔ**u**tɔf**ɔu**biə] — фотофобия
photosynthesis [fɔ**u**tɔus**i**nθesis] — фотосинтез
phthisis [θ**ai**sis] — чахотка, туберкулез
physical [f**i**zikl] — физический
physician [fizi**ʃ**ən] — врач
physicist [f**i**zisist] — физик
physiological [f**i**ziələdʒikl] — физиологический
physiology [fiziɔlədʒi] — физиология
physique [f**i**zi:k] — телосложение
pick (up) [p**i**k] — подбирать
picture [p**i**ktʃə] — картина
  clinical ~ [kl**i**nikəl] — клиническая картина
piece [p**i:**s] — часть
pierce [p**i**əs] — приникать, пронзать, пронизывать, проходить
pigment [p**i**gmənt] — пигмент
  respiratory ~ [risp**ai**ərətəri] — дыхательный пигмент
pigmentation [p**i**gmənt**ei**ʃn] — пигментация
pigmented [p**i**gməntid] — пигментированный, окрашенный
pill [p**i**l] — пилюля, таблетка
pillar [p**i**lə] — столб
pillow [p**i**ləu] — подушка
pinch [p**i**ntʃ] — щипок
pinch [p**i**ntʃ] — щипать
pinching [p**i**ntʃiŋ] — сжатие, зажимание
pinhead [p**i**nhed] — булавочная головка
pin-hole [p**i**n-hɔul] — булавочное ушко
pinkish [p**i**nkiʃ] — розоватый
pinna [p**i**nə] — ушная раковина
pinprick [p**i**nprick] — укол булавкой
pioneering [p**ai**ən**i**əriŋ] — исследовательская работа, изыскание
pioneering [p**ai**ən**i**əriŋ] — новаторский
pipette [pip**e**t] — пипетка
pit [p**i**t] — оставлять ямку
pit [p**i**t] — ямка, впадина; дупло (о зубе)
pituitary [pitj**u**itəri] — гипофиз
place [pl**ei**s] — помещать
placenta [pləs**e**ntə] — плацента
plague [pl**ei**g] — чума, бедствие
  bubonic ~ [bju:bɔnik] — бубонная чума
plain [pl**ei**n] — простой, обыкновенный
plane [pl**ei**n] — плоский, ровный
plane [pl**ei**n] — плоскость
  inclined ~ [inkl**ai**nd] — наклонная плоскость
planned [plænd] — плановый

planning [plæniŋ] — планирование
family ~ [fæmili] — планирование семьи
plant [pl**a:**nt] — растение
herbaceous ~ [hə:b**ei**ʃəs] — травянистое растение
medicinal ~ [mədisinl] — лекарственное растение
plantar [pl**a:**ntə] — подошвенный
plaque [pl**a:**k] — пятно, бляшка
plasma [plæzmə] — плазма
plaster-of-Paris spica [pl**a:**stəəv pæris sp**ai**kə] — гипс
plastic [plæstik] — пластичный
plate [pl**ei**t] — пластинка, полоска, лоскут
tarsal ~ [tʌsl] — тарзальная пластинка
platelet [pl**ei**tlit] — тромбоцит
blood ~ [blʌd] — кровяная пластинка, тромбоцит
pleura, *pl.* **pleurae** [pl**u**ərə, pl**u**ə-ri:] — плевра
pleurisy [pl**u:**risi] — плеврит
dry ~ [dr**ai**] — сухой плеврит
effusion ~ [ifj**u:**ʒən] — влажный плеврит
endemic ~ [end**e**mic] — эндемический плеврит
fibrinous ~ [f**ai**brinəs] — фибринозный плеврит
wet ~ [w**e**t] — влажный плеврит
pleurodynia [pl**u**ərəud**i**niə] — плевродения
plexus [pl**e**ksəs] — сплетение
brachial ~ [br**ei**kiəl] — плечевое сплетение
lumbosacral ~ [lʌmbəus**ei**krəl] — пояснично-крестцовое сплетение
plica [pl**ai**kə] — складка, фибринозная пленка
~ semilunaris [semilj**u**neəris] — полулунная складка
plug [plʌg] — закупоривать
plug [plæg] — закупорка
pneumococcus, *pl.* **pneumococci** [nj**u:**məuk**ɔ**kəs, nj**u:**məuk**ɔ**ksai] — пневмококк
pneumonia [nju:m**əu**niə] — пневмония
hypostatic ~ [h**ai**pəstætik] — гипостатическая пневмония
lobar ~ [l**əu**bə] — лобарная пневмония
unresolved~ [ʌnrizəlvd] — неразрешенная пневмония
pneumothorax [nj**u:**məuθ**ɔu**ræks] — пневмоторакс
spontaneous ~ [spɔnt**ei**njəs] — спонтанный пневмоторакс
tension ~ [t**e**nʃn] — вентиляторный пневмоторакс
traumatic ~ [trɔ:mætik] — травматический пневмоторакс
pocket [pɔkit] — карман, пакет, зубодесневой карман
~ of infection — источник инфекции
periodontal ~ [p**e**riɔudɔntl] — зубодесневой карман, периодонтальный карман
pock-mark [pɔkma:k] — пустула, оспина
point [pɔint] — точка
boiling ~ [bɔiliŋ] — точка кипения
melting ~ [m**e**ltiŋ] — точка плавления
pointless [p**ɔi**ntlis] — бессмысленный
poison [p**ɔi**zn] — отравлять
poison [p**ɔi**zn] — яд
chemical ~ [k**e**mikl] — химический яд
poisoning [p**ɔi**zniŋ] — отравление
polarization [p**ɔu**ləraiz**ei**ʃn] — поляризация
pole [p**ɔu**l] — полюс, конец
polio [p**ɔu**liɔu] — полиомиелит
poliomyelitis [p**ɔu**liɔumaiəl**ai**tis] — полиомиелит

poliovirus [pəuliəuv**ai**ərəs] — полиовирус
pollen [pɔlən] — пыльца
pollutant [pəlj**u:**tənt] — загрязнитель
pollute [pəlj**u:**t] — загрязнять
pollution [plj**u:**ʃən] — загрязнение
polyarthritis [pɔlia:θr**ai**tis] — полиартрит
polycythaemia [pɔlisaiθ**i:**miə] — полицитемия
polydipsia [pɔlid**i**psiə] — полидипсия
polyethylene [pɔli**e**θilin] — полиэтилен
polymerization [pɔlimərizei**ei**ʃn] — полимеризация
polymorphonuclear [pɔlimɔ:fəunju:kliə] — полиморфоядерный
polymyxin [pɔlim**i**ksin] — полимиксин
polyp [pɔlip] — полип
  nasal ~ [n**ei**zl] — носовой полип
polypeptide [pɔlipept**ai**d] — полипептид
polyphagia [pɔlif**ei**dʒiə] — полифагия
polypnoea [pɔlipn**i**ə] — полипния
polysaccharide [pɔlisækəraid] — полисахарид
polyuria [pɔlij**u:**əriə] — полиурия
pons (Varolii) [pɔnzvær**əu**liai] — Варолиев мост (отдел мозга)
poor [p**u**ə] — плохой, бедный
population [pɔpjul**ei**ʃən] — население, популяция
porcelain [pɔ:səlin] — фарфор
porridge [pɔridʒ] — овсяная каша
portal [pɔ:təl] — портальный, воротной (относящийся к воротной вене)
portion [pɔ:ʃn] — часть
  coronal ~ [kɔrənəl] — коронковая часть
position [pəz**i**ʃən] — положение (плода); располагаться
  „Brook" ~ [br**u**k] — положение Брука
  „Mohammedan praying" ~ [məhæmidən pr**ei**iŋ] — положение молящегося мусульманина
  AP ~ [**ei**p**i**] — переднезаднее положение
  lateral ~ [lætərl] — боковое (латеральное) положение
  lithotomy ~ [liθ**ɔ**təmi] — положение при литотомии
  oblique ~ [ɔbl**i:**k] — наклонное положение
  PA ~ **[piei]** — заднепереднее положение
  praying ~ [pr**ei**iŋ] — положение молящегося
  prone ~ [pr**əu**n] — пронация
  semi-prone ~ [s**e**mipr**əu**n] — положение, промежуточное между положением лежа на животе и положением на боку
  sitting ~ [s**i**tiŋ] — положение сидя
  spine ~ [sp**ai**n] — положение на спине
  Trendelenburg ~ [tr**e**ndəlenbə:g] — положение больного по Тренделенбургу
  upright ~ [ʌprait] — прямое положение
positive [pɔzətiv] — положительный
positron [pɔzitrən] — позитрон
possess [pəz**e**s] — обладать
possibility [pɔsəb**i**liti] — возможность
possible [pɔsəbl] — возможный
post mortem [p**əu**st m**ɔ:**tem] — посмертный
posterior [pɔst**i**əriə] — задний, зад
postgraduate [p**əu**stgrædjuət] — аспирант
post-operative [p**əu**st**ɔ**pərətiv] — послеоперационный
postulate [pɔstjuleit] — постулировать
postural [pɔstʃərəl] — позиционный

posture [pɔstʃə] — осанка
potassium [pətæsjəm] — калий
potency [pɔ**u**tənsi] — эффективность
potent [pɔ**u**tənt] — сильный, мощный, эффективный
potential [pət**e**nʃl] — потенциал
  evoked ~ [iv**ɔu**kt] — вызванный потенциал
potion [pɔ**u**ʃən] — питье (лекарственная форма с большим объемом жидкости, в которой растворены ингредиенты)
pour [pɔ**:**] — течь, литься
poverty [pɔvəti] — бедность
powder [p**au**də] — порошок
power [p**au**ə] — сила, способность
  executive ~ [igz**e**kjutiv] — исполнительная власть
  magnifying ~ [mægnifaiiŋ] — кратность увеличения
  resolving ~ [risɔ**l**viŋ] — разрешающая способность
powerful [p**au**əful] — мощный
powers [p**au**əz] — власть
practicable [præktikəbl] — возможный, осуществимый; применимый, пригодный
practitioner [prækt**i**ʃnə] — практик
  general ~ (G.P.) [dʒ**e**nərəl (dʒipi)] — врач общей практики
  paediatric ~ [pi**:**diætrik] — детский врач
precaution [prikɔ**:**ʃən] — предосторожность
precede [pri:s**i:**d] — предшествовать
preceding [pri:s**i:**diŋ] — предшествующий
precipitate [pris**i**piteit] — осадок
precipitation [pris**i**pit**ei**ʃn] — отложение
precipitator [pris**i**pit**ei**tə] — отстойник, осадитель, фильтр
  electrostatic ~ [il**e**ktrɔustætik] — электростатический фильтр
precise [pris**ai**z] — точный
precision [pris**i**ʒən] — точность, четкость
precocious [prikɔ**u**ʃəs] — ранний, преждевременный
precordial [pri:kɔ**:**diəl] — предсердечный, прекордиальный
precorneal [prikɔ**:**niəl] — предроговичный
precursor [prikə**:**sə] — предшественник
predictably [pridiktəbli] — предсказуемо, как и ожидалось
prediction [pridikʃən] — предсказание
predispose (to) [pri:dispɔ**u**z] — предрасполагать
predominant [pridɔminənt] — преобладающий
predominantly [pridɔminəntli] — преимущественно, главным образом
predominate [pridɔmineit] — преобладать
pre-enzyme [pri**e**nzaim] — предэнзим, предфермент
prefer [prifə**:**] — предпочитать
preference [pr**e**fərəns] — предпочтение
prefix [pr**i:**fiks] — приставка
pregnancy [pr**e**gnənsi] — беременность
pregnant [pr**e**gnənt] — беременная
prejudice [pr**e**dʒudis] — предрассудок, предубеждение
premature [pr**e**mətj**u**ə] — преждевременный, недоношенный
pre-medication [prim**e**dik**ei**ʃn] — премедикация
premolar [prim**ɔu**lə] — премоляр
preoccupation [priɔkjup**ei**ʃn] — озабоченность
preparation [pr**e**pər**ei**ʃn] — препарат
  antibacterial ~ [æntibæt**i**əriəl] — антибактериальный препарат

prepatellar [pri:pət**e**lə] — преднадколенниковый
~ **bursa** [pr**i**pət**e**lə] — преднадколенковая подсухожильная сумка
prerogative [prir**ɔ**gətiv] — прерогатива, привилегия
presage [pr**e**sidʒ] — предвещать, предрекать
presage [pr**e**sidʒ] — предсказание, предвещание
presbyopia [pr**e**zbi**ou**piə] — пресбиопия, старческая дальнозоркость
preschool [pr**i:**sku:l] — дошкольный
prescribe [priskr**ai**b] — прописывать, выписывать
prescription [priskr**i**pʃn] — рецепт
presentation [pr**e**zənt**ei**ʃn] — предлежание (плода)
breech ~ [br**i:**tʃ] — ягодичное предлежание плода
cephalic ~ [sefælik] — головное предлежание плода
vertex ~ [v**ɔ:**teks] — затылочное предлежание плода
preservation [pr**e**zə:v**ei**ʃən] — сохранение
preserve [prizə**:**v] — сохранять
pressure [pr**e**ʃə] — давление
arterial blood ~ [a:t**i**əriəlblʌd] — артериальное кровяное давление
atmospheric ~ [ætməsf**e**rik] — атмосферное давление
blood ~ [blʌd] — кровяное давление
intrathoracic ~ [**i**ntrəθəræsik] — внутригрудное давление
mean aortic ~ [m**i:**nei**ɔ:**tik] — среднее аортальное давление
mean pulmonary artery ~ [m**i:**npʌlmənəria:təri] — среднее легочное артериальное давление
negative ~ [n**e**gətiv] — отрицательное давление
presumably [prizj**u:**məbli] — предположительно, возможно, вероятно
prevailing [priv**ei**liŋ] — преобладающий
prevent [priv**e**nt] — мешать, затруднять, предотвращать,
preventable [priv**e**ntəbl] — предотвратимый
prevention [priv**e**nʃən] — профилактика, предотвращение
preventive [priv**e**ntiv] — предохранительный, профилактический
previous [pr**i:**vjəs] — предыдущий, предшествующий
prick [pr**i**k] — прокол, укол
primarily [pr**ai**mərili] — прежде всего, в основном, главным образом
primary [pr**ai**məri] — основной, первичный
primidone [pr**i**midəun] — примидон
primipara [praim**i**pərə] — женщина, рожающая в первый раз
primitive [pr**i**mitive] — простой
principal [pr**i**nsəpəl] — основной, главный
principle [pr**i**nsəpl] — принцип
prior [pr**ai**ə] — до, перед
priority [prai**ɔ**riti] — приоритет, очередность
private [pr**ai**vit] — персональный, личный, частный
probably [pr**ɔ**bəbli] — возможно, вероятно
procedure [prəs**i:**dʒə] — процедура
surgical ~ [sə**:**dʒikl] — хирургическая процедура, операция
proceed [prəs**i:**d] — продвигаться, двигаться
process [pr**əu**ses] — отросток; процесс
pathological ~ [pæθələdʒikəl] — патологический процесс

spinous ~ [sp**ai**nəs] — остистый отросток
proctoscopy [prɔkt**ɔ**skəpi] — проктоскопия
prodromal [prɔudr**əu**ml] — продромальный
produce [prədj**u:**s] — производить, вырабатывать, вызывать
product [pr**ɔ**dʌkt] — продукт
waste ~s [w**ei**st] — отходы
production [prədʌkʃən] — производство
professional [prəf**e**ʃənl] — профессиональный
profit [prɔfit] — прибыль
profit-making [prɔfitm**ei**kiŋ] — прибыльный, приносящий доход
profound [prəf**au**nd] — глубокий, сильный
profoundly [prəf**au**ndli] — сильно, крайне
profuse [prəfj**u:**s] — изобилующий, обильный, профузный
progeny [pr**ɔ**dʒini] — потомство
progesterone [prɔudʒ**e**stərɔun] — прогестерон
prognosis [prɔgn**əu**sis] — прогноз
favourable ~ [f**ei**vərəbl] — благоприятный прогноз
unfavourable ~ [ʌnf**ei**vərəbl] — неблагоприятный прогноз
program [pr**əu**græm] — программировать
programme [pr**əu**græm] — программа
progressively [prɔugr**e**sivli] — прогрессивно, постепенно
progressive [prɔugr**e**siv] — постепенный
project [prədʒ**e**kt] — выступать, выдаваться
prolactin [prɔul**æ**ktin] — пролактин
prolapsed [pr**əu**læpst] — выпавший
proliferation [prəl**i**fər**ei**ʃn] — пролиферация
prolonged [prɔul**ɔ**ŋd] — длительный, затянувшийся
prominent [pr**ɔ**minənt] — выступающий, заметный, выдающийся, отличительный
promote [prəm**əu**t] — возбуждать, стимулировать, побуждать
promotion [prəm**əu**ʃən] — продвижение
prone [pr**əu**n] — распростертый
pronounced [prən**au**nst] — ярко выраженный
proof [pr**u:**f] — непроницаемый
acid ~ [**æ**sid] — кислотоустойчивый
bullet ~ [b**u**lit] — пуленепробиваемый
fire ~ [f**ai**ə] — несгораемый
water ~ [w**ɔ**tə] — водонепроницаемый
propagation [prɔpəg**ei**ʃn] — распространение
proper [prɔpə] — правильный, соответствующий
proper [prɔpə] — собственно
properly [pr**ɔ**pəli] — правильно, должным образом, соответствующим образом
property [pr**ɔ**pəti] — имущество; свойство
prophase [pr**əu**feiz] — профаза
prophylactic [prɔfil**æ**ktik] — профилактический
proportion [prəp**ɔ:**ʃən] — часть, пропорция
propriodontal [pr**əu**priɔudɔntl] — проприодонтальный
proptosis [prɔpt**əu**sis] — проптоз
prospect [pr**ɔ**spekt] — будущее
prospective [prəsp**e**ktiv] — будущий
prostate [pr**ɔ**steit] — предстательная железа, простата
prostatectomy [prɔstət**e**ktəmi] — простатэктомия
retro-pubic ~ [r**e**trɔupj**u:**bik] — залобковая простатэктомия

transurethral ~ [trænsjuəri:θrəl] — трансуретральная простатэктомия
transvesical ~ [trænsvi:sikl] — трансвезикальная простатэктомия
prosthesis [prɔsθisis] — протез
protamine [prəutəmin] — протамин
protease [prəutieiz] — протеаза
protection [prətekʃən] — защита
protective [prətektiv] — защитный
protein [prəuti:n] — протеин, белок
proteose [prəutiəuz] — протеоза
proteosynthesis [prəutiəsinθesis] — протеосинтез
proton [prəutən] — протон
protozoon, *pl.* **protozoa** [prəutəzəuən, prəutəzəuə] — простейший (организм)
protrude [prətru:d] — выступать, выдаваться, выпадать
protruding [prətru:diŋ] — выдающийся, выступающий
~ **ears** [prətru:diŋ] — лопоухость
prove [pru:v] — доказывать, подтверждать, оказываться
provide (with) [prəvaid] — обеспечивать, предоставлять, проводить
provision [prəviʒən] — обеспечение, предоставление, снабжение
proximal [prɔksiml] — проксимальный
Prussian [prʌʃn] — прусский
psoriasis [səraiəsis] — псориаз
psychiatrist [saikaiətrist] — психиатр
psychiatry [saikaiətri] — психиатрия
psychic [saikik] — психический
psychological [saikələdʒikəl] — психологический
psychoprophylaxis [saikɔuprɔfilæksis] — психопрофилактика
psychosis [saikɔusis] — психоз
affective ~ [əfektiv] — аффективный психоз
functional ~ [fʌŋkʃənəl] — функциональный психоз
manic-depressive ~ [mænik-dipresiv] — маниакально-депрессивный психоз
organic ~ [ɔ:gænik] — органический психоз
psychosomatic [saikɔusɔumætik] — психосоматический
psychotic [saikɔtik] — психотический
ptosis [ptɔusis] — птоз
puberty [pju:bəti] — половая зрелость, период полового созревания, пубертатный период, половое созревание
pubescence [pjubesns] — половое созревание
pubis [pju:bis] — лобок; лобковая кость, лонная кость
puerperal [pjuə:pərəl] — послеродовой, пуэрперальный
puerperium [pjuə:pi:riəm] — пуэрперий, послеродовой, пуэрперальный период
puffy [pʌfi] — отекший
pull [pul] — натяжение, тяга
pulling [puliŋ] — вытягивание
pulmonary [pʌlmənəri] — легочный
pulp [pʌlp] — пульпа
dental ~ [dentl] — пульпа зуба
pulsus altenans [pʌlsəs ɔ:ltə:nənz] — альтернирующий пульс
pump [pʌmp] — качать, нагнетать
pump [pʌmp] — насос, помпа
sodium ~ [səudiəm] — натриевый насос
punctum lacrimalis [pʌnktəm lækrimeilis] — слезная точка
puncture [pʌŋktʃə] — пункция
lumber ~ [lʌmbə] — спинномозговая пункция
pupil [pju:pl, pju:pil] — зрачок
central ~ [sentrəl] — зрачок, расположенный по центру

dilated ~ [dail**ei**tid] — расширенный зрачок
equal ~**s** [**i:**kwəl] — одинаковые зрачки
pin-point ~ [p**i**np**ɔi**nt] — маленький зрачок (с булавочную головку)
round ~ [r**aun**d] — круглый зрачок
pupillary [pj**u:**piləri] — пупиллярный, зрачковый
pure [pj**uə**] — чистый
purely [pj**uə**li] — только, просто; чисто
purge [p**ə:**dʒ] — слабительное
purification [pj**u**rifik**ei**ʃn] — очистка
purify [pj**u**rifai] — очищать
purity [pj**uə**riti] — чистота
purple [p**ə:**pl] — пурпур
purple [p**ə:**pl] — пурпурный
visual ~ [v**i**ʒjuəl] — зрительный пурпур, родопсин
purpose [p**ə:**pəs] — цель
purposeful [p**ə:**pəsful] — целенаправленный
purposeless [p**ə:**pəslis] — бесцельный
purpura [p**ə:**pjuərə] — пурпура
thrombocytopenic ~ [θrɔmbɔus**ai**tɔp**i:**nik] — тромбоцитопеническая пурпура
pursue [pəsj**u:**] — преследовать
pursuit [pəsj**u:**t] — преследование
purulent [pj**u**rulənt] — гнойный
pus [pʌs] — гной
push [p**u**ʃ] — проталкивать
pustular [pʌstjulə] — прыщавый, гнойничковый
pustule [pʌstjul] — прыщ, пустула, гнойничок
pyelitis [p**ai**əl**ai**tis] — пиелит
pyelography [paiəl**ɔ**grəfi] — пиелография
ascending ~ [əs**e**ndiŋ] — восходящая пиелография
intravenous ~ [**i**ntrəv**i:**nəs] — внутривенная пиелография
retrograde ~ [r**e**trɔugreid] — ретроградная пиелография
pyelonephritis [p**ai**əlɔnefr**ai**tis] — пиелонефрит
acute ~ [əkj**u:**t] — острый пиелонефрит
chronic ~ [krɔnik] — хронический
rightsided ~ [r**ai**tsaidid] — правосторонний пиелонефрит
pyloric [pail**ɔ**rik] — привратниковый
pylorus [pail**ɔu**rəs] — привратник
pyogenic [p**ai**ɔudʒ**e**nik] — пиогенный
pyramid [p**i**rəmid] — пирамида
pyrexia [pair**e**ksiə] — лихорадка
pyrexial [pair**e**ksiəl] — лихорадочный
pyrogen [p**ai**ərədʒən] — пироген

Q

qualification [kwɔlifik**ei**ʃən] — квалификация
qualified [kwɔlifaid] — квалифицированный
quality [kwɔliti] — качество
quantitative [kwɔntətiv] — количественный
quantity [kwɔntiti] — количество
quarantine [kwɔrənti:n] — карантин
quarter [kwɔ:tə] — четверть
quickening [kw**i**kniŋ] — ускорение
quickly [kw**i**kli] — быстро
quiet [kw**ai**ət] — спокойный, тихий
quinine [kwin**i:**n, kw**i**ni:n] — хинин
quinsy [kw**i**nzi] — ангина; острый, гнойный тонзиллит
quite [kw**ai**t] — почти
quote [kw**ɔu**t] — приводить (в качестве примера), цитировать

R

rabies [r**ei**bi:z] — бешенство
rachitic [ræk**i**tik] — рахитичный
rad [ræd] — радикал
radiation [r**ei**di**ei**ʃn] — излучение, радиация
  atomic ~ [ətɔmik] — атомная радиация
  ionizing ~ [aiən**ai**ziŋ] — ионизирующая радиация
  neutron ~ [nj**u:**trɔn] — нейтронное излучение
  optic ~ [ɔptik] — зрительная лучистость, пучок Грасиоле
radical [rædikəl] — радикал
radioactive [r**ei**diɔuæktiv] — радиоактивный
radiographer [reidiɔgrəfə] — рентгенолог
radiography [r**ei**diɔgrəfi] — рентгенография
radiology [reidi**ɔ**lədʒi] — радиология, рентгенология
radio-opaque [r**ei**diɔ-ɔup**ei**k] — рентгеноконтрастный
radium [r**ei**djəm] — радий
radius [r**ei**diəs] — лучевая кость
rage [r**ei**dʒ] — бешенство, гнев
raise [r**ei**z] — поднимать, происходить
rales [r**a:**lz] — хрипы
rancid [rænsid] — отвратительный, мерзкий
range [r**ei**ndʒ] — колебаться
range [r**ei**ndʒ] — круг, предел, ряд
rapid [ræpid] — быстрый
rapidly [ræpidli] — быстро
rapture [rʌptʃə] — разрыв
rare [r**eə**] — редкий
rarely [r**eə**li] — редко
rash [ræʃ] — сыпь
  scarlet ~ [sk**a:**lit] — алая сыпь, ярко-красная сыпь
rat [ræt] — крыса
rate [r**ei**t] — степень, пропорция, часть, скорость
  ailment ~ [**ei**lmənt] — заболеваемость
  blood sedimentation ~, BSR [blʌdsediment**ei**ʃn, biesa:] — скорость оседания эритроцитов (СОЭ)
  erythrocyte sedimentation ~, E.S.R. [ir**i**θrɔusait sediment**ei**ʃn, i:esa:] — скорость оседания эритроцитов (СОЭ)
  death ~ [d**e**θ] — смертность
  heart ~ [h**a:**t] — сердечный ритм
  infant mortality ~ [**i**nfənt mɔ:t**æ**liti] — детская смертность
  maternal mortality ~ [mət**ə:**nl mɔ:tæliti] — материнская смертность
  morbidity ~ [mɔ:b**i**diti] — заболеваемость
  mortality ~ [mɔ:tæliti] — смертность
  neonatal mortality ~ [ni:ɔun**ei**lte mɔ:tæliti] — детская смертность
  perinatal mortality ~ [perin**ei**tl mɔ:tæliti] — перинатальная смертность
ravage [rævidʒ] — разрушать, уничтожать
raw [r**ɔ:**] — сырой
ray [r**ei**] — луч
  alpha ~ [ælfə] — альфа-луч
  beta ~ [b**i:**tə] — бета-луч
  gamma ~ [gæmə] — гамма-луч
  ultraviolet ~s [ʌltrəv**ai**ələt] — ультрафиолетовые лучи
reabsorb [r**i:**əbs**ɔ:**b] — реабсорбировать
reabsorption [r**i**əs**ɔ:**pʃən] — реабсорбция, повторная абсорбция
reach [r**i:**tʃ] — достигать
reaction [riæktʃən] — реакция
  biochemical ~ [b**ai**ɔuk**e**mikəl] — биохимическая реакция

immunity ~ [imj**u:**nəti] — иммунная реакция
immunization ~ [imj**u:**naiz**ei**ʃn] — реакция иммунизации
Wassermann ~ [vʌsəmən] — реакция Вассермана
reactivate [riæktiveit] — снова становиться активным
reactor [riæktə] — реактор
nuclear ~ [nj**u:**kliə] — ядерный реактор
readily [r**e**dili] — быстро, легко
reagent [ri:**ei**dʒənt] — реагент
Hager's ~ [h**a:**gəz] — реагент Хагера
Mayer's ~ [m**ei**əz] — реагент Мейера
strip ~ [str**i**p] — индикаторная (реактивная) лента, индикаторная полоска
Wagner's ~ [vægnəz] — реагент Вагнера
realize [r**i**əlaiz] — понимать
really [r**i**əli] — на самом деле
rearrangement [r**i**ər**ei**ndʒmənt] — перегруппировка, перераспределение
reason [r**i:**zn] — убеждать
reasonable [r**i:**zənəbəl] — умеренный; разумный; приемлемый, обоснованный
reasoned [r**i:**znd] — обоснованный
reasoning [r**i:**zniŋ] — убеждение, доказательство, аргументация; здравомыслие, рассуждение
receive [ris**i:**v] — получать
recently [r**i**sntli] — недавно
receptor [ris**e**ptə] — рецептор
nerve ~ [ris**e**ptə] — нервный рецептор
recessive [ris**e**siv] — рецессивный
recipient [ris**i**piənt] — реципиент
recognition [r**e**kəgn**i**ʃən] — признание, распознавание
recognize [r**e**kəgnaiz] — признавать, узнавать, распознавать
recoil [r**i**kɔil] — возврат
recommend [r**e**kəm**e**nd] — рекомендовать
recommendation [r**e**kəmend**ei**ʃən] — рекомендация
record [r**e**kɔ:d] — достижение; запись, регистрация
record [rikɔ**:**d] — регистрировать, записывать
case ~ [k**ei**s] — карта больного
recover [rikʌvə] — выздоравливать
recovery [rikʌvəri] — выздоровление
recreational [r**e**kri**ei**ʃənl] — относящийся к отдыху, рекреационный
rectal [r**e**ktl] — ректальный
rectification [r**e**ktifik**ei**ʃn] — ректификация
rectum [r**e**ktəm] — прямая кишка
recuperate [rikj**u:**pəreit] — поправляться, выздоравливать
recur [rikɔ**:**] — повторяться, рецидивировать
recurrent [rikʌrənt] — повторный, рецидивирующий, рецидивный
reddish [r**e**diʃ] — красноватый
redness [r**e**dnis] — краснота, покраснение
reduce [ridj**u:**s] — снижать, уменьшать, сводить
reduction [ridʌkʃən] — снижение; восстановление; вправление, репозиция
refer (to) [rifɔ**:**] — направлять; называть; упоминать, относиться
reference [r**e**frəns] — упоминание
refine [rif**ai**n] — усовершенствовать
reflex [r**i:**fleks] — рефлекс
abdominal ~ [æbd**ɔ**minl] — брюшной рефлекс
Babinski's ~ [bæb**i**nskiz] — рефлекс Бабинского
biceps ~ [b**ai**seps] — рефлекс двуглавой мышцы

conditioned ~ [kəndiʃənd] — условный рефлекс
corneal ~ [kɔ:niəl] — роговичный рефлекс
deep ~ [di:p] — глубокий рефлекс
gag ~ [gæg] — рвотный рефлекс
inborn ~ [inbɔ:n] — врожденный рефлекс
jaw ~ [dʒɔ:] — челюстной рефлекс
superficial ~ [sjupəfiʃəl] — поверхностный рефлекс

reflux [ri:flʌks] — рефлюкс, отток
refraction [rifrækʃn] — рефракция, преломление
refrigerator [rifridʒəreitə] — холодильник
refund [rifʌnd] — возмещать убытки
refuse [rifju:z] — отказываться, отклонять
regain [rigein] — восстанавливать
regardless (of) [rigɑ:dlis] — независимо от
regenerate [ridʒenəreit] — восстанавливать, регенерировать
region [ri:dʒən] — область
registrar [redʒistrɑ:] — регистратор
regress [rigres] — регрессировать, идти в обратном направлении
regular [regjulə] — регулярный
regularly [regjuləli] — регулярно
rehabilitation [ri:əbilitеiʃən] — реабилитация
reinforce [riinfɔ:s] — усиливать
reject [ridʒekt] — отвергать, отторгать
relapse [rilæps] — рецидив
relapse [rilæps] — рецидивировать, повторяться
relapsing [rilæpsiŋ] — рецидивирующий
relate [rileit] — связывать, относиться
related [rileitid] — родственный, связанный
relation [rileiʃn] — отношение, связь
relationship [rileiʃənʃip] — отношение, связь
relative [relətiv] — относительный
relatively [relətivli] — относительно
relax [rilæks] — расслабляться
relaxing [rilæksiŋ] — расслабляющий, смягчающий
release [rili:s] — выделять, освобождать
release [rili:s] — освобождение, выделение
relevant [relivənt] — релевантный, имеющий отношение (к); существенный, важный
reliability [rilaiəbiliti] — надежность
reliable [rilaiəbl] — надежный
relieve [reli:v] — облегчать, смягчать, снимать (боль), освобождать
relocate [ri:ləukeit] — перемещать
rely (on) [rilai] — полагаться
remain [rimein] — оставаться, сохраняться
remarkable [rimɑ:kəbl] — выдающийся
remarry [rimæri] — жениться повторно
remedial [rimi:diəl] — лечебный
~ gymnastics [dʒimnæstiks] — лечебная гимнастика
remedy [remidi] — лекарство, средство
remedy [remidi] — лечить
remember [rimembə] — помнить
remote [rimәut] — отдаленный
removal [rimuvəl] — удаление, снятие
~ of stitches [əvstitʃiz] — снятие швов
remove [rimu:v] — удалять, устранять
renal [ri:nəl] — почечный

render [r**e**ndə] — делать, становиться
repair [rip**e**ə] — лечить, восстанавливать
repeated [rip**i:**tid] — повторный, неоднократный
repetitive [rep**i**:titiv] — повторный, неоднократный
replace [ripl**ei**s] — замещать, заменять
replacement [ripl**ei**smənt] — замена, замещение
report [ripɔ**:**t] — сообщение
  case ~ [ripɔ**:**t] — карта больного
represent [r**e**priz**e**nt] — представлять
reproduce [r**i:**prədj**u:**s] — воспроизводить
reproduction [r**i:**prədʌkʃən] — воспроизведение, размножение
reproductive [r**i:**prədʌktiv] — репродуктивный
repugnant [ripʌgnənt] — отталкивающий, отвратительный
reputation [r**e**pjut**ei**ʃən] — репутация
require [rikq**ai**ə] — требовать
research [risɔ**:**tʃ] — исследование
resemble [riz**e**mbl] — напоминать, походить, быть похожим
reserve [rizɔ**:**v] — запас
reside [riz**ai**d] — находиться
resident [r**e**zidənt] — врач-стажер; житель, коренной житель
residential [r**e**zid**e**nʃəl] — жилой
residue [r**e**zidju] — остаток
resilience [rizi**l**iəns] — эластичность, упругость
resin [r**e**zin] — смола
resistance [rizi**s**təns] — сопротивление
resistant [rizi**s**tənt] — устойчивый
resolve [rizɔlv] — растворять
resonance [r**e**znəns] — резонанс
  skodaic ~ [skɔud**ei**ik] — скодаический резонанс
  tympany ~ [t**i**mpəni] — тимпанический перкуторный звук
resonant [r**e**znənt] — резонирующий
resorption [rizɔ**:**pʃn] — резорбция кости
respect [risp**e**kt] — отношение
respective [risp**e**ktiv] — соответствующий
respiration [r**e**spər**e**iʃən] — дыхание
  ~ quotient [kwɔ**u**ʃnt] — респираторный коэффициент
  controlled ~ [kəntrɔ**u**ld] — искусственная вентиляция легких
  external ~ [ekstɔ**:**nəl] — внешнее дыхание
  normal ~ [nɔ**:**məl] — нормальное дыхание
respiratory [risp**i**rətəri] — дыхательный
respond (to) [rispɔnd] — реагировать, отвечать
response [rispɔns] — ответ, реакция
responsibility [rispɔnsəb**i**liti] — ответственность, обязанность
responsible [rispɔnsəbl] — ответственный
rest [r**e**st] — находиться
rest [r**e**st] — остальной
rest [r**e**st] — покой, отдых
restaurant [r**e**stərɔŋ] — ресторан
restless [r**e**stlis] — беспокойный
restlessness [r**e**stlisnis] — беспокойство
restore [ristɔ**:**] — возвращать, восстанавливать
restoration [r**e**tər**ei**ʃən] — восстановление
restrain [r**i**strein] — сдерживать, ограничивать
result (from) [rizʌltfrɔm] — быть результатом
result (in) [rezʌltin] — приводить (к)

resuscitation [risʌsit**ei**ʃn] — оживление, реабилитация
resuscitatory [risʌsit**ei**təri] — реабилитационный
resuture [ri:sj**u:**tʃə] — наложение повторного шва, повторное ушивание
retain [rit**ei**n] — задерживать, удерживать, сохранять
retard [rit**a:**d] — задерживать, замедлять
retard [rit**a:**d] — задержка
retention [rit**e**nʃən] — задержка; сохранение, удержание
  prolonged ~ [prələŋd — длительная задержка
reticulo-endothelial [rit**i**kjulɔu-endɔuθ**i:**liəl] — ретикуло-эндотелиальный
reticulum, *pl.* **reticula** [rit**i**kjuləm, ret**i**kjulə] — ретикулум, сеточка
retina, *pl.* **retinae** [r**e**tinə, r**e**tini:] — сетчатка, сетчатая оболочка
  detached ~ [ditætʃt] — отслоившаяся сетчатая оболочка
retire [rit**ai**ə] — уходить на пенсию
retirement [rit**ai**əmənt] — уход на пенсию
retraction [ritrækʃn] — втягивание
retrograde [r**e**trɔugreid] — обратный
retroperitoneal [r**e**trɔup**e**ritɔuni**ə**l] — ретроперитонеальный
retropubic [r**e**trɔupj**u:**bik] — залобковый
return [ritə**:**n] — возврат
return [ritə**:**n] — возвращать, возвращаться
  diminished ~ [dim**i**niʃt] — пониженный возврат
  diminished capillary ~ [dim**i**niʃt kə**pi**ləri] — пониженный капиллярный возврат
reveal [riv**i:**l] — выявлять, обнаруживать
reverse [rivə**:**s] — менять в противоположном направлении
reversible [rivə**:**səbl] — обратимый, двусторонний
revolution [r**e**vəlj**u:**ʃn] — вращение
revolutionary [r**e**vəl**u:**ʃnəri] — революционный
revolve [riv**ɔ**lv] — вращаться
rhesus [r**i:**səs] — резус
  ~ -factor, Rh-f. [r**i:**zəs fæktə, a:eitʃ fæktə] — резус-фактор
  Rh-incompatibility [**a:**r**ei**tʃ **i**nkəmpætəbiliti] — резус-несовместимость
  Rh-negative [**a:**r**ei**tʃ n**e**gətiv] — резус-отрицательный
  Rh-positive [**a:**r**ei**tʃ p**ɔ**zətiv] — резус-положительный
rhinitis [rain**ai**tis] — ринит
  acute ~ [əkj**u:**t] — острый ринит
  atrophic ~ [ætrɔfik] — атрофический ринит
  chronic ~ [krɔnik] — хронический ринит
  dry ~ [dr**ai**] — сухой ринит
rhizome [r**ai**zɔum] — корень
rhoncus, *pl.* **rhonci** [r**ɔ**nkəs, rənkai] — хрип
rhythm [r**i**ðm] — ритм
  gallop ~ [gæləp] — галопирующий ритм
rhythmical [r**i**ðmikl] — ритмичный
rib [r**i**b] — ребро
ribose [r**ai**bɔuz] — рибоза
ribosome [r**ai**bəsɔum] — рибосома
richly [r**i**tʃli] — обильно
rickets [r**i**kits] — рахит
Rickettsia [rik**e**tsiə] — риккетсия
riddle [r**i**dl] — загадка
rigid [r**i**dʒid] — ригидный, негнущийся, жесткий
rigidity [ridʒ**i**diti] — ригидность, оцепенение
  muscular ~ [mʌskjulə] — мышечное окоченение
ring [r**i**ŋ] — кольцо

ring, rang, rung [riŋ, ræŋ, rʌn] — звонить
ringing [ri**ŋ**iŋ] — звон
risk [**r**isk] — риск
rod [rɔd] — осколок, обломок, палочка; палочка (сетчатой оболочки глаза)
  enamel ~ [inæməl] — эмалевая призма зуба
rodent [rɔ**u**dənt] — грызун
rod-like [rɔdlaik] — палочкообразный, палочковидный (о бактериях)
roll [rɔl] — валик
  cotton ~ [kɔtən] — ватный валик
room [r**u:**m] — комната, палата, кабинет
  admission ~ [ədmi**ʃ**ən] — приемный покой
  consulting ~ [kənsʌltiŋ] — кабинет врача; смотровая
  delivery ~ [dili**v**əri] — родильный зал
  plaster ~ [pl**a:**stə] — гипсовая
  sisters' ~ [si**s**təz] — сестринская
  treatment ~ [tr**i:**tmənt] — процедурная
root [r**u:**t] — корень; корешок
  nerve ~ [n**ə:**v] — корешок нерва
roughly [rʌfli] — приблизительно, примерно
round-the-clock [r**au**ndðəkl**ɔ**k] — круглосуточный
route [r**u:**t] — путь, способ
routine [ru:t**i:**n] — общепринятый, обычный, стандартный
routinely [ru:t**i**nli] — обычно
row [rɔu] — ряд
rub [rʌb] — тереть
rubber [rʌbə] — резина
rubber [rʌbə] — резиновый
rubella [ru:b**e**lə] — краснуха
rudimentary [r**u:**dim**e**ntəri] — рудиментарный, остаточный
rule [r**u:**l] — правило
run (out) [rʌn] — кончаться, завершаться
rupture [rʌptʃə] — разрыв, разрываться
  cardiac ~ [k**a:**diæk] — разрыв сердца
rustle [rʌsl] — шуршание

S

sac [sæk] — мешок, мешочек
  amniotic ~ [æmni**ɔ**tik] — амниотический мешок, амнион
saccharide [sækəraid] — сахарид
sacrum [s**ei**krəm] — крестец
safety [s**ei**fti] — безопасность
saline [səl**ai**n] — соляной раствор, физиологический раствор
saliva [səl**ai**və] — слюна
Salmonella typhosa [sælmən**e**lə taif**ɔ**uzə] — тифозная палочка
salpingitis [sælpiŋdʒ**ai**tis] — сальпингит
salpingo-oophoritis [sælpiŋgɔu-**ɔu**əfɔr**ai**tis] — сальпингоофорит
salt [sɔ**:**lt] — соль
same [s**ei**m] — тот же самый, такой же
sample [s**a:**mpl] — образец, проба
sarcoidosis [sa:kɔid**ɔu**sis] — саркоидоз
sarcoma [sa:k**ɔu**mə] — саркома
  osteogenic ~ [ɔstiɔudʒ**e**nik] — остеогенная саркома
  Burkitt's ~ [b**ə:**kits] — саркома Беркита
  ring ~ [r**i**ŋ] — кольцевая саркома
Sarcoptes scabiei [sa:kɔpti:z sk**ei**bi:ai] — саркоптес, чесоточный клещ
satisfactory [sætisf**æ**ktəri] — удовлетворительный
saturated [sætʃəreitid] — насыщенный
saturation [sætʃər**ei**ʃn] — насыщение
satyriasis [sætir**ai**əsis] — сатириаз
save [s**ei**v] — избавлять, спасать

scabies [sk**ei**bi:z] — чесотка
scald [sk**ɔ:**ld] — ожог (жидкостью или паром), ошпаривание, обваривание
scale (off) — шелушиться
scale [sk**ei**l] — масштаб; чешуйка, чешуя
scales [sk**ei**lz] — весы
scaler [sk**ei**lə] — инструмент для удаления зубного камня, крючок для снятия зубного камня
  chisel ~ [tʃ**i**zəl] — инструмент для удаления зубного камня (напр., крючок, экскаватор)
  hoe ~ [h**ɔu**] — стоматологический экскаватор
scaling [sk**ei**liŋ] — снятие зубных отложений, снятие зубного камня, соскабливание
scan [skæn] — сканировать
scanty [sk**æ**nti] — скудный
scapula [skæpjələ] — лопатка
scapular [skæpjulə] — лопаточный
scar [sk**a:**] — образовывать шрам
scar [sk**a:**] — рубец, шрам
  glia ~ [gl**ai**ə] — глиальный рубец
scattered [skætəd] — разбросанный, разрозненный
sceptical [sk**e**ptikl] — скептический
schizophrenia [sk**i**səufr**i:**niə] — шизофрения
schizophrenic [sk**i**səufr**i:**nik] — шизофренический
school [sk**u:**l] — школа
  nursery ~ [n**ɔ:**səri] — детский сад
science [s**ai**əns] — наука
  natural ~ [nætʃərəl] — естественная наука
science-based [s**ai**əns b**ei**st] — научно обоснованный
scissors [s**i**zəz] — ножницы
sclera [skl**i**ərə] — склера
scleritis [skl**i**ər**ai**tis] — склерит
scleromalacia perforans [skliərəmæl**ei**ʃiəpə**:**fəræns] — перфорирующая склеромаляция
sclerosis [skliər**ɔu**sis] — склероз
  ~ disseminated [dis**e**mineitid] — диссеминированный (рассеянный) склероз
  ~ multiple [mʌltipl] — рассеянный склероз
sclerotic [skl**i**ərɔ**:**tik] — склеротический
scoliosis [skəli**ɔu**sis] — сколиоз
  congenital ~ [kəndʒ**e**nitəl] — врожденный сколиоз
  paralytic ~ [pærəl**i**tik] — паралитический сколиоз
  postural ~ [pɔstʃərəl] — постуральный сколиоз
  structural ~ [strʌktʃərəl] — структурный сколиоз
scope [sk**ɔu**p] — границы, пределы; простор, свобода
score [sk**ɔ:**] — добиваться успеха, насчитывать
score [sk**ɔ:**] — множество, счет
scourge [sk**ɔ:**dʒ] — бич
screen [skr**i:**n] — скринировать
screening [skr**i:**niŋ] — скринирование, скрининг
screw (in) [skr**u:**] — вворачивать
  coarse adjustment ~ [k**ɔ:**s ədʒʌstmənt] — винт грубой настройки
  fine adjustment ~ [f**ai**n ədʒʌstmənt] — винт точной настройки
scrub [skrʌb] — вычищать, выскабливать, скрести
scrubber [skrʌbə] — газоочиститель
scurvy [sk**ə:**vi] — цинга
sea [s**i:**] — море
  high ~ [h**ai**] — открытое море
seat [s**i:**t] — место
sebaceous [sib**ei**ʃəs] — сальный
sebum [s**i:**bəm] — кожное сало
secrete [sikr**i:**t] — выделять, секретировать

secretion [sikr**i:**ʃən] — секреция, выделение
  internal ~ [int**ə:**nl] — внутренняя секреция
secretory [sikr**i:**təri] — секреторный
section [s**e**kʃn] — сечение (хирургическое), секция, часть
  Caesarian ~ [si:z**e**əriən] — кесарево сечение
security [sikj**u**əriti] — безопасность
sedation [sed**ei**ʃn] — седация, успокоение
sedative [s**e**dətiv] — седативное, успокаивающее вещество
sediment [s**e**dimənt] — осадок
sedimentation [s**e**diment**ei**ʃən] — осаждение
seed [s**i:**d] — семя
seemingly [s**i:**miŋli] — на вид, по-видимому, на первый взгляд
segment [s**e**gmənt] — сегмент
  anterior ~ [ænt**i**əriə] — передний сегмент
segmental [s**e**gmətəl] — сегментообразный, сегментный
seizure [s**i:**ʒə] — припадок, приступ
seldom [s**e**ldəm] — редко
selected [sil**e**ktid] — выборочный, отдельный
selective [sil**e**ktiv] — избирательный, выборочный
semicircular [s**e**mis**ə:**kjulə] — полукруглый
semi-fluid [s**e**mifl**u:**id] — полужидкий
semi-lunaris [s**e**mi-lun**e**əris] — полулуние
semipermeable [s**e**mip**ə:**mjəbl] — полупроницаемый
semi-prone [s**e**mipr**əu**n] — полулежачий
semisolid [s**e**mis**ə**lid] — полутвердый
senile [s**i:**nail] — старческий
senility [sin**i**liti] — старость
seniority [si:ni**ə**riti] — старшинство
sensation [sens**ei**ʃən] — чувствительность, ощущение
  tingling ~ [t**i**ŋgliŋ] — звон в ушах
sensational [sens**ei**ʃənəl] — сенсационный, поразительный
sense [s**e**ns] — смысл; чувство, ощущение
  proper ~ [pr**əu**pə] — собственный смысл
sensibility [s**e**nsib**i**liti] — чувствительность
  deep ~ [d**i:**p] — глубокая чувствительность
  pain ~ [p**ei**n] — чувствительность к боли
  tactile ~ [tæktail] — тактильная чувствительность
  thermal ~ [θ**ə:**ml] — термическая чувствительность
  vibration ~ [vaib**rei**ʃən] — чувствительность к вибрации
sensitive [s**e**nsitiv] — чувствительный
sensitivity (to) [s**e**nsit**i**vity] — чувствительность, восприимчивость
sensory [s**e**nsəri] — чувствительный
separate [s**e**pəreit] — отделять, отделяться, разделяться
separate [s**e**prit] — отдельный
septum, *pl.* **septa** [s**e**ptəm, s**e**ptə] — перегородка
  cardiac ~ [k**a:**diæk] — сердечная перегородка
  nazal ~ [n**ei**zl] — носовая перегородка
serotype [s**i**ərətaip] — серотип
serous [s**i**ərəs] — серозный
serum [s**i**ərəm] — сыворотка
  immune ~ [imj**u:**n] — иммунная сыворотка
serve [sə:v] — обслуживать, служить
set (in) [set] — наступать
set (up) [set] — устанавливать, учреждать

set [s**e**t] — набор
set [set] — располагать
setting [s**e**tiŋ] — окружение, окружающая обстановка
settle [s**e**tl] — возникать, начинаться; разрешаться, проходить
settlement [s**e**tlmənt] — осаждение
settling [s**e**tliŋ] — оседание, осаждение
severe [siv**e**ə] — тяжелый, сильный
severing [s**e**vəriŋ] — перерезывание
sewage [sj**u**idʒ] — сточные воды, нечистоты
  effluent ~ [**e**fluənt] — сточные воды
  water ~ [wɔtəz] — сточные воды
sewer [sj**u**ə] — канализация
sex-linked [s**e**kslinkt] — связанный с полом
shaft [ʃæft] — стержень, ось, ствол
shank [ʃæŋk] — голень, плюсна
shape [ʃ**ei**p] — формировать
shape [ʃ**ei**p] — форма
sharp [ʃ**a:**p] — резкий, острый
shave [ʃ**ei**v] — брить, выбривать
shear [ʃ**i**ə] — резать, срезать
shearing [ʃ**i**əriŋ] — рассечение
sheath, *pl.* **sheaths** [ʃ**i:**θ, ʃ**i:**ðz] — оболочка
  tendon ~ [t**e**ndən] — оболочка сухожилия
shed [ʃ**e**d] — избавляться
shift [ʃ**i**ft] — смещаться
shin [ʃ**i**n] — голень
shingles [ʃ**i**ŋglz] — опоясывающий лишай
shock [ʃɔk] — шок
  cardiogenic ~ [k**a:**diɔudʒ**e**nik] — кардиогенный шок
short [ʃ**ɔ:**t] — короткий
shortage [ʃ**ɔ:**tidʒ] — недостаток
short-lived [ʃ**ɔ:**tl**i**vd] — короткоживущий
shoulder [ʃ**əu**ldə] — плечо
shout [ʃ**au**t] — возглас, крик
  epileptic ~ [epil**e**ptic] — эпилептический крик
shrink, shrank, shrunk [ʃ**ri**ŋk, ʃræŋk, ʃrʌŋk] — сжиматься, сморщиваться, высыхать
shrivel [ʃ**ri**vl] — сморщиваться
shrunken[ʃrʌŋkən] — сморщенный
shuffle [ʃʌfl] — шаркать (ногами)
shut [ʃʌt] — закрывать
sibilant [s**i**bilənt] — свистящий
sibilus [s**i**biləs] — свист
sick [s**i**k] — больной
sickness [s**i**knis] — болезнь, заболевание; тошнота
side [s**ai**d] — сторона
  convex ~ [k**ɔ**nveks] — выпуклая сторона
sift — просеивать, отсеивать
sifting [s**i**ftiŋ] — отсеивание
sight [s**ai**t] — зрение
sigmoidoscopy [sigmɔidɔskəpi] — сигмоидоскопия
sign [s**ai**n] — знак, признак, симптом
  Argyll Robertson ~ [a:g**ai**l-rɔbətsən] — симптом Аргайла Робертсона
  Brudzinski's ~ [brudʒ**i**nskiz] — симптом Брудзинского
  Kerning's ~ [k**ə:**nigz] — симптом Кернига
  Romberg's ~ [rɔmbə:gz] — симптом Ромберга
significance [sign**i**fikəns] — значение
signify [s**i**gnifai] — обозначать
silium, *pl.* **silia** [s**i**liəm,s**i**liə] — ресничка
silk [s**i**lk] — шелк
silly [s**i**li] — глупый, бессмысленный, слабоумный
similarly [s**i**miləli] — так же, таким же образом
simple [s**i**mpl] — простой
simply [s**i**mpli] — просто

simultaneously [simәlt**ei**njәsli] — одновременно
single [s**i**ŋgl] — один, отдельный, единичный
single-handed [s**i**ŋglhændid] — однорукий
sink [s**i**nk] — раковина
sinus [s**ai**nәs] — пазуха
  ethmoid ~ [**e**θmɔid] — пазуха решетчатой кости, решетчатая пазуха
  frontal ~ [frʌntl] — лобная пазуха
  maxillary ~ [mæks**i**lәri] — верхнечелюстная пазуха, гайморова пазуха
  nasal ~ [n**ei**zl] — носовая пазуха, придаточная полость носа
  sphenoid ~ [sf**i:**nɔid] — клиновидная пазуха
  paranasal ~ [pærәn**ei**zl] — околоносовая пазуха
sinusitis [s**ai**nәs**ai**tis] — синусит
sister [s**i**stә] — сестра
  departmental ~ [dip**a:**tmәntl] — старшая медицинская сестра отделения
  instrument ~ [**i**nstrәment] — инструментальная сестра
  night ~ [n**ai**t] — ночная сестра
  theatre ~ [θ**i**ətә] — операционная сестра
  tutor ~ [tj**u:**tә] — старшая медсестра, сестра-наставница (в учебных учреждениях)
  ward ~ [w**ɔ:**d] — палатная сестра
site [s**ai**t] — место, область
  fracture ~ [fræktʃә] — область перелома
  operation ~ [ɔper**ei**ʃn] — операционное поле
situate [s**i**tjueit] — находиться
situated [s**i**tjueitid] — расположенный
size [s**ai**z] — размер
skeletal [sk**e**litl] — скелетный
skeleton [sk**e**litn] — скелет
skilfully [sk**i**lfuli] — умело
skill [sk**i**l] — навык, умение
skin [sk**i**n] — кожа
skull [skʌl] — череп
slab [slæb] — пластинка
sleep [sl**i:**p] — сон
sleepiness [sl**i:**pinis] — сонливость
sickness [s**i**knәs] — болезнь
  sleeping ~ [sl**i:**piŋ] — сонная болезнь
slender [sl**e**ndә] — тонкий, узкий
slice [sl**ai**s] — кусочек
slice[sl**ai**s] — резать, разрезать
slide [sl**ai**d] — слайд
slight [sl**ai**t] — легкий, незначительный
slightly [sl**ai**tli] — слегка, немного
slit-lamp [sl**i**tlæmp] — щелевая лампа
sloppy [slɔpi] — жидкий
slough [slʌf] — струп
slow [slәu] — замедляться
slow [slәu] — медленный
slowly [slә**u**li] — медленно
sludge [slʌdʒ] — ил
  activated ~ [æktiv**ei**tid] — активированный ил
sluggish [slʌgiʃ] — пассивный, вялый
smallpox [smɔ**:**lpɔks] — оспа
smell [sm**e**l] — запах
smell [sm**e**l] — нюхать
smog [smɔg] — смог
smoky [smɔ**u**ki] — дымный, дымчатый
smooth [sm**u:**θ] — гладкий, ровный
smooth [sm**u:**ð] — сглаживать, шлифовать
smoothly [sm**u:**ðli] — плавно
snuff [snʌf] — нюхательный табак/порошок
snuff [snʌf] — нюхать
social [sɔ**u**ʃәl] — социальный, общественный
socket [sɔkit] — углубление
sodium [sɔ**u**djәm] — натрий

sodium chloride [sə**u**diəmklə**:**raid] — хлористый натрий
sofisticated [səfistik**ei**tid] — утонченный
soft [sɔft] — мягкий, пластичный
soil [s**oi**l] — почва
sole [s**əu**l] — единственный
sole [s**əu**l] — ступня
solid [sɔlid] — прочный, твердый
solid [sɔlid] — твердое вещество
solidify [səl**i**difai] — делать твердым, затвердевать, твердеть, отвердевать
solitary [sɔlitəri] — уединенный
solubility [sɔljub**i**liti] — растворимость
soluble [sɔljubl] — растворимый
  readily ~ [r**e**dili] — быстрорастворимый
  sparingly ~ [sp**e**əriŋli] — труднорастворимый
solution [səlj**u:**ʃən] — раствор, растворение
  antiseptic ~ [æntis**e**ptik] — антисептический раствор
  aqueous ~ [**ei**kwiəs] — водный раствор
  concentrated ~ [kɔnsəntr**ei**tid] — концентрированный раствор
  Zenker's ~ [z**e**ŋkəz] — раствор Зенкера
solvent [sɔlvənt] — растворитель
somatic [sɔm**æ**tik] — соматический
soot [s**u**t] — сажа
sophisticated [səf**i**stikeitid] — усовершенствованный, утонченный
sore [sɔ**:**] — чувствительный
sore [sɔ**:**] — язва
soreness [sɔ**:**nis] — болезненность
sound [s**a**und] — звук
  absent ~ [æbsənt] — отсутствующий звук
  added ~ [ædid] — дополнительный звук
  adventitious ~ [ædventiʃəs] — адвентициальный звук
  continuous ~ [kənt**i**njuəs] — продолжительный звук
  diminished ~ [dim**i**niʃt] — приглушенный звук
  distant ~ [d**i**stənt] — отдаленный звук
  enhanced ~ [inh**a:**nst] — усиленный звук
  interrupted ~ [**i**ntərʌptid] — прерывистый звук
  restricted ~ [ristr**i**ktid] — ограниченный звук
  rustling ~ [rʌsliŋ] — шуршащий звук
sounds [s**a**undz] — шумы
  absent breath ~ [æbsənt] — отсутствующие дыхательные шумы
  adventitious ~ [ædventi**i**ʃəs] — добавочные шумы
  breath ~ [br**e**θ] — дыхательные шумы, шумы при дыхании
  diminished breath ~ [dim**i**niʃt br**e**θ] — пониженные дыхательные шумы
  enhanced breath ~ [inh**a:**nst br**e**θ] — усиленные дыхательные шумы
  heart ~ [h**a:**t] — сердечные шумы
  peristaltics ~ [p**e**ristæltiks] — перистальтические шумы
  restricted breath ~ [ristr**i**ktid br**e**θ] — ограниченные дыхательные шумы
  vesicular breath ~ [vi:s**i**kjulə br**e**θ] — везикулярные дыхательные шумы
space [sp**ei**s] — место, пространство
span [spæn] — промежуток времени, интервал
  life ~ [l**ai**f] — продолжительность жизни
sparingly [sp**e**əriŋli] — слабо
spasm [spæzm] — спазм
spasmodic [spæzmɔdik] — спазматический, судорожный

spastic [spæstik] — спастический
speak up [spi:kʌp] — говорить громко и разборчиво
specialization [speʃəlaizeiʃən] — специализация
specialized [speʃəlaizd] — специализированный
species, *pl. без измен.* [spi:ʃi:z] — вид
specific [spisifik] — специальный, специфический
specific gravity [spesifik græviti] — удельный вес
specifically [spisifikəli] — специфическим образом
specimen [spesimən] — образец, проба
spectacles [spektəklz] — очки
spectacular [spektækjlə] — впечатляющий, эффектный
speculation [spekjuleiʃən] — предположение
speculum, *pl.* **specula** [spekjuləm, spekjulə] — зеркало, расширитель; отражатель, рефлектор
  aural ~ [ɔ:ral] — ушное зеркало
  nasal ~ [neizl] — носовое зеркало
speed (up) [spi:dʌp] — ускорять
spell [spel] — приступ
spell (out) [spelaut] — читать с трудом
spelling [speliŋ] — правописание
sperm [spə:m] — сперма
spermatogenesis [spə:mətɔudʒenəsis] — сперматогенез
sphincter [sfiŋktə] — сфинктер
  ~ of Oddi [ɔdi] — сфинктер Одди
  pyloric ~ [pailɔrik] — пилорический сфинктер, сфинктер привратника
sphygmomanometer [sfigmɔmənɔmitə] — сфигмоманометр
spike [spaik] — пик
spike-wave [spaikweiv] — спайк-волна, пиковая волна
spina bifida [spainəbifidə] — расщепленный позвоночник, расщелина позвоночника, расщепление позвоночника
spinal [spainl] — позвоночный, спинальный, спинномозговой
spindle [spindl] — веретено
spine [spain] — позвоночник, спина
spinous [spainəs] — шиповидный
spirometer [spaiərɔmitə] — спирометр
spirometric [spaiərɔumetrik] — спирометрический
spirometry [spaiərɔmetri] — спирометрия
spittoon [spitu:n] — плевательница
spleen [spli:n] — селезенка
splenic [spli:nik] — селезеночный
splint [splint] — шина
splint [splint] — накладывать шину, шинировать
  Denis Browne ~ [denis braun] — шина Дэниса Брауна
splintage [splintidʒ] — наложение шинной повязки, шинирование
split; split, split [split] — расщеплять
spoil [spɔil] — портить, наносить ущерб
spondylolisthesis [spɔndiləulisθi:sis] — спондилолистез
spontaneous [spɔnteinjəs] — спонтанный
spontaneously [spɔnteinjəsli] — спонтанно, самопроизвольно
spoon [spu:n] — ложка
  chisel ~ [tʃizəl] — стоматологическая ложечка, экскаватор
sporadic [spərædik] — спорадический, внезапный
spot [spɔt] — пятно
  Koplik's ~s [kɔpliks] — пятна Коплика
  yellow ~ [jeləu] — желтое пятно
sprain [sprein] — растяжение связок, сустава
spray [sprei] — аэрозоль, спрей

spread; spread, spread [spred] — распространяться
springiness [spriŋdʒinis] — гибкость, упругость
sprue [spru:] — спру
sputum, *pl.* **sputa** [spju:təm, spju:tə] — мокрота
  blood-tinged ~ [blʌdtindʒd] — окрашенная кровью мокрота
  frothy ~ [frɔθi] — пенистая мокрота
  mucoid ~ [mju:kɔid] — мукоидная мокрота
  muco-purulent ~ [mju:kɔupjuərulənt] — гнойно-слизистая мокрота
  rusty ~ [rʌsti] — ржавая мокрота
square [skweə] — выпрямлять, выравнивать
squint — косить
squint [skwint] — косоглазие
stability [stəbiliti] — устойчивость
staff [sta:f] — укомплектовывать (штатом)
staff [sta:f] — штат
  auxiliary ~ [ɔ:gziliəri] — вспомогательный штат
  medical ~ [medikl] — медицинский персонал
  nursing ~ [nə:siŋ] — сестринский штат (персонал)
  teaching ~ [ti:tʃiŋ] — профессорско-преподавательский состав
stage [steidʒ] — стадия, фаза, этап
  final ~ [fainl] — конечная стадия
stagger [stægə] — потрясать, поражать
staggering [stægəriŋ] — ошеломленный, потрясающий
stain [stein] — окрашивать
stain [stein] — окраска
  blue ~ [blu:] — окрашивать в голубой цвет
  pink ~ [pink] — окрашивать в розовый цвет
stainability [steinəbiliti] — окрашиваемость
stalk [stɔ:k] — ножка
stamp (out) [stæmp] — подавлять, уничтожать
stand (out) — выступать, выделяться
stand (aloof) [əlu:f] — стоять особняком
stapes [steipi:z] — стремечко
Staphylococcus, *pl.* **Staphylococci** [stæfiləukɔkəs, stæfiləukɔkai] стафилококк
Staphylococcus pyogenes [stæfiləkɔkəs paiɔudʒinəs] — гноеродный стафилококк
starch [sta:tʃ] — крахмал
stare [steə] — пристально смотреть, уставиться
staring [steəriŋ] — пристально смотрящий
state [steit] — состояние
  anxiety ~ [æŋzaiəti] — состояние тревоги
  delirious ~ [diliriəs] — бредовое состояние
  fasting ~ [fa:stiŋ] — натощак
  resting ~ [restiŋ] — состояние покоя
statement [steitmənt] — заявление
status [steitəs] — статус, состояние
  asthmaticus ~ [æsθmætikəs] — астматический статус
  social ~ [səuʃəl] — социальное положение
steadily [stedili] — устойчиво, постоянно
steady [stedi] — устойчивый
stem [stem] — ствол, стебель
  brain ~ [brein] — ствол головного мозга
stenosis [stenəusis] — стеноз
  aortic valvular ~ [eiɔ:tik vælvjulə] — стеноз клапана аорты
  pulmonary ~ [pʌlmənəri] — легочный стеноз
  pyloric ~ [pailərik] — пилоростеноз, стеноз привратника

subvalvular ~ [sʌbvælvjulə] — субклапанный стеноз
stereotactic [st**i**ərioutæktik] — стереотактический
sterile [st**e**rail] — стерильный
sterility [ster**i**lity] — стерильность
sterilization [st**e**rilaiz**ei**ʃən] — стерилизация
sterilize [steril**ai**z] — стерилизовать
sternal [stə:nl] — грудинный
sternum [stə:nəm] — грудина
steroid [st**e**rɔid] — стероид
sterol [st**e**rɔl] — стерол
stethoscope [st**e**θəskɔup] — стетоскоп
binaural ~ [bainərəl] — бинауральный, двуушный стетоскоп
stick, stuck, stuck [stik, stʌk] — прилипать
sticky [st**i**ki] — липкий, вязкий
stiff [st**i**f] — жесткий, негибкий
still [st**i**l] — неподвижный, спокойный
stilbirth [st**i**lbə:θ] — мертворождение
stimulate [st**i**mjuleit] — раздражать, стимулировать
stimulation [st**i**mjul**ei**ʃn] — стимуляция
stimulator [st**i**mjul**ei**tə] — стимулятор
stimulus, *pl.* **stimuli** [st**i**mjuləs, st**i**mjulai] — раздражитель
stir [stə:] — мешать
stirrer [stə:rə] — мешалка
stitch [st**i**tʃ] — шов, шовная нить
stock [stɔk] — запас
stomach [stʌmək] — желудок
stomatologist [stɔ**u**mətɔlədʒist] — стоматолог
stomatology [stɔ**u**mətɔlədʒi] — стоматология
stone [stɔ**u**n] — камень, брусок
gall ~ [gɔ:l] — камнь желчного пузыря
~ **ware** [stɔ**u**nweə] — глиняная посуда
stool [st**u:**l] — испражнения, стул
bulky ~ [bʌlki] — обильный стул
hard ~ [h**a:**d] — твердый стул
loose ~ [l**u:**s] — рыхлый стул
rice-water ~ [r**a**is wɔtə] — стул белого цвета
thin ~ [θ**i**n] — рыхлый стул
stopper [stɔpə] — пробка, затычка, соединитель
storage [stɔ:ridʒ] — хранение
storax [stɔrəks] — стиракс
store (up) [stɔ:rʌp] — накапливать, хранить
store [stɔ:] — запас
strabismus [strəb**i**zməs] — косоглазие, стробизм
straight [str**ei**t] — прямо, непосредственно
straight [str**ei**t] — прямой
strain [str**ei**n] — вид, штамм; нагрузка, напряжение, натяжение
straiten [str**ei**tn] — распрямлять
strand [strænd] — полоска
strap [stræp] — стягивать края раны липким пластырем
stratified [strætifaid] — многослойный
stratum corneum [str**ai**təm k**ɔ:**niəm] — роговой слой
stray [str**ei**] — случайный
stream [str**i:**m] — река, ручей
strength [str**e**ŋgθ] — сила
strenuous [str**e**njuəs] — напряженный, тяжелый
streptococcus, *pl.* **streptococci** [str**e**ptɔuk**ɔ**kəs, str**e**ptɔuk**ɔ**kai] — стрептококк
streptomycin [str**e**ptɔum**ai**sin] — стрептомицин
stress [str**e**s] — стресс; акцент
stress [str**e**s] — подчеркивать
emotional ~ [im**ɔu**ʃənl] — эмоциональный стресс
stretch [str**e**tʃ] — вытягивание

stretch [str**e**tʃ] — растягиваться
striated [strai**ei**tid] — полосатый, поперечно-полосатый
strict [str**i**kt] — строгий
stricture [str**i**ktʃə] — стриктура, сужение
stride [straid] — спокойно относиться
stridor [str**ai**dɔ:] — стридор, свистящее дыхание
strip [str**ai**p] — полоска, полоса
stroke [str**ɔu**k] — удар, инсульт
stroke [str**ɔu**k] — ударять
stroma [str**ɔu**mə] — строма
strong [strɔŋ] — прочный
strontium [str**ɔ**ntiəm] — стронций
strophantus [strəf**æ**ntəs] — строфант
structural [str**ʌ**ktʃərəl] — структурный
structure [str**ʌ**ktʃə] — структура, строение
  investing ~ [inv**e**stiŋ] — покрывающая структура
stratum granulosum [str**æ**tum grænju:l**ɔu**zəm] — зернистый слой
Strychnos nux-vomica [str**i**knɔs nʌks v**ɔ**mikə] — рвотный орех
stuck [st**ʌ**k] — застрять, застревать
stud [st**ʌ**d] — усеивать
stupor [stj**u:**pə] — ступор
subarachnoid [s**ʌ**bəræknɔid] — субарахноидальный
subcutaneous [s**ʌ**bkjut**ei**niəs] — подкожный
subcutaneously [s**ʌ**bkju:t**ei**njəsli] — подкожно
subdivide [s**ʌ**bdiv**ai**d] — подразделять
subdural [s**ʌ**bdj**u**ərəl] — субдуральный
subepidermal [s**ʌ**b**e**pid**ə:**məl] — субэпидермальный
subfebrile [s**ʌ**bfibr**ai**l] — субфебрильный
subject [səbdʒ**e**kt] — подвергать, подвергаться
subject [s**ʌ**bdʒikt] — предмет
subjective [səbdʒ**e**ktiv] — субъективный, индивидуальный
subluxation [s**ʌ**bl**ʌ**ks**ei**ʃən] — подвывих, неполный вывих
submammary [s**ʌ**bmæməri] — ретромаммарный
subnormal [s**ʌ**bn**ɔ:**məl] — неполноценный, отсталый (умственно)
suboxide [s**ʌ**b**ɔ**ks**ai**d] — субоксид
subsequently [s**ʌ**bsikwentli] — впоследствии
substage [s**ʌ**bst**ei**dʒ] — столик под предметным столиком
substance [s**ʌ**bstəns] — вещество
  carcinogenic ~ [k**a:**sinɔudʒ**e**nik] — канцерогенное вещество
  ground ~ [gr**a**und] — основное вещество
  iron-containing ~ [**ai**ən kənt**ei**niŋ] — железосодержащее вещество
  radioactive ~ [r**ei**diɔu**æ**ktiv] — радиоактивное вещество
substitute [s**ʌ**bstitju:t] — заменять
substitute (for) [s**ʌ**bstitju:t] — замещать, заменять
substitution [s**ʌ**bstitj**u:**ʃn] — замещение
substrate [s**ʌ**bstreit] — субстрат
subvalvular [s**ʌ**bv**æ**lvjulə] — подклапанный
success [səks**e**s] — успех
successful [səks**e**sful] — успешный
succession [səks**e**ʃn] — последовательность, череда
suck [s**ʌ**k] — сосать
sucking [s**ʌ**kiŋ] — сосание (груди)
sucrose [s**u**krɔuz] — сахароза
sudden [s**ʌ**dn] — внезапный
sufficient [səf**i**ʃənt] — достаточный
sufficiently [səf**i**ʃənli] — достаточно
suffix [s**ʌ**fiks] — суффикс

suffocate [sʌfəkeit] — задыхаться
suffocation [sʌfək**ei**ʃn] — удушье
sugar [ʃ**u**gə] — сахар
suggest [səd**ʒ**est] — предлагать
suicide [sj**u**isaid] — самоубийство
  attempted ~ [ət**e**mptid] — покушение на самоубийство, преднамеренное самоубийство
suit [sj**u:**t] — удовлетворять требованиям
suitable [sj**u:**təbl] — пригодный, подходящий
sulcus [sʌlkəs] — борозда
  gingival ~ [dʒindʒ**i**vəl] — десневая борозда
  Harrison's ~ [hærisənz] — гаррисонова борозда на грудной клетке при рахите
sulphate [sʌlfeit] — сульфат
sulphite [sʌlfait] — сульфит
sulphonamide [səlf**ɔ**nəm**ai**d] — сульфонамид
sulphur [sʌfə] — сера
sunlight [sʌnlait] — солнечный свет
superficial [sj**u**pəfiʃəl] — поверхностный
superior [sj**u:**piəriə] — верхний
supernatant [sj**u:**pən**ei**tənt] — надосадочный слой
supernumerary [sj**u:**pənj**u:**mərəri] — лишний
supervise [sj**u:**pəvaiz] — наблюдать, контролировать
supervision [sju:pəv**i**ʒn] — надзор
supply [səpl**ai**] — снабжение, поставка, доставка, приток
supply [səpl**a**i] — снабжать
  water ~ [wɔ:tə səpl**ai**] — водоснабжение
support [səpɔ:t] — поддержка
support [səpɔ:t] — удерживать, поддерживать
suppose [səp**ɔu**z] — полагать, предполагать
suppository [səpɔzitəri] — свеча
  compressed powder ~ [kəmpr**e**st p**au**də] — спрессованная порошковая свеча
  moulded ~ [m**ɔu**ldid] — литая свеча
  tableted ~ [tæblitid] — таблетированная свеча
suppresive [səpr**e**siv] — подавляющий
suppress [səpr**e**s] — подавлять
suppurative [sʌpjuər**ei**tiv] — гнойный
suprabony [sj**u:**prəb**ɔu**ni] — надкостный
supravalvular [sj**u:**prəvælvjulə] — надклапанный
surface [sə:fis] — поверхность
  buccal ~ [bʌkl] — щечная поверхность
  distal ~ [d**i**stl] — дистальная поверхность
  interproximal ~ [**i**ntəpr**ɔ**ksiml] — поверхность между двумя соседними зубами
  labial ~ [l**ei**bjəl] — губная поверхность
  lingual ~ [l**i**ŋgəl] — поверхность языка
  mesial ~ [m**i:**zjəl] — средняя поверхность
  palatal ~ [pælətl] — нёбная поверхность
surgery [sə:dʒəri] — хирургия
  mucogingival ~ [mj**u:**kɔdʒindʒ**i**vl] — мукогингивальная хирургия
  plastic ~ [plæstik] — пластическая хирургия
  thoracic ~ [θəræsik] — грудная хирургия, торакальная хирургия
surname [sə:neim] — фамилия
surround [sər**au**nd] — окружать
surrounding [sər**au**ndiŋ] — окружающий
surroundings [sər**au**ndiŋz] — окружающая среда, окружение

surveillance [sə:v**ei**ləns] — надзор, наблюдение
survival [səv**ai**vəl] — выживание
survive [səv**ai**v] — выживать, переносить
susceptible (to) [səs**e**ptibl] — восприимчивый (к)
suspect [sʌsp**e**ct] — подозревать
suspend [səsp**e**nd] — взвешивать, подвешивать
suspended [səsp**e**ndid] — взвешенный
suspicion [səsp**i**ʃən] — подозрение, предположение
suspicious [səsp**i**ʃəs] — подозрительный
sustain [səst**ei**n] — поддерживать, способствовать
sustained [səst**ei**nd] — устойчивый
suture [sj**u:**tʃə] — шов
swab [sw**ɔ**b] — тампон
swallowing [sw**ɔ**ləuiŋ] — глотание
sway [sw**ei**] — покачивание, колебание
swaying [sw**ei**iŋ] — покачивание
sweat [sw**e**t] — пот
sweat [sw**e**t] — потеть
sweating [sw**e**tiŋ] — потение
sweet [sw**i:**t] — сладкий
sweetish [sw**i:**tiʃ] — сладковатый
swell [sw**e**l] — набухать, опухать
swelling [sw**e**liŋ] — опухоль, отек
switchboard [sw**i**tʃbɔ:d] — коммутатор, распределительный щит
swollen [sw**əu**lən] — опухший, распухший, отекший
sympathetic [s**i**mpəθ**e**tik] — симпатический
symptom [s**i**mptəm] — симптом
  common ~ [kɔmən] — общий симптом
  neurotic ~ [njuər**ɔ**tik] — невротический симптом
  withdrawal ~ [wiðdr**ɔ:**əl] — абстинентный синдром, абстиненция
symptomatic [s**i**mptəmætik] — симптоматический
symptomless [s**i**mptəmlis] — асимптоматический, бессимптомный
synapse [s**ai**næps] — синапс
syndrome [s**i**ndrəum] — синдром
  abstinence ~ [æbstinəns] — синдром воздержания
  Down's ~ [d**au**nz] — синдром Дауна
  effort ~ [**e**fət] — синдром напряжения
  manic-depressive ~ [mænik-dipr**e**siv] — маниакально-депрессивный синдром
synonymous [sin**ɔ**niməs] — синонимичный
synovia [sain**əu**viə] — синовия, синовиальная жидкость
synovial [sain**əu**viəl] — синовиальный
synthesis, *pl.* **syntheses** [s**i**nθəsis] — синтез
synthesize, synthetize [s**i**nθəsaiz, s**i**nθətaiz] — синтезировать, выделять
synthetic [sinθ**e**tik] — синтетическое лекарство
syphilis [s**i**filis] — сифилис
system [s**i**stim] — система
  arterial ~ [a:t**i**əriəl] — артериальная система
  autonomic nervous ~, ANS [ɔ:tən**ɔ**mik n**ə:**vəs,eienes] — автономная нервная система, АНС
  central nervous ~, CNS [s**e**ntrəln**ə:**vəs, sienes] — центральная нервная система, ЦНС
  circulatory ~ [s**ə:**kjulətəri] — циркуляторная система
  endocrine ~ [**e**ndəukrain] — эндокринная система
  limbic ~ [**li**mbic] — лимбическая система
  locomotor ~ [l**əu**kəm**əu**tə] — опорно-двигательная система

lymphatic ~ [limfætik] — лимфатическая система
motor ~ [m**ou**tə] — двигательная система
nervous ~ [nə:vəs] — нервная система
parasympatheric nervous ~ [pærəsimpəθ**e**tik] — парасимпатическая нервная система
respiratory ~ [risp**i**rətəri] — дыхательная система
reticulo-endothelial ~ [rit**i**kjuləu-**e**ndəuθ**i:**liəl] — ретикуло-эндотелиальная система
sensory ~ [s**e**nəri] — чувствительная система
sympathetic nervous ~ [s**i**mpəθ**e**tik nə:vəs] — симпатическая нервная система
urinary ~ [j**u**ərinəri] — мочевая система
urogenital ~ [j**u**ərədʒ**e**nitl] — мочеполовая система
vegetative nervous ~ [v**e**dʒitətiv nə:vəs] — вегетативная нервная система
systole [s**i**stəli] — систола
systolic [sistɔlik] — систолический

T

tabes dorsalis [t**ei**bi:z dɔ:s**ei**lis] — сухотка спинного мозга
tabetic [təb**e**tik] — табетик
tablet [tæblit] — таблетка
tackle [tækl] — схватить, подхватывать
tail [t**ei**l] — хвост
take; took, taken [t**ei**k] — брать
take place [t**ei**kpl**ei**s] — происходить, иметь место
take up [t**ei**kʌp] — поглощать, забирать
talipes equinovalgus [tælipi:z **i**kvinɔvælgəs] — эквиновальгусная деформация стопы (выворот кнаружи и подошвенное сгибание стопы), конская стопа
talkative [tɔkətiv] — разговорчивый
tally [tæli] — соответствие
tangle [tæŋgl] — путаница, сплетение
tank [tæŋk] — резервуар, цистерна
aeration ~ [eiər**ei**ʃən] — аэротенк, аэрационный резервуар
tannin [tænin] — танин
tape [t**ei**p] — лента
adhesive ~ [ədh**i:**siv] — лейкопластырь
tapping [tæpiŋ] — выстукивание
tar [t**a:**] — деготь, смола
tardy [t**a:**di] — медленный, запоздалый, поздний
target [t**a:**git] — мишень, цель
tarsal [t**a:**sl] — предплюсна
tarsal [t**a:**sl] — тарзальный, предплюсневой
task [t**a:**sk] — задача
menial ~ [m**i:**niəl] — черная работа
taste [t**ei**st] — пробовать
taste [t**ei**st] — вкус
tax [tæks] — налог
taxation [tæks**ei**ʃən] — налогообложение
teach [t**i:**tʃ] — учить
tear [t**e**ə] — разрыв; слеза
perineal ~ [p**e**rin**i:**əl] — разрыв промежности
tear, tore, torn [t**e**ə, t**ɔ:**, t**ɔ:**n] — разрывать
teat [t**i:**t] — сосок
teenager [t**i:**neidʒə] — подросток, юноша
telencephalon [telins**e**fələn] — конечный мозг
telling [t**e**liŋ] — рассказ
tell-tale [t**e**l-t**ei**l] — болтун
telophase [t**e**ləfeiz] — телофаза
temperament [t**e**mprəmənt] — темперамент

temperature [t**e**mpəritʃə] — температура
body ~ [bɔdi] — температура тела
elevated ~ [**e**liveitid] — повышенная температура
step-ladder ~ [st**e**p-lædə] — скачущая температура
temporary [t**e**mpərəri] — временный
tend [t**e**nd] — иметь тенденцию, стремиться
tendency [t**e**ndənsi] — тенденция
tender [t**e**ndə] — болезненный
tenderness [t**e**ndənis] — болезненность
tending [t**e**ndiŋ] — присмотр
tendon [t**e**ndən] — сухожилие
Achilles ~ [ək**i**li:z] — Ахиллово сухожилие
tenodesis [ten**ɔ**desis] — тенодез
tenolysis [ten**ɔ**lisis] — тенолиз
tenosynovitis [t**i:**nɔus**ai**nəv**ai**tis] — синовит сухожильных влагалищ, тенобурсит, теносиновит
tenotomy [ten**ɔ**tɔmi] — перерезка сухожилия, тенотомия
tenovaginitis [t**e**nɔuvædʒin**ai**tis] — теновагинит
traumatic ~ [trɔ:mætik] — травматический теновагинит
term [t**ə:**m] — термин; срок
termination [t**ə:**min**ei**ʃən] — прекращение, прерывание (беременности)
tertiary [t**ə:**ʃəri] — третичный
test [t**e**st] — проверять
test [t**e**st] — тест, проверка
Benedict's ~ [b**e**nidikts] — тест Бенедикта
faecal fat excretion ~ [f**i:**kl fæt ikskr**i:**ʃn] — анализ выделения жира со стулом
Fehling's ~ [f**ei**liŋz] — тест Фейлинга
histamine ~ [h**i**stəmin] — гистаминовый тест
ingestive ~ [indʒ**e**stiv] — тест на заглатывание, внутренний тест
lactose tolerance ~ [læktous] — тест на переносимость лактозы
nose-finger ~ [n**ɔu**z f**i**ŋgə] — тест, когда требуется попасть кончиком пальца в кончик носа
Shick's ~ [ʃ**i**ks] — тест Шика
slide agglutination ~ [sl**ai**d əgl**u:**tin**ei**ʃən] — тест на агглютинацию на предметном стекле
Snellen's ~s [sn**e**lnz] — набор шрифтов Снеллена
sucrose tolerance ~ [sj**u:**krous t**ɔ**lərəns] — тест на переносимость сахарозы
whisper ~ [w**i**spə] — тест на проверку слуха
testis, *pl.* **testises** [t**e**stis, t**e**stisi:z] — яичко, семенник
testosterone [test**ɔ**sterɔun] — тестостерон
test-tube [t**e**st-tju:b] — пробирка
tetanus [t**e**tənəs] — столбняк
tetany [t**e**təni] — тетания
thalamus [θæləməs] — таламус
thaw [θ**ɔ:**] — оттаивать
theatre [θ**i**ətə] — аудитория, операционная
operating ~ [ɔpər**ei**tiŋ] — операционная
theorize [θ**i**əraiz] — теоретизировать
theorizing [θ**i**əraiziŋ] — теоретизирование
therapist [θ**e**rəpist] — терапевт
occupational ~ [**ɔ**kjəp**ei**ʃənəl] — врач, специалист по профессиональным болезням
therapy [θ**e**rəpi] — терапия, лечение
electroconvulsive ~ (ECT) [il**e**ktɔukənv**ʌ**lsiv(i:siti)] — электросудорожная терапия

theriac [θi:riæk] — мазь, противоядие
thermometer [θəmɔmitə] — термометр
thermoregulatory [θə:məregjuleitəri] — терморегуляторный
thermostat [θə:məstæt] — термостат
thick [θik] — толстый
thickening [θikəniŋ] — утолщение, уплотнение
thigh [θai] — бедро
thigh-bone [θai-bəun] — бедренная кость
thin [θin] — тонкий
thinly [θinli] — редко, негусто
thoracic [θəræsik] — торакальный, грудной
thoracoscopy [θɔrəkɔskəpi] — торакоскопия
thorax [θɔrəks] — грудная клетка
though [ðəu] — хотя
thought [θɔ:t] — мышление, мысль
thread [θred] — нить, нитка
threat [θret] — угроза
thrive, **throve, thriven** [θraiv, θrouv, θrivn] — преуспевать, быстро развиваться
throat [θrəut] — горло
  sore ~ [sɔ:] — ангина
thrombocyte [θrɔmbɔsait] — тромбоцит
thrombosis [θrɔmbəusis] — тромбоз
  cavernous sinus ~ [kævənəs sainəs] — тромбоз венозного синуса
  coronary ~ [kɔrənəri] — тромбоз коронарных артерий
thrombus [θrɔmbəs] — тромб
through [θru:] — через, сквозь
throughout [θruaut] — в течение
thumb [θʌm] — большой палец руки
thyme [taim] — тимьян, чабрец
thymine [θaimi:n] — тимин
thymus [θaiməs] — вилочковая железа
thyroidectomy [θairɔidektəmi] — тироидэктомия
thyroxine [θaiərɔksin] — тироксин
tic [tik] — тик, мышечное подергивание
tick [tik] — клещ
tick-borne [tik-bɔ:n] — передаваемый клещами
tibia [tibiə] — большая берцовая кость
tie [tai] — завязывать
tilt [tilt] — наклонять, смещать
tilted [tiltid] — наклонный, наклонное положение
time [taim] — время
  bleeding ~ [bli:diŋ] — время кровотечения
  clotting ~ [klɔtiŋ] — время свертывания крови
timely [taimli] — вовремя, своевременно
tinnitus [tinitəs] — звон в ушах
tiny [taini] — крошечный, мельчайший
tissue [tiʃu:, tisju:] — ткань
  adipose ~ [ædipɔuz] — жировая ткань
  amoeboid ~ [əmi:bɔid] — амебоидная ткань
  connective ~ [kənektiv] — соединительная ткань
  embryonic ~ [embriɔnik] — эмбриональная ткань
  episcleral ~ [episkliərəl] — эписклеральная ткань
  epithelial ~ [epiθi:liəl] — эпителиальная ткань
  fibrous ~ [faibrəs] — фиброзная ткань
  fluid ~ [flu:id] — жидкая ткань
  glandular ~ [glændjulə] — железистая ткань
  lining ~ [lainiŋ] — выстилающая ткань

loose subcutaneous ~ [**lu:**s sʌbkjut**ei**njəs] — рыхлая подкожная ткань
lymphoid ~ [**li**mfɔid] — лимфоидная ткань
muscle ~ [mʌsl] — мышечная ткань
necrotic ~ [nekrɔtik] — некротическая ткань
nerve~ [nə**:**v] — нервная ткань
osseous ~ [ɔsiəs] — костная ткань
soft ~ [sɔft] — мягкая ткань, гладкая ткань
supporting ~ [səpɔ**:**tiŋ] — поддерживающая ткань
tocopherol [tɔkɔfərɔl] — токоферол
toddler [tɔdlə] — ребенок раннего возраста, начинающий ходить ребенок
toe [tɔ**u**] — палец на ноге
great ~ [gr**ei**t] — большой палец на ноге
hammer ~ [hæmə] — молоткообразный палец стопы
mallet ~ [mælit] — палочкообразный палец стопы
together [təg**e**ðə] — вместе
tolerance [tɔlərəns] — толерантность, переносимость
toll [tɔ**u**l] — колокол
death ~ [d**e**θ] — похоронный звон
tomography [təmɔgrəfi] — томография
computerized ~ [kəmpj**u:**teraizd] — компьютерная томография
tone [tɔ**u**n] — звук, тон
tongue [tʌŋ] — язык
~ **depressor** [dipr**e**sə] — шпатель
dry ~ [dr**ai**] — сухой язык
firred~ [fə**:**d] — обложенный язык
fissured ~ [fi**ʃ**əd] — бороздчатый язык
florid ~ [flɔrid] — воспаленный язык
furred ~ [fə**:**d] — обложенный язык
glazed ~ [gl**ei**zd] — блестящий язык
moist ~ [mɔ**i**st] — влажный язык
pale ~ [p**ei**l] — бледный язык
strawberry ~ [str**ɔ:**bəri] — ярко-красный язык
tonic [tɔnik] — тонический
tonsil [tɔnsəl] — миндалина
faucial ~ [fɔ**:**siəl] — нёбная миндалина
tonsillectomy [tɔnsil**e**ktɔmi] — тонзиллэктомия, удаление миндалин
tonsillitis [tɔnsil**ai**tis] — тонзиллит
tonus [tɔ**u**nəs] — тонус
tool [t**u:**l] — инструмент
tooth, *pl.* **teeth** [t**u:**θ, t**i:**θ] — зуб
~ **cusp** [kʌsp] — бугорок коронки зуба
decayed ~ [dik**ei**d] — испорченный зуб
deciduous ~ [dis**i**djuəs] — молочный зуб
impacted ~ [impæktid] — непрорезавшийся зуб, ретинированный зуб
locked ~ [lɔkt] — ретинированный зуб
milk ~ [m**i**lk] — молочный зуб
permanent ~ [pə**:**mənənt] — коренной зуб
posterior ~ [pɔst**i**əriə] — жевательный зуб
primary ~ [pr**ai**məri] — молочный зуб
supernumerary ~ [sj**u:**pənj**u:**mərəri] — лишний зуб
temporary ~ [t**e**mpərəri] — молочный зуб
wisdom ~ [w**i**zdəm] — зуб мудрости
toothache [t**u**θeik] — зубная боль
top [tɔp] — верх

topical [tɔpikəl] — местный, топический
topographic [tɔpəgræfik] — топографический
total [tɔ**u**tl] — весь, целый, общий
touch (off) [tʌtʃɔv] — вызывать
towards [tɔwɔ:dz] — к, на, по направлению
toxic [tɔksik] — токсический, токсичный
toxicity [tɔks**i**siti] — токсичность
toxin [tɔksin] — токсин
toxoid [tɔksɔid] — токсоид
trabecula, *pl.* **trabeculae** [trəb**e**kjulə, trəb**e**kjuli:] — трабекула
trace [tr**ei**s] — прослеживать, следить, выявлять
trace [tr**ei**s] — след
  ~ elements [**e**limənts] — следовые элементы
trachea [trək**i**ə] — трахея
tracheostomy [trækiɔstəmi] — трахеостомия
trachoma [trækɔ**u**mə] — трахома
tract [trækt] — тракт
  alimentary ~ [**æ**lim**e**ntəri] — пищеварительный тракт
  genital ~ [dʒ**e**nitl] — половой путь
  olfactory ~ [ɔlfæktəri] — обонятельный тракт
  uveal ~ [j**u:**viəl] — увеальный тракт
traction [trækʃən] — вытяжение
traditional [trəd**i**ʃənl] — традиционный
traffic [træfik] — движение, транспорт
train [tr**ei**n] — обучать
training [tr**ei**niŋ] — подготовка
  postgraduate ~ [p**ɔu**stgrædjuət] — последипломное обучение
trait [tr**ei**, tr**ei**t] — характерная черта, особенность
tranquilizer [trænkwilaizə] — транквилизатор
transaction [trænzækʃən] — операция, сделка
transaminase [trænsæmineiz] — трансаминаза
transfer [trænsfə:] — перенос, передача
transfer [trænsfə:] — переводить, переносить
transform [trænsf**ɔ:**m] — преобразовывать
transfusion [trænsfj**u:**ʒən] — переливание (крови)
  packed cells ~ [pæktselz] — переливание эритроцитарной массы
transitional [trænz**i**ʃnl] — переходный
transmissible [trænsm**i**sibl] — заразный, инфекционный
transmission [trænzm**i**ʃən] — передача
transmit [trænsm**i**t] — передавать
transmitter [trænzmitə] — передатчик
transplant [trænspla:nt] — трансплантировать
transurethral [trænsjuər**i:**θrəl] — трансуретральный
transverse [trænsvə:s] — поперечный
transvesical [trænsv**i:**sikl] — трансвезикальный
trap [træp] — ловушка
trap [træp] — улавливать
trauma [trɔ:mə] — травма
  blunt ~ [blʌnt] — тупая травма
traumatic [trɔ:mætik] — травматический
traumatology [trɔ:mətɔlədʒi] — травматология
treatment [tr**i:**tmənt] — лечение, обработка
  conservative ~ [kənsɔ:vətiv] — консервативное лечение
  waste water ~ [w**ei**st wɔ:tə] — обработка сточных вод
treaty [tr**i:**ti] — договор

tremendous [trim**e**ndəs] — огромный
tremor [tr**e**mə] — дрожание, тремор
trial [tr**ai**əl] — испытание
triangle [tr**ai**æŋgl] — треугольник
trifid [tr**ai**fid] — трехраздельный
trigeminal [traidʒ**e**minl] — тройничный
trigger (off) — начинать, вызывать
triglyceride [tr**ai**gl**i**səraid] — триглицерид
trim [tr**i**m] — зачищать, обрабатывать
trioxide [tr**ai**ɔks**ai**d] — триоксид
triple [tr**ai**pl] — тройной
trituration [tritjuər**ei**ʃn] — порошкование, измельчение в порошок
triumph [tr**ai**əmf] — триумф, успех, торжество
trivial [tr**i**viəl] — тривиальный, незначительный, банальный, обычный
trocanter [trɔkæntə] — вертел
trophic [trɔfik] — трофический
tropical [trɔpikl] — тропический
trouble [trʌbl] — беспокойство, неприятность
troubled [trʌbld] — обеспокоенный
true [tr**u:**] — истинный, настоящий, справедливый, верный
true-bred [tr**u:**bred] — чистокровный
truly [tr**u:**li] — действительно, в полном смысле слова
trunk [trʌŋk] — туловище
tryptophane [tr**i**ptəfein] — триптофан
tube [tju:b] — трубка, зонд; тюбик; канал
  digestive ~ [didʒ**e**stiv] — пищеварительный канал
  double-lumen ~ [dʌbll**u:**mən] — двухпросветная интубационная трубка
  Eustachian ~ [ju:st**ei**kjən] — евстахиева труба
  Fallopiant ~ [fæl**ɔu**piən] — фаллопиева труба
  nasogastric ~ [n**ei**zougæstrik] — назогастральный зонд
tubercle [tj**u:**bəkl] — бугорок
  tibial ~ [t**i**biəl] — бугорок большеберцовой кости
tuberculosis [tju:bə**:**kjul**ɔu**sis] — туберкулез
  miliary ~ [m**i**liəri] — милиарный туберкулез
  pulmonary ~ [pʌlmənəri] — легочный туберкулез
tuberosity [tju:bər**ɔ**siti] — бугристость
  ischial ~ [**i**skiəl] — седалищная бугристость
tubing [tj**u:**biŋ] — интубирование
tubule [tj**u:**bju:l] — трубочка
tuft [tʌft] — пучок
  bulbar ~ [bʌlbə] — бульбарная опухоль
  glomerular ~ [glɔm**e**rulə] — гломерулярный пучок
tumor [tj**u:**mə] — опухоль, новообразование
  malignant ~ [mə**li**gnənt] — злокачественная опухоль
  Wilms' ~ [w**i**lmz] — опухоль Вильмса
turn (out) — оказываться
turn [tə**:**n] — очередь; поворот
turn [tə**:**n] — поворачивать
twig [tw**i**g] — разветвление
twitch [tw**i**tʃ] — подергивание, судорога, конвульсия
twitching [tw**i**tʃiŋ] — подергивание
twofold [tu:f**ɔu**ld] — двукратный
tympanic [t**i**mpænik] — барабанный
tympanum [t**i**mpənəm] — среднее ухо
type [t**ai**p] — тип; шрифт
typhoid [t**ai**fɔid] — тиф

typhus [t**ai**fəs] — тиф
  spotted ~ [sp**ɔ**tid] — сыпной тиф
typical [t**i**pikl] — типичный
tyrosine [t**a**iərəusin] — тирозин

U

ulcer [ʌlsə] — язва
  bleeding peptic ~ [bl**i:**diŋ p**e**ptic] — кровоточащая пептическая язва
  dendritic ~ [dendr**ai**tik] — ветвистая язва роговицы
  duodenal ~ [dj**u**ɔud**i:**nəl] — язва двенадцатиперстной кишки
  gastric ~ [gæstrik] — язва желудка
  mycotic ~ [maik**ɔ**tik] — микотическая язва
  peptic ~ [p**e**ptik] — язва желудка и двенадцатиперстной кишки, пептическая язва
ulceration [ʌlsər**ei**ʃən] — изъязвление, образование язв
ulcerative [ʌlsərətiv] — язвенный
ultimate [**ʌ**ltimit] — конечный, окончательный, отдаленный, первичный
ultimately [ʌltimitli] — в конце концов, в итоге
ultramicroscopic [ʌltrəmaikrəsk**ɔ**pik] — ультрамикроскопический
ultrasonic [ʌltrəs**ɔ**nik] — ультразвуковой
umbilical [ʌmb**i**likl] — пупочный
unaided [ʌn**ei**did] — без помощи
unanimity [j**u**nən**i**miti] — единодушие
unanimously [junæniməsli] — единогласно
unbreakable [ʌndr**ei**kəbl] — небьющийся
unburnt [ʌnb**ə:**nt] — несгоревший
uncommon [ʌnk**ɔ**mən] — редкий, необычный
unconscious [ʌnk**ɔ**nʃəs] — бессознательный, бессознательное состояние
unconsciously [ʌnk**ɔ**nʃəsli] — бессознательно
uncontrollable [ʌnkəntr**əu**ləbl] — неконтролируемый
uncontrolled [ʌnkəntr**əu**ld] — неконтролируемый
uncross [ʌnkr**ɔ**s] — не перекрещиваться, не пересекаться
undercut [ʌndəkʌt] — подрез
underestimate [ʌndə**e**stimeit] — недооценивать
undergo [ʌdəg**əu**] — подвергаться
underlying [ʌdəl**ai**iŋ] — подлежащий, лежащий ниже, лежащий в основе
undertake, undertook, undertaken [ʌndət**ei**k, ʌndərt**u:**k, ʌndərt**ə**ikn] — предпринять, предпринимать
undertaking [ʌndət**ei**kiŋ] — дело
undesirable [ʌndiz**ai**ərəbl] — нежелательный
undisturbed [ʌndist**ə:**bd] — ненарушенный
undue [ʌndj**u:**] — непомерный
undulating [ʌndjul**ei**tiŋ] — волнистый, волнообразный
unexplained [ʌniksp**lei**nd] — необъяснимый
unfamiliar [ʌnfəm**i**ljə] — неизвестный, несвойственный
uniform [j**u:**nifɔ:m] — однородный
uniform [j**u:**nifɔ:m] — форменная одежда
uniformly [j**u**nifɔ:mli] — равномерно
unilateral [j**u:**nil**æ**tərəl] — односторонний
unimpeded [ʌnimp**i:**did] — свободный, беспрепятственный
union [j**u:**niən] — срастание, соединение
  delayed ~ [dil**ei**d] — замедленная консолидация

unit [**ju:**nit] — отделение, бокс; единица
accident ~ [æksidənt] — отделение неотложной помощи
burn ~ [bə:n] — ожоговое отделение
chest surgery ~ [tʃ**e**st sə:dʒəri] — отделение грудной хирургии
head injuries ~ [h**e**d **i**ndʒəriz] — отделение нейрохирургии
intensive care ~ [int**e**nsiv k**eə**] — отделение интенсивной терапии
plastic surgery ~ [plæstik sə:dʒəri] — отделение пластической хирургии
unite [ju:n**ai**t] — срастаться
universal [**ju:**niv**ə:**səl] — универсальный
university [**ju:**niv**ə:**siti] — университет
unknown [ʌn**əu**n] — неизвестный
unlike [ʌnl**ai**k] — в отличие от
unlucky [ʌnlʌki] — несчастный
unmistakable [ʌnmist**ei**kəbl] — очевидный, явный
unparalleled [ʌnpærələld] — беспримерный, бесподобный
unpleasant [ʌnpl**e**zənt] — неприятный
unqualified [ʌnkwəlifaid] — абсолютный, неквалифицированный
unrelated [ʌnril**ei**tid] — неродственный, несвязанный
unsaturated [ʌnsætjur**ei**tid] — ненасыщенный
unsightly [ʌns**ai**tli] — неприглядный
unspectacular [ʌnspektækjulə] — не впечатляющий, маловыразительный
unstable [ʌnst**ei**bl] — неуравновешенный
unsteadiness [ʌnst**e**dinis] — неустойчивость
unstuck [ʌnstʌk] — отделившийся, отставший
unthinkable [ʌnθ**i**ŋkəbl] — невероятный, немыслимый
untreated [ʌntr**i:**tid] — необработанный, нелеченый
unusually [ʌnj**u**ʒuəli] — необычно, необыкновенно
upper [ʌpə] — верхний
uppermost [ʌpəməust] — поверхностный слой
upright [ʌprait] — прямой
uptake [ʌpteik] — поглощение
upwards [ʌpwədz] — вверх
uraemia [juər**i:**miə] — уремия
urate [**ju**əreit] — урат
urban [**ə:**bən] — городской
urea [**ju**əriə] — мочевина
ureter [juər**i:**tə] — мочеточник
urethra [juər**i:**θrə] — уретра
urgent [**ə:**dʒənt] — необходимый
uric [**ju**ərik] — мочевой
urinal [**ju**ərinl] — утка
urinary [**ju**ərinəri] — мочевой
urine [**ju**ərin] — моча
urinometer [**ju**ərinəmitə] — уринометр
urobilinogen [**ju**ərəubail**i**nəudʒən] — уробилиноген
urochrome [**ju**ərəkrəum] — урохром
useful [**ju:**sful] — полезный
usually [**ju:**ʒeəli] — обычно
uterine [**ju:**tərain] — маточный
uterus, *pl.* **uteri** [**ju:**tərəs, **ju:**tərai] — матка
uvea, *pl,* **-uvae** [**ju:**viə, **ju:**vi:] — увеа, сосудистая оболочка глазного яблока
uveitis [ju:vi**ai**tis] — увеит
chronic anterior ~ [krənik æntiəriə] — хронический передний увеит

V

vaccination [væksin**ei**ʃən] — вакцинация

vaccine [væksi:n] — вакцина
Sabin ~ [s**ei**bin] — вакцина Сабина
Salk ~ [s**ɔ:**lk] — вакцина Солка
vaccinia [væks**i**niə] — коровья оспа
vagina [vədʒ**ai**nə] — вагина, влагалище
artificial ~ [**a:**tif**i**ʃəl] — искусственное влагалище
vaginal [vədʒ**ai**nl] — влагалищный
vaginitis [vædʒin**ai**tis] — вагинит
vague [v**ei**g] — неясный, неопределенный
vagus [v**ei**gəs] — блуждающий нерв
valency [v**ei**lənsi] — валентность
valerian [vəl**i**əriən] — валериана, валериановые капли
validity [vəl**i**diti] — действенность
valine [v**ei**li:n] — валин
valuable [væjuəbl] — ценный, важный
value [vælju:] — значение, ценность, показатель, полезность
haemodynamic ~ [h**i:**mɔudainæmik] — гемодинамический показатель
valve [vælv] — клапан
aortic ~ [eiɔ**:**tik] — аортальный клапан
atrioventricular ~ [**ei**triɔuventr**i**kjulə] — атриовентрикулярный клапан
bicuspid ~ [baikʌspid] — двустворчатый клапан
incompetent ~ [inkɔmpitənt] — поврежденный клапан, недостаточность клапана
mitral ~ [m**ai**trəl] — митральный клапан
pulmonary ~ [pʌlmənəri] — легочный клапан
tricuapid ~ [traikʌspid] — трехстворчатый клапан
vapour [v**ei**pə] — пар
varicella [væris**e**lə] — ветряная оспа
varicose [værikɔus] — варикозный
variety [vər**ai**əti] — ряд, разновидность, разнообразие
variola [vər**ai**ələ] — оспа
various [v**e**əriəs] — различный, разнообразный, разный
varix, *pl.* **varices** [v**e**əriks, v**e**əri-si:z] — варикозно расширенный сосуд
vas deferens [væs d**e**fərənz] — отводящий сосуд
vascular [væskjulə] — сосудистый
vasoconstrictor [v**ei**sɔukənstr**i**ktə] — сосудосуживающее вещество, вазоконстриктор
vasopressin [v**ei**sɔupr**e**sin] — вазопрессин
vehicle [v**i:**kl] — переносчик; транспортное средство
motor ~ [m**ɔu**tə] — автомобиль
vein [v**ei**n] — вена
cubital ~ [kj**u:**bitl] — локтевая вена
femoral ~ [f**i:**mərəl] — бедренная вена
hepatic ~ [hipætik] — печеночная вена
portal ~ [p**ɔ:**təl] — воротная вена
renal ~ [r**i**nəl] — почечная вена
splenic ~ [spl**i:**nik] — селезеночная вена
vena cava [v**i:**nə k**ei**və] — полая вена
inferior ~ [inf**i**əriə] — нижняя полая вена
superior ~ [sjup**i**əriə] — верхняя полая вена
venation [vin**ei**ʃn] — жилкование, венозная сеть
ventilating [v**e**ntileitiŋ] — вентиляционный
ventricle [v**e**ntrikl] — желудочек
ventricular [ventr**i**kjulə] — желудочковый

venule [v**e**njul] — венула
vernal [v**ə:**nl] — весенний
verruca [vər**u:**kə] — бородавка
verrucose [ver**u:**kous] — веррукозный
vertebra, *pl.* **vertebrae** [v**ə:**təbrə, v**ə:**təbri] — позвонок
vertebral [v**ə:**təbəl] — позвоночный
vertigo [v**ə:**tigəu] — головокружение
vesicle [v**e**sikl] — везикула, пузырек
vesicular [ves**i**kjulə] — везикулярный
vessel [v**e**sl] — сосуд
  blood ~ [blʌd] — кровеносный сосуд
  capillary blood ~ [kəp**i**ləri] — капиллярный кровеносный сосуд
vestibular [vəst**i**bjulə] — вестибулярный
vestibule [v**e**stibjul] — преддверие, вход
vestibulocochlear [vəst**i**bjuləuk**ɔ**kliə] — вестибуло-кохлеарный
vestibuloplasty [vesti**b**juləuplæsti] — вестибулопластика
via [v**ai**ə] — через
viable [v**ai**əbl] — жизнеспособный
vibration [vaibr**ei**ʃən] — вибрация
vibrio [vibriəu] — вибрион
  ~ cholera [kələrə] — холерный вибрион
vice versa [v**ai**sə v**ə:**sə] — наоборот
victim [v**i**ktim] — жертва
villus, *pl.* **villi** [v**i**ləs, v**i**lai] — ворсинка
violence [v**ai**ələns] — насильственное нанесение (травмы)
violent [v**ai**ələnt] — интенсивный, сильный
viral [v**ai**ərəl] — вирусный
virtually [v**ə:**tjuəli] — фактически
virtue (of) [v**ə:**tju] — посредством
virulence [v**i**rulens] — вирулентность
virulent [v**i**ruənt] — вирулентный
virus [v**ai**ərəs] — вирус
  neurotropic ~ [nj**u**ərətr**ɔ**pik] — нейротропный вирус
visceral [v**i**sərəl] — висцеральный
viscus, *pl.* **viscera** [v**i**skəs, v**i**sərə] — внутренний орган
visible [v**i**zəble] — видимый
vision [v**i**ʒn] — зрение
visitor [v**i**zitə] — посетитель
  health ~ [h**e**lθ] — патронажная медицинская сестра
visual [v**i**ʒjuəl, v**iə**ʒəl] — визуальный, зрительный
  ~ acuity [æk**ju**əti] — острота зрения
visualization [v**i**ʒuəlaiz**ei**ʃn] — визуализация
vital [v**ai**tl] — жизненный
  ~ capacity [v**ai**tlkəpæsiti] — жизненная емкость
vitamin [v**i**təmin, v**ai**təmin] — витамин
voiding [v**ɔi**diŋ] — опорожнение
void [v**ɔi**d] — опорожнять
voice [v**ɔi**s] — голос
  broken ~ [br**ɔ**ukn] — ломающийся голос
volatile [vɔlətail] — летучий
volatility [v**ɔ**lət**i**liti] — летучесть
volume [vɔljum] — объем
  end-diastolic ~ [**e**nddaiæstɔlik] — конечный диастолический объем
  end-systolic ~[**e**ndsistɔlik] — конечный систолический объем
  packed-cell ~ [pæktsel] — объем эритроцитарной массы
  residual ~ [riz**i**djuəl] — остаточный объем
  stroke ~ [str**ɔu**k] — ударный объем
voluntary [vɔləntəri] — добровольный
volvulus [vɔlvjuləs] — заворот кишок
vomiting [vɔmitiŋ] — рвота
vulnerable [vʌlnərəbl] — уязвимый

vulva, *pl.* **-ae** [vʌlvə, vʌlvi:] — вульва
vulval [vʌlvəl] — относящийся к вульве
vulvovaginitis [vʌlvɔvædʒin**ai**tis] — вульвовагинит

W

wage [w**ei**dʒ] — проводить (кампанию)
waist [w**ei**st] — поясница, талия
walk [wɔ:k] — ходить
walking [wɔ:kiŋ] — ходьба
wall [wɔ:l] — стенка
  pulpal ~ [pʌlpl] — стенка пульпы
want [wɔnt] — хотеть, желать
ward[wɔ:d] — палата
  medical ~ [m**e**dikl] — терапевтическая палата
  paediatric ~ [p**i**diætrik] — педиатрическая палата, детская палата
  resuscitation ~ [risʌsit**ei**ʃən] — реанимационная палата
  special surgical ~ [sp**e**ʃəl sə:dʒikəl] — специальная хирургическая палата
  surgical ~ [sə:dʒikəl] — хирургическая палата
warming [wɔ:miŋ] — согревание
warning [wɔ:niŋ] — предупреждение
wart [wɔ:t] — бородавка
washbasin [wɔʃb**ei**sn] — раковина
wash [wɔʃ] — мыть, промывать
waste [w**ei**st] — отходы
  industrial ~s [indʌstiəl] — промышленные отходы
watch [wɔtʃ] — наблюдать, следить
watch-glass — смотровое стекло
water [wɔ:tə] — вода
  ground ~s [gr**au**nd] — грунтовые воды
  running ~ [rʌniŋwɔ:tə] — водопровод
  surface ~ [sə:fis] — поверхностная вода
watercourse [wɔ:təkɔ:s] — русло
waterproof [wɔ:təpru:f] — водонепроницаемый
wave [w**ei**v] — волна
  ultrasonic ~ [ʌltrəsɔnik] — ультразвуковая волна
wax [wæks] — воск
weak [wi:k] — слабый
weakened [wi:kənd] — ослабленный
weakness [wi:knis] — слабость
  muscle ~ [mʌsl] — мышечная слабость
wean [wi:n] — отнимать от груди
weaning [wi:niŋ] — отнятие от груди
wear [we**ə**] — носить
  occlusal ~ [ɔkl**u:**zl] — брекет для исправления прикуса
wearing [w**e**əriŋ] — износ, снашивание
weedkiller [wi:dkilə] — гербицид
weigh [w**ei**] — взвешивать
weighing [w**ei**iŋ] — взвешивание
weight [w**ei**t] вес
weights [w**ei**ts] — разновески
weld [w**e**ld] — спаивать, сваривать
welding [w**e**ldiŋ] — сварка, спайка
welfare [w**e**lfeə] — благополучие
well-developed [w**e**l div**e**lɔpt] — хорошо развитый
whatever [wɔt**e**və] — какой бы ни, любой
wheat [wi:t] — пшеница
wheeze [wi:z] — тяжелое дыхание, свистящее дыхание, свист
whereas [weəræz] — в то время как, тогда как
whisper [wispə] — шепот
whistle [wisl] — свист
white [w**ai**t] — белый
whitish [w**ai**tiʃ] — беловатый
whole [h**əu**l] — весь, целый

whooping cough [h**u:**piŋk**ɔ**f] — коклюш
wide [w**ai**d] — широкий
widely [w**ai**dli] — широко
wide-spectrum [w**ai**d-sp**e**ktrəm] — широкий спектр
widespread [w**ai**dspred] — широко распространенный
widow [w**i**dɔu] — вдовец
wild [w**ai**ld] — дикий
windpipe [w**i**ndpaip] — дыхательное горло
wisp [w**i**sp] — пучок
withdrawl [wiðdr**əə**l] — абстиненция, синдром отмены; отмена, отчужденность
withdrawn [wiðdr**ɔ:**n] — замкнутый, ушедший в себя
witness [w**i**tnis] — свидетель, очевидец
woman, *pl.* **women** [w**u**mən, w**i**min] — женщина
  parturient ~ [pa:tj**u**əriənt] — роженица
womb [w**u:**m] — матка, утроба
worker [w**ə:**kə] — рабочий, работник, сотрудник
  medical social ~ M.S.W. [m**e**diklsɔ**u**ʃəl, emesdʌblju] — соцработник
  psychiatric social ~ P.S.W. [s**ai**kiætrik s**ou**ʃəl, piesdʌblju] — социальный работник по оказанию психиатрической помощи
working [w**ə:**kiŋ] — работа
wormwood [w**ə:**mwud] — полынь горькая
worry [wʌri] — беспокоиться
worry-free [wʌrifr**i:**] — беззаботный, спокойный
wound [w**u:**nd] — рана
  facial ~ [f**ei**ʃəl] — лицевая рана
  open ~ [**ɔu**pən] — открытая рана
  penetrating ~ [p**e**nitr**ei**tiŋ] — проникающее ранение
  traumatic ~ [trɔ:m**æ**tik] — травматическая рана
wrist [r**i**st] — запястье
wrong [r**ɔ**ŋ] — неправильно, неверно

X

xanthelasma [zænθilæzmə] — ксантелазма, плоская ксантома
xeroderma [zi:rəud**ə:**mə] — ксеродерма
X-rays [**e**ksr**ei**z] — рентгеновские лучи
xylol [z**ai**ləl] — ксилол

Y

yaws [j**ɔ:**z] — фрамбезия
yield [j**i:**ld] — вырабатывать, производить, приводить, давать

Z

zero [z**i**ərɔu] — ноль
zone [z**ɔu**n] — зона
zonule [z**ɔu**nju:l] — поясок

LIST OF PROPER NAMES MENTIONED IN THE BOOK

Addison [**æ**disn]
Argyll Robertson [**a:**gail rɔbətsən]
Avicenna [**æ**visenə]
Babinski [bæb**i**nski]
Barnad [b**a:**nəd]
Basedow [bʌzədou]
Benedict [b**e**nidikt]
Bergman [b**ə:**gmən]
Billroth [b**i**lrɔt]
Bleuler [bl**ɔi**lə]
Bouin [bw**a:**n]
Bowman [b**ɔu**mən]
Brudzinski [brudz**i**nski]
Burkitt [bə**:**kit]
Cheyne Stokes [tʃ**ei**n st**ɔu**ks]
Cooley [k**u:**li]
Crohn [kr**ɔu**n]
Czermak [tʃ**e**əmək]
Denis-Browne [d**e**nis-br**au**n]
Domagk [dɔ:mək]
Doun [d**au**n]
Du Bois-Reymond [du bw**a:** reimənŋ]
Erb [a:b]
El Tor [**e**l tɔ**:**]
Fehling [f**ei**liŋ]
Filatov [f**i**lətɔv]
Fleming [fl**e**miŋ]
Forel [fɔrəl]
Forssmann [fɔ**:**smən]
Galen [g**ei**lən]
Geiger [g**ai**gə]
Glisson [gl**i**sən]
Golgi [gɔldʒi]
Grave [gr**ei**v]
Hager [h**a:**gə]
Hebra [h**e**brə]
Helmholtz [h**e**lmhɔlts]
Henle [h**e**nli]
Hippocrates [hipɔkrəti:z]
Hodgkin [hɔdʒkin]
Huntingdon [hʌŋtingdən]
Jacksonian [dʒæksɔun**i:**ən]
Kernig [kə**:**nig]
Klebs-Löffler [klebz-l**e**flə]
Koch [kɔ:k]
Kocher [kɔ**:**kə]
Koplik [kɔplik]
Landsteiner [lændst**ai**ner]
Langerhans [læŋgəhæns]
Lister [l**i**stə]
Mayer [m**ei**ə]
Mendel [m**e**ndl]
Meniere [m**ei**niə]
Morton [mɔ**:**tən]
Müller [m**u**lə]
Nils Rosen von Rosenstein [nils rɔ**u**zən fɔn rɔ**u**zənsti:n]
Oddi [**o**di]
Paracelsus [pærəs**e**lsəs]
Paster [pæstə**:**]
Peyer [p**ai**ə]
Pirquet [pirk**ei**]
Purkinje [pə**:**kindʒi]
Ramsted [ræmsted]
Roentgen [r**e**ntgən]
Rokitansky [rɔ**u**kitænski]
Romberg [rɔmbə:g]
Sabin [s**ei**bin]
Salk [sɔ**:**lk]
Sauerbruch [s**au**əbruk]
Schlemm [ʃl**e**m]
Semmelweis [z**e**mlvais]
Simmonds [s**i**məndz]
Snellen [sn**e**ln]

Starling [st**a:**liŋ]
Sydenham [**si**dnæm]
Tay-Sachs [t**ei** zæks]
Tolu [tɔl**u:**]
Trendelenburg [tr**e**ndəlenbə:g]
Vater [f**a:**tə]
Waggner-Jauregg [v**a:**gnə-j**au**reg]
Wagner [v**a:**gnə]
Wassermann [vʌsərmən]
Weil [v**ai**l]
Wilms [w**i**lmz]
Zenker [z**e**ŋkə]

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