

МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ
УЧРЕЖДЕНИЕ ОБРАЗОВАНИЯ
«ГОМЕЛЬСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ»

Кафедра иностранных языков

МЕДИЦИНСКИЙ АНГЛИЙСКИЙ

для магистрантов

Рекомендовано учебно-методическим объединением
по высшему медицинскому, фармацевтическому образованию
в качестве учебно-методического пособия для магистрантов
учреждений высшего образования,
обучающихся по специальностям 1-79 80 01 «Лечебное дело»,
1-79 80 13 «Медико-диагностическое дело»

MEDICAL ENGLISH

for post-graduates

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Учебно-методическое пособие составлено на основе аутентичных медицинских лекций для подготовки обучающихся к осознанному восприятию и пониманию оригинальных текстов и развитию навыков устной речи, позволяющих использовать иностранный язык для решения социально-коммуникативных задач в различных областях профессиональной деятельности.

Предназначено для магистрантов учреждений высшего образования, обучающихся по специальностям 1-79 80 01 «Лечебное дело», 1-79 80 13 «Медико-диагностическое дело».

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ПРЕДИСЛОВИЕ

Данное учебно-методическое пособие предназначено для магистрантов, продолжающих изучение английского языка, и является частью учебных материалов. Цель пособия — подготовить обучающихся к осознанному восприятию и пониманию оригинальных медицинских текстов и развить навыки общения на английском языке.

Тематика текстового материала соответствует основным требованиям программы и обусловлена уровнем профессиональной подготовки медиков с опорой на такие профилирующие дисциплины, как физиология, патологическая физиология, терапия, хирургия, психиатрия и фармакология. Серия текстов разработана по традиционной методике деления процесса аудирования на *pre-listening*, *listening* и *post-listening*, что предполагает поэтапное формирование и развитие аудитивных навыков. Задания в каждой лекции опираются на знания дисциплин профессиональной направленности, тем самым активизируют фоновый языковой и междисциплинарный запас.

Некоторые лекции сопровождаются наличием диаграмм, что значительно облегчает непосредственное восприятие аудиотекста. Обязательным заданием каждой лекции является создание учебной коммуникативной ситуации, которая стимулирует обучающихся к активному применению полученной информации, что, по сути, реализует коммуникативную направленность обучения.

ILLNESS AND DISEASE

Pre-listening

Before listening to the lecture do some training to prevent difficulties in understanding.

I. Practise the pronunciation of the words. Try to guess their meaning basing on their Russian and Latin equivalents.

1) function	[ˈfʌŋkʃən]
2) infection	[ɪnˈfektʃən]
3) microorganism	[ˈmaɪkrəuˈɔːgənɪzəm]
4) microscope	[ˈmaɪkrəuskəʊp]
5) symptom	[ˈsɪmptəm]
6) hypertension	[ˈhaɪpə(:)ˈtenʃən]
7) ophthalmoscope	[ɒf,θælməˈskəʊp]
8) subjective	[səbˈdʒektɪv]
9) abnormal	[æbˈnɔːmə]
10) clinical	[ˈklɪnɪkəl]
11) diagnosis	[ˌdaɪəgˈnəʊsɪz]
12) tablet	[ˈtæblɪt]
13) instrument	[ˈɪnstɹumənt]
14) patient	[ˈpeɪʃənt]
15) problem	[ˈprɒbləm]

II. Memorize the following word combinations. Insert the necessary ones in the statements and make up your own sentences with these words.

ill — больной, нездоровый

to feel ill — чувствовать себя больным

to be ill (with smth) — болеть (чем-либо)

to fall (fell; fallen) ill with smth — заболеть чем-либо

ill-health — плохое здоровье, недомогание

illness — болезнь, нездоровье

1. Why is he absent? Is he _____?
2. I usually see my therapist in case of _____.
3. I _____ the grippe last week and hasn't recovered yet.
4. You look so pale and tired. — Yes, I _____.
5. Jane doesn't attend school as she _____ measles.
6. If you feel unwell, you certainly have an _____.
7. When did you _____? — May be several days ago.

III. Match the proper Russian equivalents for the modal verbs minding their form.

you might think
it can be measured
you may not have heard
you can't feel
you can see
the doctor may find
you can prevent

ВЫ НЕ МОЖЕТЕ ЧУВСТВОВАТЬ
ДОКТОР МОГ НАЙТИ
ВЫ МОЖЕТЕ ПРЕДОТВРАТИТЬ
ЭТО МОЖНО ИЗМЕРИТЬ
ВЫ МОЖЕТЕ ПОДУМАТЬ
ВЫ МОЖЕТЕ УВИДЕТЬ
ВЫ МОЖЕТЕ НЕ СЛЫШАТЬ
ДОКТОР МОЖЕТ НАЙТИ
ВЫ МОГЛИ БЫ ПОДУМАТЬ
ВЫ МОГЛИ НЕ СЛЫШАТЬ

Name the modal verbs used in:

a) the Past form; b) the Perfect form; c) the Present form; d) the Passive form; e) the Present negative form

IV. While listening you'll encounter some clinical terms

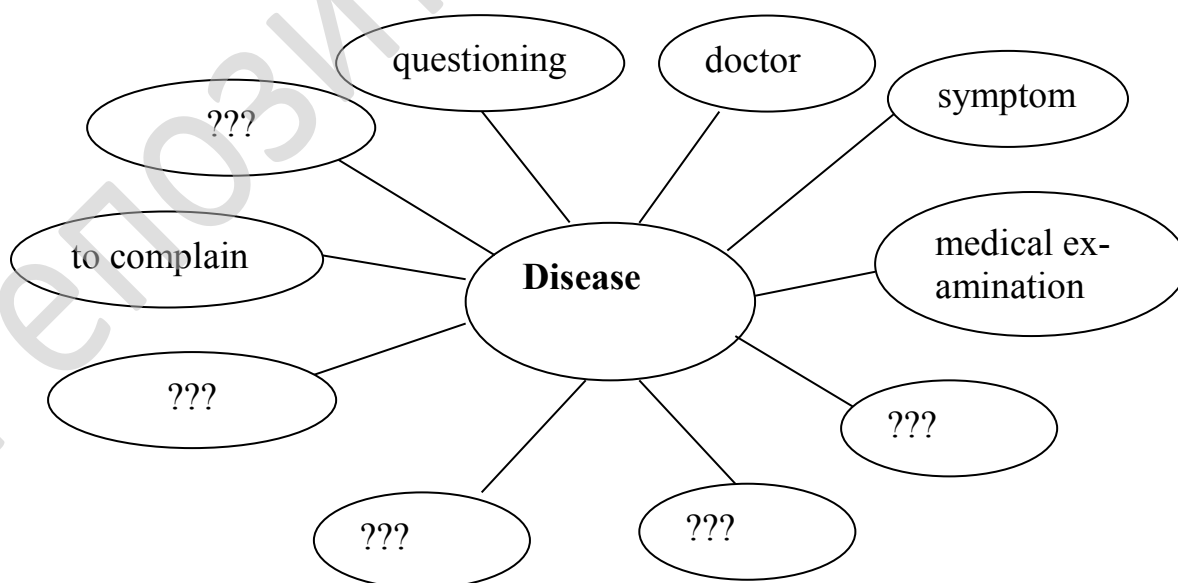
What do these elements mean?

micro-; ophthalm-; -scopia; -tension; hyper-

Explain the meaning of the following terms

microorganism; hypertension; ophthalmoscope; microscope.

V. Complete filling in the associative diagram on the topic words "Illness and Disease". What words do you suppose to hear in the lecture?



VI. Here is the list of new vocabulary that will help you understand the lecture.

1) synonymous	[sɪˈnɒnɪməs]	синонимичный
2) experience	[ɪksˈpɪəriəns]	опыт, переживание
3) to accompany	[əˈkʌmpəni]	сопровождать, сопутствовать
4) disturbance	[dɪsˈtɜːbəns]	нарушение
5) cancer	[ˈkænsə]	рак
6) to measure/ to take	[ˈmeɪʒə]	измерять, мерить
7) weakness	[ˈwiːknɪs]	слабость
8) nausea	[ˈnɔːsjə]	тошнота
9) to complain of to complain about	[kəmˈpleɪn]	жаловаться на /мед./ жаловаться на /быт/
10) complaint	[kəmˈpleɪnt]	жалоба, недовольство
11) to result in	[rɪˈzʌlt]	иметь результатом, привести к ч-л.
12) to develop	[dɪˈveləp]	развиваться, распространяться
13) vessel	[vesl]	сосуд
14) damage	[ˈdæmɪdʒ]	вред, повреждение
15) sign	[saɪn]	знак, признак, симптом
16) to report	[rɪˈpɔːt]	сообщать, рассказывать
17) to involve	[ɪnˈvɒlv]	включать в себя
18) to look for	[luːk]	искать
19) characteristic	[ˌkærɪktəˈrɪstɪk]	характерный
20) pattern	[ˈpætən]	образец, модель, шаблон
21) to fit	[fɪt]	приспосабливать, подгонять
22) jigsaw	[ˈdʒɪɡzɔː]	составная картинка-загадка
23) to occur	[əˈkɔː]	случаться, происходить
24) heart attack	[ˈhɑːt əˈtæk]	сердечный приступ
25) to prevent	[prɪˈvent]	предотвратить, предупредить
26) to cure	[kjʊə]	вылечивать, исцелять / исцеление
27) to afford	[əˈfɔːd]	позволить себе
28) rare	[rɛə]	редкий
29) notion	[ˈnəʊʃən]	понятие, идея
30) descriptive	[dɪsˈkrɪptɪv]	описательный
31) palliative	[ˈpæliətɪv]	паллиативный, смягчающий
32) to remove	[rɪˈmuːv]	устранить, удалить
33) to get rid of	[rɪd]	избавиться от

VII. Work in pairs. Check up your neighbour's knowledge of the words

опыт У вас есть опыт работы с такими пациентами?	experience Do you have any experience of working with such patients?
жаловаться на Он часто жалуется на жизнь.	to complain of / about He often complains about his life.

На что вы жалуетесь? жалоба У вас есть какие-либо жалобы?	What do you complain of? complaint Do you have any complaints?
иметь результатом, привести к ч-л. Такой образ жизни может привести к серьезным проблемам с сердцем.	to result in smth This lifestyle can result in serious heart troubles.
включать в себя Моя работа включает много телефонных звонков.	to involve My work involves a lot of phone calls.
искать Что вы ищите здесь?	to look for What are you looking for here?
подгонять, подходить Это пальто не подходит тебе.	to fit This coat doesn't fit you.
случаться, происходить Эти симптомы случаются при хронических формах заболевания.	to occur These symptoms occur in chronic forms of the disease.
избавиться от чего-либо Вам нужно избавиться от вредных привычек как можно быстрее.	to get rid of smth You have to get rid of your bad habits as fast as possible.
устранить, удалить Это лекарство поможет вам устранить основные симптомы.	to remove This medicine will help you to remove the main symptoms.
позволить себе Я не могу себе позволить купить квартиру в новом районе.	to afford I can't afford to buy an apartment in a new district.
излечивать, исцеление Это лечение не принесло исцеление от болезни.	to cure (of) / cure This treatment didn't bring any cure of the disease.
признак Какие признаки вашего плохого самочувствия?	sign What are the signs of your ill-health / sickness?

VIII. Answer the questions and translate into English (you may do it in writing)

nausea

1. Have you ever had nausea?
2. Как часто вы чувствуете тошноту?
3. Тошнота — это признак кишечных нарушений.

to develop

1. How do you develop your speaking skills in English?

2. Наша компания развивается очень быстро.
3. Ребёнок развивался согласно возрасту.

weakness

1. How often do you feel weakness?
2. Если у вас слабость, обратитесь к врачу.
3. Она страдала от слабости и головной боли.

to measure

1. What do you measure your temperature with?
2. Врач попросил медсестру измерить давление пациента.
3. Вы можете измерить размер вашей комнаты?

to prevent

1. What do you do to prevent colds?
2. Дети предотвратили пожар в школе.
3. Вам нужно принимать это лекарство, чтобы предотвратить пневмонию.

IX. Translate the sentences into English using the new vocabulary

1. Характерные признаки этой болезни — слабость и тошнота.
2. Паллиативное лечение не приводит к исцелению.
3. Сердечный приступ случился рано утром.
4. Компания ищет специалиста с большим опытом работы в строительстве.
5. Этот курс включал лекции и практические занятия.
6. Неправильное питание может привести к нарушению работы кишечника.
7. Повреждение сосуда развилось очень быстро.
8. Я не могу избавиться от привычки много есть по ночам.
9. Пациент сообщил свои жалобы, а врач измерил его давление.
10. Кто будет сопровождать вас в этой поездке?

Listening

Now you are going to hear the lecture divided into four sections. During the pause after each section you'll have to answer the questions:

Section I

- What is an illness?
- What is a disease?

Section II

- What is a symptom?
- What is an ophthalmoscope used for?

Section III

- What is a sign?
- What does the process of making a diagnosis involve?

Section IV

- Why is prevention better than cure?

Post-listening

I. Try to remember in which section the following words were mentioned first.

symptom; feeling of ill-health; clinical sign; cure; hypertension; illness; diagnosis; descriptive medicine; prevent; infection; characteristic pattern; blood vessels; microorganism; abnormal; technological treatment; pain; jigsaw.

II. Complete the definitions of the key words

1. Illness is the experience ____.
2. Disease is a disturbance ____.
3. Symptom is a subjective ____.
4. Hypertension is high ____.
5. Ophthalmoscope is a special instrument ____.
6. Diagnosis is the process ____.
7. Prevention is much better ____.

III. Listen to the lecture again and dwell on the following ideas proving them with the concrete examples

1. Difference between illness and disease.
2. Having a disease and not feeling it at all.
3. The process of making a diagnosis.
4. Prevention is better than cure.

IV. Choose the right words according to the context

1. You have a headache; it's a(n) (disease; illness).
2. Your analyses are not good enough; it's a(n) (disease; illness).
3. You complain of a sore throat and a headache; these are (symptoms; signs).
4. The doctor hears moist rales; it's a (symptom; sign).
5. It's cheaper to (prevent; cure) the disease.
6. Hypertension is a disease developing in the (heart; blood vessels).
7. The doctor fits symptoms and signs into a (pattern; jigsaw).
8. (All the diseases; only infectious diseases) may be cured.

V. Answer the questions minding the details

1. Are the notions "illness" and "disease" synonymous?

2. Does a disease accompany an illness or on the contrary?
3. What do people complain of?
4. Where does hypertension develop?
5. How can you see the damage?
6. What does the doctor find on examining a patient?
7. What does the process of making a diagnosis involve?
8. Can you say that making a diagnosis is like solving a jigsaw? Why?
9. What should people suffering from hypertension do?
10. What diseases are possible to cure?
11. What sort of medicine is it?
12. Can you get rid of the disease completely?

VI. Make up your own plan of the lecture. The scheme will help you. Try to retell the lecture basing on the plan.

I. Illness and disease.

1. 1
1. 2
1. 3

II. Symptom.

2. 1
2. 2

III. Sign and diagnosis.

3. 1
3. 2
3. 3

IV. Prevention and cure.

4. 1
4. 2

VII. Translate the sentences into English

1. Болезненность /illness/ — это чувство недомогания, которое сопровождается болезнью.
2. Болезнь /disease/ — это нарушение структуры или функции организма инфекцией или раком.
3. Субъективная жалоба называется симптомом.
4. Вполне возможно иметь болезнь и не чувствовать её вообще.
5. Когда человек чувствует себя плохо, врач пытается выяснить, в чём проблема.
6. Когда врач находит что-то аномальное при осмотре пациента, это называется признаком.
7. Диагноз включает в себя опрос пациента о его симптомах и осмотр пациента в поисках признаков.
8. Каждая болезнь имеет характерную модель симптомов и признаков.

9. Можно устранить симптомы пациента, но часто невозможно избавиться от них полностью.

10. Современное технологическое лечение слишком дорогое для большинства стран, чтобы его позволить себе.

VIII. Refer the word combinations to the following key-groups

Illness	Disease	Symptom	Sign
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Cancer; bad electrocardiogram; pain in the heart; a sore throat; high blood pressure; swollen tonsils; the gripe; feeling tired; moist rales; a high temperature; quinsy; a bad cough; nausea; a red throat.

IX. Make up your own dialogues on the topic "Making a diagnosis" between the doctor and the patient. The situation is the following: The patient has been suffering from a bad cough for three days. He comes to see a doctor to find out what the problem is." There are three patterns in which the symptom of a bad cough is the principle one. Develop your dialogue according to one of these three lines to make a correct diagnosis.

	Symptoms	Auscultation	X-ray examination	Analyses	Diagnosis
a bad cough	no high temperature; breathlessness; moist cough	hard breathing; dry rales;	no darkening in the lungs	inflammatory character	Obstructive chronic bronchitis
	a high temperature; a running nose; a sore throat; painful cough	hard breathing; no rales heard;	no darkening in the lungs	acute inflammatory character	Acute bronchitis
	a very high temperature; moist cough	moist rales	darkening in the right upper lobe of the lungs	bad inflammatory character	Right-sided upper-lobe pneumonia

COMPOSITION OF FOODSTUFFS

Pre-listening

1. Memorize the vocabulary of the lecture and practise the pronunciation

1) macromolecule	[,mækrəu'mɒlɪkjʊ:l]	макромолекула
2) to bind (bound)	['baɪnd] ['baʊnd]	1) связывать, связанный
3) constituent	[kən'stɪtjuənt]	2) составная часть
4) to split (into)	[splɪt]	3) расщепляться, делить на части
5) to compose	[kəm'pəʊz]	4) составлять, состоять из
6) concern	[kən'sə:n]	5) дело, отношение, касательство
7) compound	['kɒmpaʊnd]	6) смесь, соединение
8) carbon	['kɑ:bən]	7) углерод
9) hydrogen	['haɪdrɪdʒən]	8) водород
10) nitrogen	['naɪtrɪdʒən]	9) азот
11) formula	['fɔ:mju:lə]	10) формула
formulae (pl.)	['fɔ:mju:lɪ:]	
12) acid	['æsɪd]	11) кислота
13) to denote	[dɪ'nəʊt]	12) обозначать
14) to expand	['ɪks'pænd]	13) увеличивать, расширять, раскрывать (формулу)
15) bond	[bɒnd]	14) связь
16) valency	['veɪlənsɪ]	15) валентность
17) to fold	[fəʊld]	16) складывать
18) benzene	['benzi:n]	17) бензол
19) helix	['hɪ:lɪks]	18) спираль
helices (pl.)	['helɪsɪ:z]	
20) dimensional	[dɪ'menʃnəl]	19) имеющий измерение, пространственный
21) foodstuffs	['fu:dstʌfs]	20) продукты питания
22) protein	['prəʊtɪ:n]	21) белок
23) carbohydrate	['kɑ:bəu'haidreɪt]	22) углевод
24) fat	[fæt]	23) жир
25) starch	[stɑ:tʃ]	24) крахмал
26) cereal	['sɪəriəl]	25) хлебные злаки, кушанье из круп
27) to break down	[breɪk daʊn]	26) распадаться
28) to convert	[kən've:t]	27) превращать
29) obesity	[əu'bi:sɪtɪ]	28) тучность, ожирение
30) to exhaust	[ɪg'zɔ:st]	29) исчерпывать, изнурять
31) to waste away	[weɪst ə'weɪ]	30) истощать
32) starvation	[stɑ:'veɪʃn]	31) голодание, голод, голодная смерть
33) surplus	['sə:pləs]	32) излишек, остаток

II. Check your neighbour's knowledge: ask your neighbour the following words and the sentences in Russian and compare his/her answer with the English version

кислота Желудочный сок содержит соляную кислоту.	acid Gastric juice contains hydrochloric acid.
формула Вы знаете формулу водорода?	formula Do you know the formula of hydrogen?
соединение, смесь Я никогда не использовал такого соединения.	compound I've never used such a compound.
складывать Она сложила руки(на груди). Вы сложили чистую одежду?	to fold She folded her arms. Have you folded clean clothes?
спираль, спиральная линия Это имеет форму спирали.	helix It has a form of helix.
крахмал Добавьте крахмал, когда будете готовить эту еду.	starch Add some starch when you cook this food.
хлебный злак, каша Каша — очень полезное блюдо.	cereal Cereal is a very useful dish.
связь Эти линии представляют собой химические связи.	bond These lines represent chemical bonds.
продукты питания Какие продукты питания вы обычно покупаете на рынке?	foodstuffs What foodstuffs do you usually buy at the market?
излишек У них никогда не было лишних денег.	suplus They have never had suplus money.
голодание Длительное голодание может привести к смерти.	starvation Starvation for a long time may cause death.

III. Answer the questions and then translate the sentences using the active words and word combinations

to concern

1. What is a concern of your life?
2. What was a concern of your parents in your childhood?
3. Это — наша забота.
4. Дело врача – лечить пациентов.

to exhaust

1. When do you sometimes feel exhausted?
2. What do you do when you are exhausted?
3. Холодильник был пуст, запасы еды закончились.
4. Тяжёлая работа истощила его силы.

to denote

1. What does “love” denote?
2. What does the word “family” denote?
3. Химические элементы обозначаются буквами.
4. Здесь месяцы обозначены цифрами.

obesity

1. What causes obesity?
2. Is obesity dangerous?
3. How can obesity influence people’s health?
4. Ему было трудно ходить из-за ожирения.
5. Ожирение оказало влияние на её суставы.

to expand

1. Does reading help expand your vocabulary?
2. Вода при замерзании расширяется.
3. Наша торговля с Китаем будет расширяться.

to convert into

1. What helps convert any relations into friendship?
2. Они превратили спальню в рабочий кабинет.
3. Священники многих обратили в христианство.
4. Они умеют превращать камни в золото.

to contain

1. What information does your PC contain?
2. What items does your handbag contain?
3. Эта книга содержит более ста рецептов.
4. Эти продукты содержат много жира.

IV. Translate into English

1. Это может истощить ваши силы.
2. Жир вреден для здоровья.
3. Снег начал таять, затем превратился в лёд.
4. Каждое слово обозначено цифрой.
5. Что находится в этой коробке?

6. Это не моя забота.
7. В этих продуктах содержатся орехи.
8. Сколько слов содержит этот словарь?

Listening

Section 1. Answer the question:

1. How will the lecturer call this lecture?

Section 2. Complete the sentences:

1. "Macro" means ...
2. A molecule is ...
3. Atoms are ...
4. The atom is composed of ...
5. A compound is ...
6. Elements are ...

Section 3. Answer the questions:

1. How are the elements represented?
2. How can compounds be represented?
3. What's the valency?
4. What does DNA determine?

Section 4. Complete the sentences:

1. The three main types of macromolecule in foodstuffs are ...
2. Proteins are made up of ...
3. Proteins are found in ...
4. Carbohydrates are made up of ...
5. Carbohydrates are found in ...
6. Fats are composed of ...
7. Fats are also known as ...

Section 5. Explain the meaning of:

1. Obesity.
2. Glycolysis.
3. Gluconeogenesis.
4. Starvation.

Post-listening

I. Translate the following words and word combinations into English

Соединение, составная часть, развернутая формула, химическая связь, водород, углерод, азот, в ядре каждой клетки, генетический код, двойная спираль, белки, углеводы, жиры, излишек съеденной пищи, ожирение, ис-

тощаться, исчерпывать, распадаться, голодание, бензольное кольцо, складываться, пространственный, богатая крахмалом пища, кушанье из круп, продукты питания, обозначать, связанный.

II. Fill in the missing parts of the sentences

1. A molecule is a structure formed when
2. Atoms are the smallest possible particles of
3. Elements are substances which ... by chemical means.
4. A compound is a substance made by
5. The three main types of macromolecules in foodstuffs are
6. Proteins are made up of
7. Carbohydrates are made up of
8. Fats are composed of
9. Fats are also known as
10. Amino acids are used
11. Sugars are ... in a process called glycolysis.
12. Fats can be ... in a process known as gluconeogenesis
13. When the body's store of fat is exhausted, it will

III. Fill in the blanks with prepositions where it's necessary

1. The hundred or so elements ... nature are substances which can't be split ... simpler substances ... chemical means.
2. The atom is itself composed ... smaller particles.
3. The second way ... representing molecules is ... drawing expanded formulae.
4. Each atom ... an element can make a certain number ... bonds ... other atoms.
5. The atoms may be joined together ... branching rows and also ... rings.
6. DNA is the substance ... the nucleus ... every cell which contains ... the genetic code.
7. Proteins are made ... smaller molecules called amino acids.
8. Fats are composed ... chains ... fatty acids.
9. Sugars are broken ... to form energy ... a process called glycolysis.
10. Sugars can be converted ... fats.
11. If not enough food is eaten to provide energy, the body will first ... all use ... its stores ... fat.

IV. Find the logical continuation of the sentences

- | | |
|------------------|--|
| 1. A molecule is | 1. made by the chemical combination of two or more elements. |
| 2. Atoms are | 2. can make a certain number of bonds with other atoms. |

- | | |
|--|--|
| <p>3. The atom is itself composed</p> <p>4. A compound is a substance</p> <p>5. Compounds can be represented</p> <p>6. Each atom of an element</p> <p>7. The number for each type of atom is constant</p> <p>8. The atoms may be joined together</p> <p>9. Molecules in living systems are often</p> <p>10. DNA is the substance in the nucleus</p> <p>11. The genetic code determines</p> <p>12. Amino acids are given this name</p> <p>13. Sugars are found mainly in plants especially</p> <p>14. Sugars are broken down</p> <p>15. If too much fat or carbohydrate is eaten regularly,</p> <p>16. If not enough food is eaten to provide energy,</p> | <p>3. very large and can be folded round in complex three-dimensional structures.</p> <p>4. how an organism grows or develops.</p> <p>5. the structure formed when two atoms become bound together.</p> <p>6. of every cell which contains the genetic code.</p> <p>7. because they contain both amino and acid groups.</p> <p>8. obesity may result.</p> <p>9. in two ways.</p> <p>10. to form energy in a process called glycolysis.</p> <p>11. the smallest possible particles of an element.</p> <p>12. in branching rows and also in rings.</p> <p>13. and is known as its valency.</p> <p>14. of smaller particles.</p> <p>15. the body will first of all use up its stores of fat.</p> <p>16. in so-called starchy foods like cereals or root vegetables.</p> |
|--|--|

V. Answer the questions

1. What does the word “macromolecules” mean?
2. The structure when two atoms become bound together is called a molecule, isn't it?
3. What are the smallest possible particles of a molecule?
4. What is atom composed of?
5. Can you explain the meaning of the word “compound”?
6. How are the elements represented?
7. Can you give the full name of the symbols: C, H, N?
8. What is the formula of an alcohol?
9. What does the word-combination “expanded formulae” mean?
10. Each type of atom is constant and is known as its valency, isn't it?
11. What substance contains the genetic code which determines how an organism grows or develops?

12. What are the main three types of macromolecules?
13. What are proteins made up of?
14. Do proteins form the main structures of human cells?
15. Where are proteins found?
16. What are carbohydrates made up of?
17. Where are carbohydrates found?
18. What are fats composed of?
19. Fats are known as lipids, aren't they?
20. What do proteins, carbohydrates, fats do when food is digested?
21. Why do some people suffer from obesity?
22. When does the effect of starvation take place?

VI. Translate the sentences into English

1. Элементы соединяются линиями.
2. Каждая линия представляет химическую связь.
3. Молекулы могут складываться в сложные трехмерные структуры.
4. ДНК — это вещество в ядре каждой клетки.
5. Генетический код определяет, как организм растет и развивается.
6. Каждый атом элемента может иметь определенное число связей с другими атомами.
7. Число связей для каждого типа атома постоянно и известно как валентность.
8. Белки содержатся в мясе и в таких растительных продуктах питания, как бобы.
9. Углеводы в основном содержатся в продуктах, содержащих крахмал, как хлебные злаки или корнеплоды.
10. Когда пища переваривается, макромолекулы распадаются на составные части.
11. Жиры могут превращаться в сахар, глюкозу, в печени.
12. Регулярное употребление в пищу большого количества жира или углеводов может привести к ожирению.
13. Если съедается недостаточно пищи для обеспечения организма энергией, организм будет, прежде всего, использовать запасы жира.

DRUG ABUSE

Pre-listening

I. Memorize the vocabulary of the lecture

1) to confuse	[kən'fju:z]	1) смешивать, спутывать
2) confusing	[kən'fju:ziŋ]	2) путающий
3) to imply	[imp'laɪ]	3) подразумевать
4) judgement	[ˈdʒʌdʒmənt]	4) суждение, мнение
5) harmful	[ˈhɑ:mful]	5) вредный
6) illegal	[ɪ'li:g(ə)l]	6) нелегальный, незаконный
7) to vary	[ˈveəri]	7) различаться, расходиться
8) to allow	[ə'laʊ]	8) позволять
9) to require	[rɪk'waɪə]	9) требовать
10) damage	[ˈdæmɪdʒ]	10) повреждение
11) relationship	[rɪ'leɪʃn ʃɪp]	11) связь, отношение
12) dependence	[dɪ'pendəns]	12) зависимость, подчинение
13) to regard	[rɪ'gɑ:d]	13) считать
14) indispensable	[ɪndɪ'spensəbl]	14) совершенно необходимый
15) prop	[prɒp]	15) опора
16) to motivate	[ˈmɒtɪveɪt]	16) побуждать, мотивировать
17) to concern	[kən'sə:n]	17) интересоваться, беспокоиться
18) addiction	[æ'dɪkʃ(ə)n]	18) наркомания, зависимость
19) addictive	[æ'dɪktɪv]	19) вызывающий зависимость
20) due to	[dju:]	20) благодаря, из-за
21) withdrawal effect	[wɪð'drɔ:əl ɪ'fekt]	21) синдром отмены
22) available	[ə'veɪləbl]	22) имеющийся в распоряжении, наличный
23) huge	[hju:dʒ]	23) огромный
24) amount	[ə'maʊnt]	24) количество
25) crime	[kraɪm]	25) преступление
26) enormous	[ɪ'nɔ:məs]	26) огромный
27) to abuse	[ə'bjuz]	27) злоупотреблять
28) abuse	[ə'bjus]	28) злоупотребление

II. Practise the pronunciation

terminology	[tə:mɪ'nɒlədʒɪ]
moral	[ˈmɒrəl]
legality	[lɪ:'gælətɪ]
psychological	[ˌsaɪkə'lɒdʒɪkəl]
physical	[ˈfɪzɪkəl]

chemical	[ˈkemɪkəl]
effect	[ɪˈfekt]
heroin	[ˈherɔɪn]
cocaine	[kəˈkeɪn]
alcohol	[ˈælkəhɒl]
tobacco	[təˈbækəʊ]
economic	[ɪ:kəˈnɒmɪk]
tranquilizer	[ˌtræŋkwəˈlaɪzə]

III. Form the new words using the following suffixes and translate them
 a) –ing; b) –ful; c) –ed; d) –ion; e) –ive; f) –ly; g) –ous;
 confuse (v); harm (n); motivate (v); concern (v); addict, wide (adj); danger (adj); abuse (v).

IV. Work in pairs. Check up your neighbour's knowledge of the words

злоупотреблять Вы можете злоупотреблять этими препаратами, но они не вызывают зависимости.	to abuse You can abuse with these drugs but they are not addictive.
требовать Этот случай требует срочной операции.	to require This case requires an urgent operation.
отношения, связь Что повреждает их отношения	relationship What damages their relationship?
огромный Мы обеспокоены огромным количеством преступлений здесь.	huge, enormous We are concerned with a huge amount of crime here.
синдром отмены Это происходит из-за синдрома отмены.	withdrawal effect It occurs due to the withdrawal effect.
из-за Это из-за его суждения.	due to It's due to his judgement.
смешивать, спутывать Эта терминология может быть путающей.	to confuse This terminology may be confusing.
подразумевать Что эта терминология подразумевает?	to imply What does this terminology imply?
считать Мы считаем его опытным хирургом. Он считается опытным хирургом.	to regard We regard him to be an experienced surgeon. He is regarded to be an experienced surgeon.

V. Answer the questions and translate into English (you may do it in writing)

to confuse

1. Have you ever confused anyone?
2. Ты постоянно путаешь меня.
3. Не путай меня, пожалуйста.

to require

1. What do you usually require from other people?
2. What do you usually require from yourself?
3. Это требует строгого контроля.
4. Почему ты это требуешь сделать?

damage

1. What can damage your relationship with other people?
2. Злоупотребление этим препаратом повредило структуру ДНК.
3. Когда вы повредили свою машину?

indispensable

1. Who or what is an indispensable prop in your life?
2. Вы совершенно необходимы в этот день.
3. Моя семья — совершенно необходимая опора в моей жизни.

available

1. What modern equipment is available at your department?
2. Какие учебники есть в нашей библиотеке?
3. Какие фильмы есть на этом сайте?

VI. Translate (do it in writing)

1. Как вы предотвратили синдром отмены?
2. Это незаконно, не так ли?
3. Почему ваши суждения так разнятся?
4. Вас беспокоит проблема зависимости от этих препаратов?
5. Их беспокоит огромное количество преступлений в стране.
6. Есть ли у вас это лекарство?
7. Они считаются хорошими хирургами.
8. Мои друзья всегда были совершенно необходимой опорой в моей жизни.

Listening

Section I.

Answer the question:

1. In what way have the societies viewed different drugs at different times?

Section II.

Complete the sentences:

1. Abuse is the use of the drug to a degree which
2. Dependence is
3. The types of dependence are
4. Psychological dependence is when the drug is
5. Physical addiction is due to

Section III.

Answer the questions:

1. What are the drugs causing the greatest problems of abuse in Britain?
2. What harm do they cause?

Post-listening

I. Give English equivalents

наркозависимость; терминология; вредный; опасный; законный; считать; включать психологическую зависимость; разрешать; синдром отмены; беспокоить; совершенно необходимая опора; из-за; временами; в такой степени, которая; химический эффект; наличный; соединение; героин; кокаин; алкоголь; табак; также; транквилизатор; подразумевать нравственное суждение; разниться; вредить отношениям; обходиться без лекарства; вызывать огромное количество смертей и преступлений; экономический урон; распад семьи.

II. Match the synonyms

- | | |
|-----------------|------------------------|
| 1) relationship | a) enormous |
| 2) dependence | b) because of |
| 3) damage | c) result |
| 4) huge | d) to worry |
| 5) due to | e) to consider |
| 6) effect | f) harm |
| 7) to concern | g) addiction |
| 8) abuse | h) wrong use |
| 9) to regard | i) personal connection |

III. Match the antonyms

- | | |
|--------------|-----------------|
| 1) huge | a) independence |
| 2) harmful | b) illegal |
| 3) addiction | c) to forbid |
| 4) legal | d) useful |
| 5) to allow | e) small |

IV. Answer the questions

1. What questions do people often mix up speaking about a drug?
2. In what way is the drug seen by societies at different times?
3. What does the term “abuse” mean?
4. What do we mean by “dependence”?
5. What types of dependence are there?
6. What’s the difference between psychological and physical dependence?
7. What is “a withdrawal effect”?
8. When can drugs be abused?
9. What is the most serious problem of abuse in Britain? Why?
10. What are two other drugs that cause the greatest problems of abuse in Britain? Why?

V. Fill in the blanks with prepositions where it is necessary

1. Terms are used ... a way which implies moral judgement.
2. People often mix ... the questions whether a drug is harmful or illegal.
3. Some societies have ... times allowed the free use ... drugs.
4. Abuse means the use ... a degree which causes either physical harm or damage to people’s relationships.
5. ... dependence we mean that the user cannot do ... the drug.
6. Physical addiction is due ... a direct chemical effect ... the drug ... the body.
7. The most serious problem ... abuse is ... alcohol. This causes a huge amount ... deaths, disease, crime, family break-... .

VI. Complete the sentences

1. People often mix up questions of whether
2. At times some societies
3. By the term “abuse”, we mean
4. Term “dependence” means
5. Dependence includes
6. Psychological dependence is
7. Physical addiction is
8. The most serious problems of abuse are
9. Alcohol and tobacco cause

VII. Translate into English

1. Люди часто путают эту терминологию.
2. Некоторые общества считают эти лекарства вредными и незаконными.
3. Этот наркотик считается незаконным и требует строжайшего контроля.

4. Под термином “злоупотребление” мы не имеем в виду просто “употребление”.

5. Злоупотребление — это употребление лекарства до такой степени, которая оказывает физически вредное воздействие на человека или нарушает его взаимоотношения с людьми.

6. Зависимость означает, что человек не может обойтись без наркотиков.

7. Некоторые лекарства вызывают зависимость.

8. Самые серьезные проблемы для нашего общества включают в себя злоупотребление алкоголем и табаком.

9. Это вызывает огромное количество смертей, болезней, преступлений, распад семей и экономический урон стране.

10. Подобно алкоголю и табаку, транквилизаторы вызывают зависимость.

VII. Develop the idea

<i>The Internet Abuse</i>	<i>Game Abuse</i>
Some societies considered	Some societies considered
By the term <i>abuse</i>	By the term <i>abuse</i>
By the term <i>dependence</i>	By the term <i>dependence</i>
The types of dependence	The types of dependence
They mean	They mean
The Internet abuse causes	The game abuse causes
The treatment for its withdrawal effects	The treatment for its withdrawal effects

IX. Speak on the topic

The problem of drug abuse.

AIDS

Part I

Pre-listening

Before listening to the lecture do some training to prevent difficulties in understanding.

I. Practise the pronunciation

1) acquired	[ə'kwaiəd]	1) carinii	[kə'ri:nii]
2) immunodeficiency	[i'mjunədi'fiʃənsi]	2) circumstance	['sə:kəmstəns]
3) chronic	['krɒnik]	3) immune	[i'mju:n]
4) virus	['vairəs]	4) previously	['pri:vjəslɪ]
5) surprisingly	[sə'praiziŋli]	5) curiously	['kjuəriəsli]
6) extremely	[iks'tri:mli]	6) although	[ɔ:l'dəu]
7) cancer	['kænsə]	7) isolated	['aisəleɪtɪd]
8) pneumocystis	[nju:mə'sistis]		

II. Learn the following words

1) to acquire	[ə'kwaiəd]	1) приобретать
2) immunodeficiency	[i'mjunədi'fiʃənsi]	2) иммунодефицит
3) virus	['vairəs]	3) вирус
4) to destroy	[dis'trɔɪ]	4) разрушать
5) to recognize	['rekəɡnaɪz]	5) признать
6) surprisingly	[sə'praiziŋli]	6) удивительно
7) rare	[rɛə]	7) редкий
8) circumstance	['sə:kəmstəns]	8) обстоятельство
9) curiously	['kjuəriəsli]	9) любопытно
10) to involve	[in'vɒlv]	10) поражать, вовлекать
11) responsible for	[ris'pɒnsəbl]	11) ответственный за
12) to isolate	['aisəleɪt]	12) изолировать, выделить
13) to happen	['hæpən]	13) происходить

III. Work in pairs. Check up your neighbour's knowledge of the words

приобретать Каждый день мы приобретаем больше знаний по медицине.	to acquire We acquire more knowledge of medicine every day.
разрушать Эти вещества разрушают печень.	to destroy These substances destroy the liver.
признавать, узнавать (внешность) Он признал это очень быстро. Я не узнал его сначала. Он сильно изменился.	to recognize He recognized it very quickly. I didn't recognize him at first. He changed a lot.

обстоятельство Это очень редкие обстоятельства.	circumstance These are rare circumstances.
поражать, вовлекать Эта проблема затрагивает каждого.	to involve This problem involves everyone.
ответственный за Кто ответственный за детей здесь?	responsible for Who is responsible for the children here?
изолировать Мы должны изолировать этого больного из-за этой инфекции.	to isolate We must isolate this patient because of the infection.
происходить Когда это произошло?	to happen When did it happen?
удивительно Количество этих случаев было удивительно низким.	surprisingly The number of these cases was surprisingly low.

IV. Answer the questions and translate into English (you may do it in writing)

acquire

1. What are the best ways to acquire knowledge of any foreign language?
2. What good and bad habits did you acquire in your life?
3. Когда вы приобрели эту привычку?
4. За последние несколько лет мы приобрели большой опыт в медицине.

destroy

1. What may destroy one's family?
2. What can destroy a person?
3. Сильный ураган разрушил почти все дома в районе.
4. Неудачи медленно разрушали его.

curious

1. What was the most curious event in your life?
2. Не будьте слишком любопытны!
3. Почему ваш дядя такой любопытный?

virus

1. What viruses are the most dangerous?
2. Чтобы защититься от вируса, принимайте витамины.
3. Вирус Эбола крайне опасен для жизни.

happen

1. What interesting events have happened in the world lately?
2. Что с вами вчера произошло?
3. Что происходит? Почему вы кричите?

V. Translate (do it in writing)

1. Не вовлекай детей в это!
2. Много интересных событий произошло в моей жизни в последнее время.
3. Кто был ответственным за уход за детьми?
4. Ваша тетьа удивительно умелая медсестра.
5. Врачи изолировали всю деревню из-за эпидемии этой инфекционной болезни.
6. В этой библиотеке есть несколько редких книг по этой теме.
7. Как люди могут жить в этих необычных условиях?
8. Когда вы приобрели навыки ухода за больными?
9. Не разрушай свое здоровье плохими привычками!

Listening

.Now you are going to hear first two sections of the lecture. The list of new vocabulary given above will help you understand it.

Section I

Answer the questions:

- What does the lecturer say his talk will be about?
- What abbreviations does the lecturer mention?
- What does HIV destroy?

Section II

Answer the questions:

- When was the disease recognized?
- What unusual diseases helped recognize a new disease?
- When was the virus isolated?

Post-listening

I. Match the synonyms

- | | |
|-----------------|-------------------------|
| 1) to happen | a) received |
| 2) to involve | b) to ruin |
| 3) to isolate | c) to occur |
| 4) acquired | d) incredibly |
| 5) rare | e) unusual |
| 6) surprisingly | f) in charge of |
| 7) to destroy | g) to identify |
| 8) responsible | h) to separate |
| 9) to recognize | i) greatly |
| 10) extremely | j) to engage, to affect |

II. Match the antonyms

- | | |
|---------------|-----------------|
| 1) to appear | a) usual |
| 2) rare | b) to collect |
| 3) to destroy | c) quickly |
| 4) slowly | d) to disappear |
| 5) previous | e) to build |
| 6) to isolate | f) natural |
| 7) acquired | g) late |

III. Translate into Russian

acquired immunodeficiency syndrome, popularly known, end-stage, chronic, slowly destroys, was recognized, noted, surprisingly large number of cases, extremely unusual, immune system, rare infection, normal circumstances, both, previously healthy, responsible for disease, was isolated.

IV. Translate into English

синдром приобретенного иммунодефицита, известный, кратко, конечная стадия, хроническая инфекция, вирус иммунодефицита человека, медленно, быстро, разрушать, оказывается, признавать, отметить, удивительно, крайне, редкая форма, рак кожи, нормальные обстоятельства, оба состояния, иммунная система, ранее больной, любопытно, поражать, происходить (2 вар.), ответственный за, изолировать.

V. Answer the questions

1. What is AIDS?
2. What is HIV?
3. What does HIV destroy?
4. What diseases did the Center of Atlanta note?
5. What is Kaposi's sarcoma?
6. What is PCP?
7. Where were these conditions seen in normal circumstances?
8. When was this virus isolated?

VI. Fill in the prepositions

1. Acquired immunodeficiency syndrome is popularly known as AIDS ... short.
2. ... normal circumstances these conditions were seen ... patients ... a destroyed immune system.
3. The new cases were all ... previously healthy young people.
4. The virus responsible ... the disease was isolated ... 1983.
5. AIDS is an end-stage ... a chronic infection ... HIV.

VII. Translate into English

1. ВИЧ медленно разрушает иммунную систему человека.
2. СПИД — это конечная стадия хронической инфекции, известной как вирус иммунодефицита человека.
3. Болезнь была признана в 1981 году в Америке.
4. Происходило что-то необычное.
5. Центр по контролю за болезнями отметил удивительно большое число крайне необычных болезней.
6. Саркома Капоши — это редкая форма рака кожи.
7. Пневмоцистная пневмония — это редкая форма легочной инфекции.
8. Вирус был выделен в 1983 году.

Part II

Pre-listening

Before listening to the second part of the lecture do some training to prevent difficulties in understanding.

I. Practise the pronunciation

through	[θru:]
sexual	[ˈseksjuəl]
unborn	[ʌnˈbɔ:n]
asymptomatic	[æsɪmptəˈmætɪk]
generalized	[ˈdʒenərəlaɪzd]
lymphadenopathy	[lɪmfədiˈnɔ:pəθi]
prognosis	[prɒɡˈnəʊsɪs]
outcome	[ˈaʊtkʌm]

II. Learn the following words

1) to share	[ʃeə]	1) разделять
2) needle	[ni:dəl]	2) игла
3) to inject	[ɪnˈdʒekt]	3) вводить (лекарство)
4) accidental	[æksɪˈdentəl]	4) случайный
5) to carry	[ˈkæri]	5) нести
6) congenital	[kɒnˈdʒenɪtl]	6) врожденный
7) course	[kɔ:s]	7) течение
8) to continue	[kənˈtɪnju:]	8) продолжать
9) stage	[steɪdʒ]	9) стадия
10) node	[nəʊd]	10) узел
11) tumour	[ˈtju:mə]	11) опухоль
12) weak	[wi:k]	12) слабый
13) to resist	[rɪˈzɪst]	13) сопротивляться
14) eventually	[ɪˈventʃuəli]	14) в конце концов
15) to discover	[dɪsˈkʌvə]	15) обнаружить
16) to swell up	[swel]	16) опухнуть
17) to disappear	[dɪsəˈpiə]	17) исчезнуть

III. Translate the following into Russian

1) transmission: transmission of impulses, transmission of virus, transmission of a disease, transmission of the infection; to transmit; transmitted;

2) to share: to share a flat, to share a syringe, to share a house; shared; sharing;

3) to inject: to inject some medicine, to inject intravenously, to inject intramuscularly; injection; injected;

4) accidental: accidental transfusion, accidental infection, accidental transmission; accidentally; accident;

5) to carry: to carry the virus, to carry heavy bags, to carry infection, to carry on;

6) congenital: a congenital disease, a congenital infection, congenital heart disease;

7) course: the course of the disease, a long course, a short course, a course of treatment;

8) to continue: to continue the course of physiotherapy, to continue studies, to continue unexpectedly;

9) stage: four stages, the third stage, what stage is it? end-stage; to stage

10) node: a lymph node, a swollen gland, what node is it? to examine lymph nodes, tender lymph nodes; nodular;

11) tumour: a large tumour, a small tumour, malignant tumour, benign tumour, to remove the tumour;

12) weak: a weak student, to become weak, weakness, to weaken;

13) to resist: to resist infection, to resist unusual viruses, to resist weakly, to resist strongly; resistance;

14) to discover: to discover a new land, to discover a new remedy, to discover an effective treatment; discovery; discovered;

15) to disappear: to disappear rapidly, to disappear slowly, to disappear completely; disappearance.

IV. Work in pairs. Check up your neighbour's knowledge of the words

разделять С кем вы живете в квартире?	to share Who do you share your flat with?
случайный Она заразилась из-за случайного переливания инфицированной крови.	accidental She got infected because of accidental transfusion of the infected blood.
нести, переносить Кто переносит этот вирус?	to carry Who carries this virus?
стадия Это конечная стадия болезни.	stage It is an end-stage of the disease.
слабый Ваш брат всегда был слабым, чтобы сопротивляться вредным привычкам.	weak Your brother has always been weak to resist bad habits.

сопротивляться Почему вы не сопротивляетесь его влиянию на вас?	resist Why don't you resist his influence on you?
обнаружить Когда вы открыли это?	to discover When did you discover it?
исчезнуть Не беспокойтесь, сыпь скоро исчезнет.	to disappear Don't worry, the rash will disappear soon.
врожденный У вашего племянника врожденный порок сердца.	congenital Your nephew has congenital heart disease.

V. Answer the questions and translate into English (you may do it in writing)

accidental

1. Are you aware of any accidental discoveries in history?
2. Is it possible to get infected accidentally?
3. Это была случайная встреча.
4. Мы познакомились случайно.

course

1. Have you ever undergone any course of treatment?
2. Do you advise your patients to undergo a course of physiotherapy regularly?
3. Течение болезни было тяжелым.
4. У вас будет долгий курс лечения.

to discover

1. Is it possible to discover new lands nowadays?
2. Could you discover a new remedy for any disease?
3. Что вы обнаружили?
4. Мы только что открыли новый способ лечения этой болезни.

to resist

1. Is it difficult to resist bad influence or habits?
2. What is it necessary to do to resist infections?
3. Я не согу сопротивляться ему.
4. Почему вы всё время сопротивляетесь?

to share

1. Have you ever shared a flat or a room with anybody?
2. Is it easy for you to share your thoughts with other people?
3. Вы никогда не должны пользоваться одним и тем же шприцем с другими людьми!
4. Нам придется жить в одном доме.

stage

1. What is the most interesting stage in life for you?
2. What are the main stages of any infectious disease?
3. Какая это стадия болезни?
4. Что вы будете делать на этой стадии?

VI. Translate into English

1. Его организм слишком слабый, чтобы сопротивляться инфекции.
2. Я думаю, эта опухоль не злокачественная.
3. Снимите кольцо, потому что ваш палец быстро опухает.
4. Когда исчез ваш друг?
5. В конце концов, мы продолжили нашу работу.
6. Здесь нет лимфатических узлов.
7. Какое лекарство вы только что ввели больному?
8. Помогите мне нести эту тяжелую сумку, пожалуйста!
9. Какой у вас прогноз?

Listening

Now you are going to hear last two sections of the lecture. The list of new vocabulary given above will help you understand it.

- a) answer the questions;
- b) write the key-words to the section;
- c) give the title to the section.

Section I

Answer the questions:

- How is HIV transmitted?
- What is congenital infection?

Section II

Answer the questions:

- How many stages does the disease involve? What are they?
- What abbreviations does the lecturer mention?
- What's the eventual outcome of the disease?

Post-listening

I. Translate into English

передача вируса, продукты крови, особенно (2вар.), общее пользование, случайное переливание, нести вирус, врожденная инфекция, течение болезни, стадия, сильная простуда, совершенно здоровый, бессимптомный, лимфатические узлы, опухать, страдать от, необычные опухоли, слабый, сопротивляться, даже, окончательный исход, смертельный, предотвращать, открыть.

II. Match the synonyms

- | | |
|----------------|----------------|
| 1) to continue | a) to find out |
| 2) to discover | b) growth |
| 3) eventually | c) divide |
| 4) accidental | d) finally |
| 5) tumour | e) to go on |
| 6) to share | f) lethal |
| 7) fatal | g) unexpected |

III. Match the antonyms

- | | |
|---------------|----------------|
| 1) weak | a) to give in |
| 2) to resist | b) to unite |
| 3) to share | c) acquired |
| 4) accidental | d) strong |
| 5) congenital | d) intentional |

IV. Answer the questions

1. What are the methods of HIV transmission?
2. How many stages does the course of the disease involve?
3. What is the first stage?
4. Why is the second stage called asymptomatic?
5. How is the third stage known?
6. What stage is AIDS itself? What are its symptoms?
7. What is the prognosis of AIDS?
8. Are there any methods of treating AIDS?

V. Give the full form of the words

1. AIDS.
2. HIV.
3. PGL.
4. KS.
5. PCP.

VI. Give the definitions

- 1) the development of a disease;
- 2) a rare form of lung disease;
- 3) a rare form of skin cancer;
- 4) stage of the disease without any symptoms;
- 5) the infection of an unborn child by a mother carrying the virus;
- 6) the prognosis of a disease.

VII. Translate into English.

1. К 1981 было замечено большое число крайне необычных заболеваний.
2. В нормальных условиях эти болезни отмечались только у людей с разрушенной иммунной системой.
3. Передача вируса происходит через кровь и её продукты.
4. Основные способы передачи болезни включают: половую активность, общее пользование зараженными шприцами, случайное переливание инфицированной крови и передача инфекции матерью, переносящей вирус.
5. Течение болезни включает четыре стадии.
6. Когда человек инфицируется, он может несколько дней чувствовать себя нездоровым, как при сильной простуде.
7. Потом все симптомы исчезают.
8. На третьей стадии большинство лимфатических узлов опухает.
9. При самом СПИДе человек страдает от необычных инфекций и опухолей, из-за неспособности иммунной системы им сопротивляться.
10. Человек умирает через год или два.
11. СПИД считается смертельным во всех случаях.

ACTION OF DRUGS

Pre-listening

I. Memorize the vocabulary of the lecture and practise the pronunciation

1) drug	[drʌg]	лекарство, медикамент
2) to influence	['ɪnfluəns]	оказывать влияние, влиять
3) matter	['mætə]	вопрос, дело
4) in fact	[fækt]	в действительности, на самом деле
5) to complicate	['kɒmplɪkeɪt]	усложнять
6) to alter	['ɔ:lteɪ]	изменять, менять
7) response	[rɪs'pɒns]	ответ, отклик, реакция
8) poisonous	['pɔɪznəs]	ядовитый
9) actually	['æktʃʊəli]	фактически, на самом деле
10) compliance	[kəm'plaɪəns]	согласие; податливость, уступчивость
11) obvious	['ɒvɪəs]	очевидный, ясный
12) point	[pɔɪnt]	момент, дело, вопрос, пункт
13) pound	[paʊnd]	фунт (453,6 г)
14) worth	[wɜ:θ]	цена, стоимость, ценность
15) at (some) point		в какой-то момент
16) presume	[prɪ'zju:m]	предполагать, допускать
17) composition	[,kɒmpə'zɪʃən]	состав
18) formulation	[fɔ:mju'leɪʃən]	состав, формула
19) gut	[gʌt]	кишка, пищеварительный канал
20) bloodstream	[blʌdstri:m]	кровеное русло, кровоток
21) to break down	[breɪkdaʊn]	разрушать(ся), распадаться
22) bowel	['bauəl]	кишка
23) to interfere	[,ɪntə'fɪə]	вредить, мешать, быть помехой
24) to affect	[ə'fekt]	воздействовать, влиять
25) largely	['lɑ:dʒli]	значительно
26) to absorb	[əb'sɔ:b]	всасывать, абсорбировать, поглощать
27) distribution	[,dɪstrɪ'bju:ʃən]	распределение
28) to distribute	[dɪs'trɪbjʊ:t]	распределять, распространять
29) tissue	['tɪʃu:]	ткань
30) to diffuse	[dɪ'fju:z]	распространять, диффундировать
31) to attach	[ə'tætʃ]	прикреплять, присоединять
32) to increase	[ɪn'kri:z]	возрастать, увеличиваться
33) amount	[ə'maʊnt]	количество
34) to bind, (bound, bound)	[baɪnd] [baʊnd]	связывать, задерживать
35) sort	[sɔ:t]	сорт, вид
36) to compete for	[kəm'pi:t]	состязаться, соревноваться, конкурировать из-за (ради)

37) initially	[ɪ'nɪʃəlɪ]	в начальной стадии, в исходном положении
38) otherwise	['ʌðəwaɪz]	или же, в противном случае
39) to release	[rɪ'li:s]	освободить
40) once	[wʌns]	(для усиления) сто́ит ...
41. elimination	[ɪ, lɪmɪ'neɪʃən]	удаление из организма
42. excretion	[eks'kri:ʃən]	выделение
43. to decline	[dɪ'klaɪn]	ухудшаться, уменьшаться
44. dosage	['dɔ:sɪdʒ]	дозировка; доза
45. to require	[rɪ'kwaɪə]	требовать, нуждаться
46. required	[rɪ'kwaɪəd]	необходимый, обязательный

II. Check your neighbour's knowledge: ask your neighbour the following words and the sentences in Russian and compare his/her answer with the English version

ответ, отклик Она не услышала ответ на свой вопрос.	response She didn't hear any response to her question.
в действительности В действительности, она очень интересный человек.	in fact In fact, she is a very interesting person.
на самом деле, фактически На самом деле он не так силен, как об этом рассказывает.	actually He isn't actually so strong as he tells about it.
очевидный, ясный Это — очевидная информация. Его проблема была ясна.	obvious It's obvious information. His problem was obvious.
допускать, предполагать Вы можете предположить, что они поженятся?	to presume Can you presume that they will get married?
состав Эти духи имеют удивительный состав. Этот художник использует широкий спектр красок.	composition This perfume has an extraordinary (wonderful) composition. This artist uses a wide composition of colours.
ткань Лекарство распределяется по тканям.	tissue The drug is distributed around the tissues.
или же, в противном случае Вы должны поторопиться, или же вы опоздаете на поезд.	otherwise You must hurry up, otherwise you'll miss your train.
прикреплять, присоединять Вам придётся прикрепить фотографию к этому документу.	to attach You will have to attach a photo to this document.

количество Ей придётся выполнить много работы. Сколько это составляет?	amount She will have to do a large amount of work. What is the amount of this?
распределять, раздавать Раздайте, пожалуйста, книги студентам. Раздайте эти подарки детям.	to distribute (among, to) Will you distribute these books to the students? Can you distribute presents among the children?

III. Answer the questions and then translate the sentences using the active words and word combinations

to affect

1. What affects your feelings?
2. Как этот вирус оказал воздействие на наше здоровье?
3. Это лекарство воздействует на иммунную систему.

to interfere with

1. What can interfere with your attitude towards people?
2. Can anybody interfere with your plans?
3. Это мешает в осуществлении нашего плана.
4. Это лекарство навредило вашему желудку.

to increase

1. What are your ways of increasing your English vocabulary?
2. Количество эритроцитов увеличилось.
3. Вы увеличили дозу лекарства?

to alter

1. What would you like to alter in your life?
2. Преподаватель решил изменить задание.
3. Я ничего не хочу менять в этой ситуации.

to influence

1. Who influenced the choice of your medical career?
2. Do your colleagues influence your mood?
3. Родители оказывают положительное влияние на своих детей.
4. Тяжёлая работа повлияла на его здоровье.

to complicate

1. Do children complicate our lives?
2. Can you solve complicated tasks?

3. What was the last complicated task you solved?
4. Новая работа усложнила его жизнь.
5. Не усложняйте проблему.

to require

1. What knowledge does your speciality require?
2. Do your English studies require careful preparation?
3. Что вы требуете от себя?
4. Наша квартира требует ремонта.

to compete

1. Have you ever competed for anything?
2. Как они соревнуются?
3. Они стараются не соревноваться, а работать вместе.
4. Мы соревновались за первое место.

to be worth

1. Why are English classes worth attending?
2. Is it worth working as a doctor?
3. Эти туфли не стоит покупать.
4. Этот фильм стоило посмотреть.
5. Эту книгу стоит читать?

IV. Translate into English

1. Эта работа не требует дополнительной подготовки.
2. Они будут соревноваться в этом виде спорта.
3. Это собрание не стоило посещать.
4. Они ничего не изменили в этом списке.
5. Что повлияло на её настроение?
6. Это усложнит ситуацию.
7. Не мешайте мне работать, пожалуйста.

Listening

Section I.

Complete the sentences:

1. The lecture deals with the factors ...
2. You have to get ...

Section II.

Complete the sentences:

1. Compliance is ...
2. The formulation is ...

Section III.

Answer the questions:

1. What is the process of absorption?
2. Is the process of absorption active or passive ?
3. What drugs cannot be taken by mouth and why?
4. What will affect the absorption of the drugs?
5. What happens once the drug has been absorbed from the gut?
6. Why do large doses of drugs need to be given?
7. What happens if the liver is diseased?

Section IV.

Answer the questions:

1. How is the drug distributed around the tissues?
2. What do some proteins bind?
3. How may two drugs compete for the protein?
4. What happens if the liver is diseased?

Section V.

Answer the questions:

1. How does the elimination of the active drug from the body happen?
2. Where does metabolism occur?
3. What exactly do the liver and the kidney do?
4. What affects the levels of drug achieved by a given dose?
5. Why do older people need smaller doses of drug?

Post-listening

I. Form the new words using the following suffixes. Translate them

- ing: to presume, to depend, to swallow
- ed: to complicate, to attach, to prescribe, to achieve, to require
- ion: to distribute, to diffuse, to formulate, to act (tion): to absorb, to circulate, to concentrate, to excrete, to eliminate
- ly: sudden, final, direct, free, initial, actual, large
- er: small, high, old

II. Give English equivalent

Оказывать влияние на действие медикаментов; изменить дозировку; в соответствии с реакцией пациента; очевидный момент; в какой-то момент; предполагая; уступчивость; состав таблетки; влиять на частоту всасывания лекарства; разрушаться в кишке; свободно распространяться; присоединяться к протеинам; конкурировать из-за белка; связывать два вида лекарства; вырабатываться в печени; удаление из организма активного медикамента; вредить печени или почкам; влиять на концентрации лекарства в организме; ухудшаться с возрастом; необходимая дозировка.

III. Find in the text the sentences with

- b) Passive Voice
- c) Modal Verbs
- d) Future Indefinite

IV. Give the definition of the following notions

- compliance
- formulation
- absorption
- distribution
- elimination

V. Answer the questions

1. What does compliance mean?
2. What is the formulation of a drug?
3. What does the process of absorption mean?
4. Why can't insulin be taken by mouth?
5. Where are most drugs absorbed?
6. If the liver is diseased, will more or less of some drugs enter the general circulation?
7. In which two ways do drugs become distributed around tissues?
8. Can you describe how two drugs may compete for the protein? Can you explain the effect of such competition?
9. What two mechanisms are involved in the elimination of drugs from the body?
10. In what way should drug dosages change as people get older?
11. What diseased organs can interfere with drug action? In what way are drug levels in the body altered by these diseased organs?

VI. Fill in the blanks with prepositions where it is necessary

1. You have to alter the dose according ... the patient's response.
2. Some patients need drugs ... doses which ... others would be poisonous.
3. The drug is mixed ... other substances and these can influence the rate ... absorption ... the drug.
4. The process ... absorption is the process ... which the drug is taken ... the gut ... the bloodstream.
5. Insulin cannot be taken ... mouth because it is broken ... the gut ... it can be absorbed.
6. Most drugs are absorbed ... the upper part ... the small bowel, so any disease that interferes ... the small bowel will affect absorption ... the drug.
7. Some drugs diffuse freely ... the body. Others become attached ... proteins.
8. Two drugs may compete ... the proteins.

9. Metabolism occurs ... the liver, which changes active drugs ... inactive substances which can be excreted ... the kidneys.

VII. Complete the following statements

1. Some patients need doses of drugs which to other patients would be
2. Absorption is the process by which the drug is taken in
3. Most drugs are absorbed in
4. Once a drug has been absorbed from the gut, it has to pass through ... before it reaches the general circulation.
5. Once in the body the drug
6. Some proteins bind two sorts of drug, but prefer
7. If the protein is initially bound to the first sort, and then
8. The proteins which bind drugs are manufactured in
9. Metabolism in the liver changes active drugs into ... which can be excreted by
10. Any disease that interferes with the liver or the kidney
11. The function of the organs declines with age, so

VIII. Translate into English

1. Вам нужно изменять дозировку лекарства согласно реакции пациента.
2. Некоторым пациентам нужны лекарства в таких дозах, которые для других пациентов были бы ядовитыми.
3. Лекарство смешивается с другими веществами, которые могут влиять на скорость его всасывания.
4. Процесс всасывания может быть активным или пассивным в зависимости от химического состава лекарства.
5. Большинство лекарств всасывается в верхней части тонкого кишечника.
6. Любая болезнь, которая нарушает функции тонкого кишечника, может влиять на всасывание лекарства.
7. Лекарство абсорбируется в кишечнике.
8. Кровь, в которой содержится лекарство, проходит через печень до поступления в большой круг кровообращения.
9. В организме, лекарство распределяется по тканям.
10. Некоторые белки связывают два вида лекарства, но предпочитают один вид другому.
11. Белок, который связывает лекарство, вырабатывается печенью.
12. Обмен веществ происходит в печени.
13. Печень превращает активные вещества в неактивные, которые выделяются почками.

MAKING A DIAGNOSIS

Pre-listening

Before listening to the lecture do some training to prevent difficulties in understanding.

I. Practise the pronunciation of the words. Try to guess their meaning basing on their Russian equivalents

1) element	[ˈelɪmənt]
2) information	[ˌɪnfəˈmeɪʃən]
3) diagnosis	[ˌdaɪəgˈnəʊsɪs]
4) physical	[ˈfɪzɪkəl]
5) special	[ˈspeʃəl]
6) logical	[ˈlɒdʒkəl]
7) process	[ˈprəʊsəs]
8) detail	[ˈdiːteɪl]
9) symptom	[ˈsɪmptəm]
10) personal	[ˈpɜːsnl]
11) social	[ˈsəʊʃəl]
12) medicinal	[meˈdɪsɪnl]
13) organ system	[ˈɔːgən ˈsɪstəm]
14) service	[ˈsɜːvɪs]
15) expert	[ˈekspɜːt]
16) list	[lɪst]
17) radiological	[ˌreɪdɪəˈlɒdʒɪkəl]
18) contrast	[ˈkɒntrəst]
19) injection	[ɪnˈdʒekʃən]
20) structure	[ˈstrʌktʃə]
21) instrumental	[ˌɪnstuˈmentəl]

II. While listening you'll encounter a number of clinical terms. Practise their pronunciation and explain their meaning

1) cardiovascular	[ˌkɑːdɪəˈvæskjuːləː]
2) gastro-intestinal	[ˌgæstrəɪnˈtestɪnəl]
3) neurological	[ˌnjuərəˈlɒdʒɪkəl]
4) haematology	[ˌhiːməʊˈtɒlədʒɪ]
5) biochemistry	[ˈbaɪəˈkemɪstrɪ]
6) microbiology	[ˌmaɪkrəʊbaɪˈɒlədʒɪ]
7) microorganism	[ˌmaɪkrəʊˈɔːgənɪzəm]
8) histology	[hɪsˈtɒlədʒɪ]
9) interior	[ɪnˈtɪəriə]
10) angiography	[ˈændʒɪˈɔːgræfɪ]

11) axial	[`æksɪəl]
12) tomography	[tə`mɔgræfi]
13) gastroscopy	[gæs`trɔskəpɪ]
14) oesophagus	[ɪ`sɒfəgəs]

III. Complete the statements with the appropriate words according to their meaning

history-taking; questioning; illness; drugs; confirm; abnormality; area; special; investigations; study; techniques; blood vessels; research; expensive.

1. While ____ the doctor wants to learn everything about all the symptoms the patient has.
2. Do you know the ____ you suffered in your childhood?
3. Biology is the ____ of living structures.
4. You need undergo some extra ____ to have a complete picture of your disease.
5. I'm sure that the results of X-ray examination will ____ my initial diagnosis.
6. ____ is one of the main methods of gathering information about the patient's trouble.
7. This clinic uses the most advanced ____ of treating and preventing this disease.
8. Could you tell me what kind of ____ do you usually take?
9. A lot of scientists carry on ____ work in this field of medicine.
10. Where do you feel pain? – I feel sharp pain in the substernal ____.
11. The electrocardiogram findings show some ____ in your heart work.
12. Treatment of this disease is very _____. Not all the patients can afford it.
13. Hypertension is the disease which develops inside the _____.

IV. Choose the right grammar forms

1. The physical examination (uses; is used; have been used) to confirm the diagnosis.
2. By the end of the examination the doctor (will find out; will be found out; will have found out) what the problem is.
3. You should listen to the patient (reporting; reported; having report) his own view of the problem.
4. Doctors in large hospitals (must; can; may) call on other experts to examine the patient properly.
5. There (is; are; will) a wide range of techniques of imaging the inner organs.
6. Much time (must spend; must be spent; must be spend) on examining all the systems of the human body.

V. Suggest your own vision of the diagnostic process. Answer the following questions and make up a list of key words on this topic

1. What should you start with?
2. What are the main elements of making a diagnosis?
3. What can help you to confirm the diagnosis?
4. What kinds of diagnosis do you know?
5. How long must the diagnostic process take?
6. In what cases should you use extra investigations?

VI. Here is the list of new vocabulary that will help you understand the lecture

1) to gather	[ˈgæðə]	собирать
2) investigation investigative	[ɪnˌvestɪˈgeɪʃn] [ɪnˈvestɪgətɪv]	исследование исследовательский
3) to approach	[əˈprəʊtʃ]	приближаться, подходить
4) account	[əˈkaʊnt]	счёт, мнение, оценка
5) to seek	[si:k]	искать, разыскивать
6) clarification	[ˌklærɪfɪˈkeɪʃn]	прояснение, объяснение
7) duration	[dʒuəˈreɪʃn]	продолжительность
8) previous	[ˈpri:vjəs]	предыдущий
9) circumstance	[ˈsə:kəmstəns]	обстоятельство, случай
10) to be likely	[ˈlaɪklɪ]	вероятно
11) to confirm	[kənˈfə:m]	подтверждать
12) to refine	[rɪˈfaɪn]	очищать, повышать качество
13) to conduct	[kənˈdʌkt]	вести, проводить
14) standardized	[ˈstændədaɪzd]	стандартизированный
15) appearance	[əˈpiərəns]	внешний вид
16) in turn	[tə:n]	по очереди
17) to affect (un)affected	[əˈfekt]	действовать, влиять (не)поражённый болезнью
18) to explore (un)explored	[ɪksˈplɔ:]	исследовать, изучать (не)изученный
19) to miss	[mɪs]	попускать, упускать
20) to discover	[dɪsˈklʌvə]	обнаружить, раскрыть, узнать
21) abnormality	[ˌæbnɔ:ˈmæltɪ]	аномалия
22) to indicate	[ˈɪndɪkeɪt]	указывать, показывать
23) to obtain	[əbˈteɪn]	получать, приобретать
24) to assist	[əˈsɪst]	помогать, содействовать
25) range	[ˈreɪndʒ]	линия, ряд
26) to call upon	[kɔ:l]	вызывать, взывать
27) technician	[tekˈnɪʃən]	специалист
28) constituent	[kənˈstɪtjuənt]	составная часть
29) chemicals	[ˈkemɪkəlz]	химические препараты

30) to reflect	[rɪˈflekt]	отражать, показывать
31) to culture	[ˈkʌltʃə]	выращивать, разводить
32) sample	[sɑ:mpl]	образец, проба
33) tissue	[ˈtɪʃu:]	ткань
34) imaging	[ˈɪmɪdʒɪŋ]	изображение
35) to be familiar with	[fəˈmɪljə]	знать что-л
36) radioopaque	[ˈreɪdɪəʊˈpeɪk]	рентген непроницаемый
37) to outline	[ˈaʊtlaɪn]	обрисовать в общих чертах
38) nuclear	[ˈnju:kliə]	ядерный
39) labeled	[ˈleɪblɪd]	маркированный
40) to delineate	[dɪˈlɪneɪt]	изображать, описывать
41) tool	[tu:l]	инструмент
42) to visualize	[ˈvɪzjuəlaɪz]	делать видимым
43) flexible	[ˈfleksəbl]	гибкий, эластичный
44) fiberoptic	[ˈfaɪbəˈɒptɪk]	фиброоптический
45) similar	[ˈsɪmlə]	подобный, похожий
46) orifice	[ˈɔrɪfɪs]	отверстие

VII. Work in pairs. Check up your neighbour's knowledge of the words

исследование Какая цель вашего исследования?	investigation / research What is the purpose of your investigation / research?
продолжительность Было важно выяснить продолжительность приступа.	duration It was important to find out the duration of the attack.
вероятно Вероятно, он скоро придёт	to be likely He is likely to come soon.
подтверждать Результаты анализов не подтвердили первоначальный диагноз.	to confirm The results of the analyses didn't confirm the initial diagnosis.
действовать, влиять, поражать Использование этих препаратов может поражать почки и печень.	to affect Using these medicines can affect kidneys and liver.
пропускать, упускать Врач упустил очень важный симптом и поставил неверный диагноз.	to miss The doctor missed a very important symptom and made an incorrect diagnosis.
аномалия, отклонение Какие аномалии развития у этого ребёнка?	abnormality What abnormalities of development does this baby have?
отражать Вы должны отразить серьёзные аспекты в своём докладе.	to reflect You have to reflect serious aspects in your report.

изображение Компьютерное изображение даёт очень точное описание органа.	imaging Computer imaging gives a very accurate description of the organ.
инструмент Существует множество различных хирургических инструментов.	tool There are lots of different surgical tools.
предыдущий Какое было предыдущее лечение этого заболевания?	previous What was the previous treatment of this disease?

VIII. Answer the questions and translate into English (you may do it in writing)

to conduct

1. What investigations does a doctor conduct to make a diagnosis?
2. Как часто нужно проводить это обследование?
3. Учёные не смогли провести этот сложный эксперимент.

to gather

1. Where can you gather the information about the student?
2. Вам нужно собрать последние данные для вашего исследования.
3. Вы уже собрали необходимую информацию для проверки?

circumstance

1. Who usually finds out circumstances of an accident?
2. Вы знаете обстоятельства этого дела?
3. Мне трудно объяснить обстоятельства вчерашнего случая.

to assist

1. What kind of medical procedures would you like to assist?
2. Молодому хирургу разрешили ассистировать на операции.
3. Могу я чем-нибудь подействовать в вашей трудной ситуации?

to be familiar with

1. What methods of teaching are you familiar with?
2. Я не был знаком с его родителями.
3. Вы знакомы с профессорами нашего университета?

constituent

1. What are the constituents of blood?
2. Вы знаете составляющие этого химического вещества?
3. Очень важно понимать составляющие процесса гемолиза.

IX. Translate the sentences into English using new vocabulary

1. На начальной стадии важно описать характер и продолжительность боли.
2. Студенты должны отработать эти навыки по очереди.
3. Учёные обнаружили новые обстоятельства этого случая.
4. Вы можете получить разъяснение у главного врача больницы.
5. Специалист лаборатории исследовал образцы ткани.
6. Преподаватель указал несколько грубых ошибок в тесте.
7. Ряд исследований были проведены в лабораторных условиях.
8. Как часто вы пропускаете тренировки в спортивном зале?
9. Эти химические препараты не изучены ещё.
10. Все предыдущие стадии болезни были описаны в его статье.

Listening

Now you're going to hear the lecture divided into four sections. Below you are given some tasks to each section

Section I

Complete the statements:

- a. The main elements in the gathering of information to form a diagnosis are
- b. History-taking begins
- c. The doctor seeks
- d. There follows questioning
- e. Details are taken of
- f. The doctor goes through

Section II

Answer the questions:

- What is the purpose of the physical examination?
- How does it begin?
- What is explored during the physical examination?

Section III

Explain the meaning of these special investigations:

- Haematology is
- Biochemistry is
- Microbiology is
- Histology is

Section IV

Answer the following questions:

1. What radiological techniques are used to examine a patient?

2. What do contrast studies involve?
3. What is nuclear imaging?
4. What techniques are mainly used in specialized research?
5. What is gastroscopy?

Post-listening

I. Choose the right element of the statement appropriate to the context of the lecture

1. There are (two; three; four) main elements to form a diagnosis.
2. History-taking gives (objective; subjective; emotional) data.
3. By the end of history-taking, the doctor has (much; little; enough) information to decide which diagnoses are likely.
4. Physical examination aims at exploring (the patient's appearance; all the system's in turn; only affected areas).
5. As a result, the doctor will make up (a pattern of abnormalities; a pattern of symptoms; a correct diagnosis).
6. Special investigations are necessary (to confirm the diagnosis; to obtain further information; to finish making a diagnosis).
7. Radiological techniques allow imaging (the interior of the body; the internal abnormalities; the general state of the body).

II. Give names to the medical terms according to their meaning

- 1) studying the constituents of blood;
- 2) injecting radioopaque liquid into the body to outline structures;
- 3) examining and culturing microorganisms from patient's samples;
- 4) using radioactively labeled substances to delineate organs;
- 5) studying tissue samples;
- 6) examining various chemicals in the blood or body fluids to reflect the state of organs.

III. Listen to the lecture for again and answer the questions

1. What are the three main elements in the evaluation of a patient?
2. The lecturer describes the different sections into which the history falls. Can you list them?
3. At what stage should the doctor be able to form an opinion as to which diagnoses are likely?
4. In what way is the physical examination conducted?
5. With what does it begin?
6. What areas does the doctor spend most time examining?
7. Why should no system be left unexplored?
8. What is the list of laboratory investigations?
9. What is the difference between contrast and nuclear imaging?
10. Why are NMR and PET scanning not widely used?

IV. Refer the following statements to the main stages of making a diagnosis, marking them with the figures

- 1) history-taking;
- 2) physical examination;
- 3) laboratory investigations;
- 4) special investigations.

palpation; biochemical blood analyses; X-ray examination; questioning; auscultation; patient's account of the problem; gastroscopy; histological analysis; family history; taking blood pressure; CT scanning; clearing particular details; urinalysis; exploring the abnormal area; contrast imaging.

V. Put the following doctor's statements in the logical order

- You'll have to undergo the procedure of gastroscopy.
- How long have you had pain in the stomach?
- Do you feel any pain on palpating?
- Results of biochemical blood analysis will clarify the situation.
- Let me palpate your abdomen and epigastric area.
- Did anyone of your relatives suffer from stomach ulcer?
- To be sure of the diagnosis and exclude any lung troubles we'll carry on nuclear imaging.
- What sort of pain do you feel (sharp; dull)?

VI. Translate into English basing on the lecture

- ✓ Есть три основных элемента в сборе информации, чтобы поставить правильный диагноз.
- ✓ Доктор должен искать разъяснение определённых деталей, таких как точный характер и длительность симптомов.
- ✓ Затем следует опрос пациента о его предыдущих заболеваниях, наличии или отсутствии заболевания в семье.
- ✓ Физический осмотр проводится в стандартной манере, начиная с общего внешнего вида пациента, и затем исследуют каждую систему по очереди.
- ✓ К концу осмотра доктор должен выяснить ряд отклонений, которые указывают на конкретный диагноз.
- ✓ Необходимо получить дальнейшую информацию для установки диагноза и лечения, используя специальные исследования.
- ✓ В больших больницах доктор может вызвать специальных экспертов и специалистов, чтобы получить консультацию.
- ✓ Существует широкий спектр /ряд/ радиологических технологий, которые позволяют получить изображение внутренних органов человека.
- ✓ Контрастированное исследование предполагает введение рентген непроницаемой жидкости в организм, чтобы обрисовать все необходимые структуры.

✓ Такие исследования, как КТ, МРТ и ПЭТ КТ, доступны только в крупных больницах и остаются чрезвычайно дорогими.

VII. You are given three situations. You'll have to compose a list of your actions and questions in order to make a correct diagnosis: "You're a doctor. A patient comes to see you and complains of

- a sharp pain in the heart and substernal area;
- a pain in the back;
- constant headaches

The process of making a diagnosis must involve all the stages presented in the lecture.

HUMAN HEREDITY

Pre-listening

I. Memorize the vocabulary of the lecture

1) heredity	[hə`rediti]	1) наследственность
2) to influence	[`influəns]	2) влиять
3) to transmit	[trænz`mit]	3) передавать, отправлять
4) offspring	[`ofsprɪŋ]	4) отпрыск, потомок
5) inheritance	[in`heritəns]	5) наследство
6) determine	[di`tə:mɪn]	6) определять, устанавливать
7) chain	[tʃeɪn]	7) цепь, цепочка
8) sufficient	[sə`fɪʃiənt]	8) достаточный
9) concern	[kən`sə:n]	9) забота, беспокойство
10) to divide	[di`vaɪd]	10) делить
11) ovary	[`əʊvəri]	11) яичник

II. Practise the pronunciation

chromosomes	[`krəʊməsəʊm]
gametes	[`gæmɪts]
technique	[tek`nik]
gene	[dʒi:n]
genetic	[dʒə`netɪk]
duplicate	[`dʒʌplɪkeɪt]
embryo	[`embriəʊ]
anaemia	[ə`ni:mɪə]
dominant	[`domɪnənt]
chorea	[kə`riə]
hereditary	[hə`redɪtəri]

III. Work in pairs. Check up your neighbour's knowledge of the words

определять, устанавливать Врач определил границы печени при помощи перкуссии.	to determine The doctor has determined the borders of the liver by means of percussion.
цепь, цепочка Жиры состоят из цепочек жирных кислот.	chain Fats are composed of chains of fatty acids.
наследственность Что наследственность определяет?	heredity What does heredity determine?
достаточный У меня достаточное количество информации, чтобы поставить диагноз.	sufficient I have a sufficient amount of information to make a diagnosis.
влиять Наследственность влияет на многие характеристики.	to influence Heredity influences a lot of characteristics.
передавать Вся наследственная информация передаётся от родителей к их потомку.	to transmit All heredity information is transmitted from parents to their offspring.

IV. Answer the questions and translate into English (you may do it in writing)

inheritance

1. What would you do with a generous inheritance?
2. Он получил это по наследству. (*by ..*)
3. Что включает её наследство?

to determine

1. What determines a child's character?
2. Он определил границы сердца точно.
3. Как ты это определил?

to influence

1. What might influence your life?
2. Что повлияло на твой выбор?
3. Когда это повлияло на функции яичников?

V. Translate (do it in writing)

1. Где воспитывались их потомки?
2. Как передаются эти заболевания?
3. Что помогло определить эти микроорганизмы?
4. Что оказало влияние на его поведение?
5. Я обеспокоен тем её наследственным (hereditary) заболеванием яичников.

6. Мы изучили достаточное количество образцов тканей, чтобы сделать выводы.

7. Цепочка исследований установила влияние наследственности на это заболевание.

Listening

Section I.

Answer the questions:

1. What mechanisms shall we consider?
2. Why are these mechanisms important?

Section II.

Answer the questions:

1. What does DNA code?
2. What is a gene?

Section III.

Answer the questions:

1. What chromosomes do the female and the male possess?
2. What are autosomes?

Section IV.

Complete the sentences:

1. Mitosis is
2. Meiosis is

Section V.

Complete the sentences:

1. Recessive conditions are
2. Dominant genes are

Post-listening

I. Give English equivalents

Наследственность человека, влияние наследственности, передаваться от родителей к ребенку, наследственная болезнь, код ДНК, клетка включает в себя 46 хромосом, генетическая информация, деление клетки, нормальный / ненормальный ген, один из четырех детей, наследственность влияет на здоровье (характер).

II. Find in the text the sentences with

1. Passive Voice.
2. Modal Verbs.

III. Answer the questions

1. Why is it important to study human heredity?
2. How is heredity information transmitted from parent to offspring?
3. What forms genes?
4. What is gene?
5. What do you know about chromosomes?
6. How many chromosomes does human cell contain?
7. What is autosomes?
8. How is genetic information passed on?
9. What is the difference between mitosis and meiosis?
10. When is it necessary that the individual possesses a double dose of the abnormal gene?
11. When is only one dose of the abnormal gene necessary for the disease to be expressed?

IV. Fill in the blanks with prepositions where it is necessary

1. Some forms of illness can be transmitted ... parent ... child.
2. A gene is a sequence ... a single polypeptide chain ... a protein molecule.
3. The genes are arranged ... a linear sequence of DNA, which forms rod-shaped bodies known ... chromosomes.
4. Autosomes can be made visible ... the microscope ... special staining techniques.
5. Some individuals possess genes which are abnormal and so may lead ... disease.

V. Complete the sentences

1. All heredity information is transmitted from parent to offspring through
2. Each human cell contains
3. These sex chromosomes are named
4. The remaining 44 chromosomes are non-sex chromosomes, also known as
5. When the sperm and the egg combine, the resulting embryo has

VI. Which of the answers below are correct?

1. Genes...
 - a) are made up of DNA;
 - b) code for amino acid sequences;
 - c) 100,000 are present in each cell;
 - d) are formed into chromosomes.
2. Chromosomes...
 - a) are made up of RNA;

- b) number 44 in each cell;
 - c) males possess two X chromosomes;
 - d) non-sex chromosomes are known as autosomes;
 - e) can be seen under the microscope when specially stained.
3. Cell division ...
- a) in mitosis, the number of chromosomes is reduced by half;
 - b) in meiosis, each resultant cell has 23 chromosomes;
 - c) meiosis occurs in the formation of gametes;
 - d) 23 chromosomes are inherited from each parent.
4. In recessive conditions...
- a) a single dose of abnormal chromosome produces the disease;
 - b) an example is sickle-cell anaemia;
 - c) one parent will be abnormal;
 - d) 2 in every 4 children will be abnormal;
 - e) 1 in every 4 children will be free of the abnormal gene.
5. In autosomal dominant conditions...
- a) a double dose of the abnormal gene is needed;
 - b) an example is Huntington's chorea;
 - c) one parent will be affected;
 - d) 1 in 4 children will be affected.

VII. Translate

1. Разные формы заболеваний могут передаваться от родителей к потомкам через наследование ДНК .
2. Это определяет синтез белка.
3. Количество ДНК в каждой клетке человека достаточно для образования более чем 50000 генов.
4. Каждая клетка человека содержит 46 хромосом.
5. Две из 46 хромосом определяют пол человека.
6. Ядра таких клеток делятся.
7. Другой вид деления клеток происходит при формировании гамет в яичниках и яичках.
8. В среднем, у одного из четырёх детей будет двойная доза гена с патологией и, таким образом, он может быть поражён заболеванием.

VIII. Speak on the topic

The problem of human heredity.

PSYCHIATRIC ILLNESSES

Part I

Pre-listening

I. Memorize the vocabulary of the lecture

1) similar	[ˈsɪmɪlə]	1) схожий; подобный
2) order	[ˈɔ:də]	2) порядок; последовательность
3) mind	[maɪnd]	3) ум; разум
4) lump	[lʌmp]	4) бугор; выступ; шишка
5) bump	[bʌmp]	5) шишка; выпуклость
6) to prod	[prɒd]	6) наткнуться
7) power/powers	[paʊə]	7) сила; степень/способности; возможности
8) observation	[,ɒbzəˈveɪʃn]	8) наблюдение; наблюдательность
9) skill	[skɪl]	9) умение; мастерство
10) appearance	[əˈpiərəns]	10) внешность; наружность
11) behaviour	[bɪˈheɪvjə]	11) поведение; манеры
12) peculiar	[prɪˈkju:ljə]	12) необычный; странный; своеобразный
13) appropriate	[əˈprɒprɪət]	13) подходящий; свойственный
14) thought	[θɔ:t]	14) мысль; мышление
15) to switch	[swɪtʃ]	15) переключать (-ся)
16) to rhyme	[raɪm]	16) рифмовать (-ся)
17) to broadcast (broadcast-broadcast)	[ˈbrɔ:dka:st]	17) передавать (по радио, по телевидению)
18) contents	[ˈkɒntənts]	18) содержание
19) false	[fɔ:ls]	19) ложный; неверный; ошибочный
20) belief	[bɪˈli:f]	20) убеждение; мнение; верование
21) to consider	[kənˈsɪdə]	21) рассматривать; считать(-ся)

II. Practise the pronunciation

physical	[ˈfɪzɪkəl]
psychiatric	[ˌsaɪkɪˈætrɪk]
abstract	[ˈæbstrækt]
to analyse	[ˈænəlaɪz]
mania	[ˈmeniə]
schizophrenia	[ˌskɪtsəˈfrɪ:njə]
Mars	[mɑ:z]
delusion	[dɪˈlu:ʒn]
psychiatrist	[ˌsaɪˈkɪətrɪst]
psychiatry	[ˌsaɪˈkɪətrɪ]

III. Work in pairs. Check up your neighbour's knowledge of the words

умение, мастерство Какие умения ты приобрёл?	skill What skills have you obtained?
поведение, манеры Его поведение было своеобразным, не так ли?	behaviour His behaviour was peculiar, wasn't it?
передавать (по радио) Какие новости уже передали?	to broadcast What news have been broadcast yet?
подходящий, свойственный Его внешний вид был таким неподходящим.	appropriate His appearance was so inappropriate.
порядок, последовательность Делай всё в логичном порядке, пожалуйста.	order Will you do everything in a logical order, please.
содержание Ты помнишь содержание лекции?	contents Do you remember the contents of the lecture?
убеждение, мнение Ваше убеждение ошибочно.	belief Your belief is false.

IV. Answer the questions and translate into English (you may do it in writing)

skill

1. What skills would you like to obtain?
2. Мне нравится его умение общаться с детьми.
3. Её мастерство впечатлило нас.

to switch

1. Is it easy for you to switch over unpleasant things to anything else?
2. Включи телевизор, пожалуйста.
3. Выключи это, пожалуйста.
4. Переключи каналы, пожалуйста.

to broadcast

1. What broadcasting do you usually listen to?
2. Что сегодня передали по радио?
3. Когда эта передача транслировалась?

power/ powers

1. What your powers are you proud of?
2. Это зависит от степени наблюдательности.
3. У него необычные способности.

V. Translate (do it in writing)

1. Те образцы тканей очень схожи.
2. Вы можете наткнуться на странные выступления.
3. Это подходящий способ для рассмотрения этой проблемы.
4. Сначала врач рассматривает внешность и поведение пациента.
5. Я не считаю, что её мнение ошибочно.
6. Вы изучили содержание семейного анамнеза?
7. Какая странная мысль, не так ли?

Listening

Section I.

Answer the questions:

1. What are the similarities between examining a person's physical state and examining a person from a psychiatric point of view?
2. What is the main difference?

Section II.

Answer the questions:

1. What does mental state examination begin with?
2. What do we consider then?
3. How do we consider a patient's thought?
4. What's a delusion?

Post- listening

I. Give English equivalents for the following words and word combinations

Психиатрическое заболевание; в логическом порядке; состояние ума; абстрактный; бугорки и шишечки; умение быть наблюдательным; внешность и поведение; необычно одетый; рассматривать речь; форма мысли; иметь смысл; при мании; переключаться с одной темы на другую; передавать по радио или телевидению; указывать на диагноз шизофрении; содержание мысли; планета Марс; ложное убеждение; иллюзия.

II. Match to the definitions

mental	what one can do
belief	the act of speaking
power	false belief
skill	the feeling that something is true or that something really exists
speech	concerning illness of the mind
delusion	practical knowledge

III. Match the synonyms

appropriate	look
appearance	abilities

powers	to think
to consider	the same
similar	to change
to switch	suitable

IV. Match the antonyms

true	inappropriate
different	logical
suitable	false
illogical	fast
slow	similar

V. Answer the questions

1. What are the similarities between examining a person's physical state and examining a person from a psychiatric point of view?
2. What is the main difference?
3. What do you have to use on examining the person with a psychiatric illness?
4. What parts does the mental state examination fall into?
5. What does the examination of the person's appearance and behaviour include?
6. In what way do you consider their speech?
7. Why is it necessary to pay attention to the form of their thought?
8. Why do you look at the content of a person's thought?
9. In what illness may a person jump from idea to idea simply because words rhyme?
10. In what illness may a person think that others can read his thoughts?
11. What is the name given to an evidently false belief?

VI. Choose the most appropriate variant

1. How do you examine a patient to (look; looked) for (psychiatrical; psychiatric) illness?
2. It's similar to (examine; examining) a patient with a (physic; physical) illness.
3. You go through the parts (to be examined; to examine) in a (logic; logical) order.
4. Examination of mental state is very (differs; different) from examination of the body.
5. You (has; have) to (be used; use) your powers of observation and your skill in (analysing; analysed) what people say.
6. You begin by (examine; examining) the person's (appearance; appear) and (behave; behaviour).

7. They may be (dressing; dressed) in a peculiar way or react to the situation (unappropriately; inappropriately).

8. Some people jump from idea to idea in a way that doesn't (have; make) sense.

9. The patient may (to have; has; have) funny ideas about his thoughts.

10. Some people might (belief; believe) that their movements are (being followed; been followed) by small green (mans; men) from the planet Mars.

11. Such a false (belief; believe) is (calling; called) a delusion.

VII. Fill in the blanks with prepositions, where it's necessary

1. How do you examine a patient to look ... a psychiatric illness?

2. It's similar ... examining a patient ... a physical illness.

3. You find ... what the patient is complaining ..., then you go ... the parts to be examined ... a logical order.

4. But examination ... the mental state is different ... examination ... the body.

5. You are dealing ... abstract things.

6. You have to use your powers ... observation and your skill ... analysing what people say.

7. You begin ... examining the person's appearance and behaviour.

8. They may be dressed ... a peculiar way.

9. ... mania, the patients may switch ... one subject ... another simply because two words rhyme.

10. The patient may think that his thoughts belong ... someone else, or that everyone else can read them or that they're being broadcast ... radio or TV.

11. After considering the form ... thought, you can look ... the content ... a person's thought.

12. Some people might believe that their movements are being followed ... small green men ... the planet Mars

VIII. Complete the sentences

1. Examining a patient with a psychiatric illness is similar to

2. First of all you find out what the patient

3. But examination of the mental state is different, because you are dealing with

4. You simply have to use your

5. You begin your examination by

6. The examination of the appearance and behaviour means

7. Then you consider their speech, because they may

8. In mania

9. In schizophrenia

10. After considering the form of thoughts, you look at

11. A delusion is

IX. Translate from Russian into English

1. Как вы осматриваете пациента, чтобы обнаружить психиатрическое заболевание?
2. Сначала вы слушаете его жалобы.
3. Вы обследуете его в логическом порядке.
4. Вам необходимо быть наблюдательным.
5. Вы начинаете с осмотра его внешности и поведения.
6. Это означает, как они одеты и что делают на собеседовании.
7. Затем вы рассматриваете их речь, потому что они могут не говорить совсем или говорить очень быстро.
8. Можете ли вы проследить их мысль?
9. При мании они переключаются с мысли на мысль только потому, что слова рифмуются.
10. Эти странные мысли указывают на диагноз шизофрении.
11. Ложное убеждение называется иллюзией.

Part II

I. Memorize the vocabulary of the lecture

1) perception	[pə'sepʃn]	1) восприятие; познание
2) sense	[sens]	2) чувство; ощущение
3) to smell	[smel]	3) ощущать запах; пахнуть
4) voice	[vɔɪs]	4) голос
5) to compel	[kəm'pel]	5) заставлять; вынуждать
6) modality	[mou'dælɪtɪ]	6) форма; вид
7) odour	['oudə]	7) запах; аромат
8) mood	[mu:d]	8) настроение; расположение
9) anxious	['æŋkʃəs]	9) обеспокоенный; встревоженный
10) to elate	[ɪ'leɪt]	10) поднимать настроение; приводить в восторг
11) cognitive	['kɔgnɪtɪv]	11) познавательный
12) to affect	[ə'fekt]	12) воздействовать;
		13) поражать (о болезни)
13) insight	['ɪnsaɪt]	14) понимание; проницательность
14) ability	[ə'bɪlɪtɪ]	15) способность; умение
15) to lack	[læk]	16) испытывать недостаток; не хватать
16) list	[lɪst]	17) список; перечень
17) to fit	[fɪt]	18) соответствовать; годиться
18) pattern	['pætən]	19) образец; модель

II. Practise the pronunciation

hearing	['hɪərɪŋ]
seeing vision	['si:ɪŋ] ['vɪʒn]
stimulus	['stɪmjʊləs]
auditory hallucination	['ɔ:dɪtəri] [hə,lʊ:sɪ'neiʃn]

depressed	[di'prest]
process	['prouəs]
concentration	[,kɒnsən'treɪʃn]
abnormality	[,æbnɔ:'mæltɪ]

III. Work in pairs. Check up your neighbour's knowledge of the words

чувство, ощущение У вас хорошее чувство юмора.	sense You have a good sense of humour.
заставлять, вынуждать Не вынуждай меня делать это.	to compel Don't compel me to do it.
соответствовать, годиться Это пальто сидит на тебе хорошо.	to fit This coat fits you.
обеспокоенный, встревоженный Ты выглядишь встревоженно. Что случилось?	anxious ['æŋksɪs] You look anxious. What's happened?
ощущать запах, пахнуть Ты ощущаешь запах?	to smell Do you smell the smell?
поднимать настроение, приводить в восторг Что привело его в такой восторг?	to elate What has elated him so much?
испытывать недостаток, не хватать Им не хватает проницательности.	to lack They lack insight.

IV. Answer the questions and translate into English (you may do it in writing)

mood

1. What do you usually do when you are in a bad mood?
2. Что может улучшить ваше настроение?
3. Какое у него настроение сегодня?

to compel

1. Might anything compel you to do a bad thing?
2. Что заставило тебя сделать это?
3. Вы когда-нибудь заставляли своих детей делать работу по дому?

to affect

1. What might affect your relationship with other people?
2. Эти бактерии поразили работу дыхательной (эндокринной, нервной, пищеварительной) системы.
3. Как ваши слова воздействовали на его поведение?

V. Translate (do it in writing)

1. Какие органы чувств были поражены?
2. Им не хватает способностей.

3. Она всегда в приподнятом настроении.
4. О чём говорит его настроение?
5. Он взволнован или мне показалось?
6. Его восприятие и понимание другого вида.
7. Это воздействует на её когнитивное состояние.
8. Этот список не годится.
9. Какой приятный запах!

Listening

Section III.

Complete the sentences:

1. Perceptions mean
2. Hallucinations are

Section IV.

Complete the sentences:

1. Cognitive state is
2. Insight means

Post- listening

I. Give English equivalents for the following words and word combinations

Слух, зрение, обоняние; слуховая галлюцинация; в приподнятом настроении; голоса вынуждают; познавательное состояние; память; поражать головной мозг; восприятие; ощущение странных запахов; обеспокоенный; список отклонений; соответствовать; отсутствие стимула.

II. Match to the definitions

disease	the experience of feeling unwell
perception	the ability to see the situation for what it is
hallucination	a perception in the absence of any form of stimulus
mood	a state of the feelings at a particular time
cognitive state	mental processes, such as memory and concentration
insight	what they are told by their senses
illness	a disturbance of the structure or function of part of the body

III. Match the synonyms

disease	state
unique	anxious
smell	absence
sick	to indicate
worried	odour
lack	ill
to show; to point out	the only
condition	illness

IV. Match the antonyms

difficult	ill
healthy	normal
elated	absence
to forget	easy
presence	to remember
abnormal	depressed

V. Answer the questions

1. What is a perception?
2. What is the term for a perception in the absence of any stimulus?
3. What hallucinations can the patients with a psychiatric illness have?
4. What mood is characteristic of such patients?
5. What may abnormalities in the cognitive state often indicate?
6. What does the insight mean?
7. What does a doctor do at the end of his examination?

VI. Choose the most appropriate variant

1. Perceptions (means; mean) what the people are (told; telling) by (them; their) senses.
2. Perceptions in the (absence; absent) of any form of stimulus are (knowing; known) as hallucinations.
3. Then their mood (examines; is examined). Are they (depressing; depressed), anxious or elated?
4. The cognitive state (means; mean) their mental processes, such as memory and concentration.
5. Some (abnormalitys; abnormalities) indicate a (physic; physical) disease which (is affected; is affecting) the brain.
6. The insight means their ability (to see; to be seen) their situation for what (it is; they are).
7. At the end of your examination you must (to fit; fit) all the abnormalities in a pattern and look for the illness that this pattern (fit; fits) (most; best).

VII. Fill in the blanks with prepositions, where it's necessary

1. Next you go ... to look ... their perception.
2. Perceptions ... the absence ... any form ... stimulus are known as hallucinations.
3. Hallucinations ... hearing are called auditory hallucinations.
4. You can get hallucinations ... any modality ... sensation – seeing visions, smelling strange odours and so
5. Then you look ... their mood, cognitive state and insight.
6. The insight means their ability to see their situation ... what it is.
7. ... the end ... your examination you have a list ... abnormalities.

8. You then fit these together ... a pattern and look ... the illness.
9. The only way to learn it is ... watching someone else do it.

VIII. Complete the sentences

1. Perceptions mean
2. Some people can hear
3. Hallucinations are
4. You can get such hallucinations as
5. Their mood can be different:
6. The cognitive state is
7. The insight means
8. At the end of examination

IX. Translate from Russian into English

1. Восприятие означает то, что нам говорят наши органы чувств — слух, зрение, обоняние и т. д.
2. Некоторые чувствуют себя вынужденными делать то, что голоса говорят им.
3. Пациенты могут быть в депрессии, взволнованы или в приподнятом настроении.
4. Такие отклонения указывают на заболевание, поражающее головной мозг.
5. У них могут быть разные виды галлюцинаций — зрительные видения, ощущение странных запахов и другие.
6. У некоторых пациентов наблюдается отсутствие понимания.

X. Read the following articles and complete the following table as fully as possible from the information given in the texts. Divide the group into 2 variants

<u>Variant I</u> <u>Mania</u>	<u>Variant II</u> <u>Schizophrenia</u>
<p>The core of the syndrome is not elation so much as a subjective sense of well being accompanied by increased activity. The patient has abundant energy. He says that he feels fine, is superbly healthy and can think more clearly than ever before. His head is full of exciting plans and ideas and he is more talkative than normal. He stays up till long after midnight or rises in the early hours of the morning, not be-</p>	<p>Schizophrenia is a severe mental disease characterized by unpredictable disturbances in thinking. It refers to the characteristic schizophrenic behavior of withdrawing from reality and thinking in illogical, confused patterns. The term does not mean that a victim has more than one personality, but that there is a split or incongruence between thought and emotional content.</p>

cause he is troubled by insomnia but because he feels no need for sleep or is too busy to waste precious hours in bed. But despite this energy and expansive enthusiasm he achieves little. He is constantly dropping one scheme to take up another. He may ask personal questions of the doctor trying to interview him and behaves in other ways that are normally considered impolite. Grandiose ideas are very characteristic, varying from an exaggerated view of genuine talents or assets to delusional convictions of being the prime minister, or the son of God, or having solved the secret of the universe.

The patient's mood may well be elated, but is not always obviously so. Irritability is often more prominent and sometimes the only obvious abnormality of mood is an uncharacteristic failure to be alarmed by bad news. Sometimes, in addition to the pressure of speech, there is a characteristic *flight of ideas*, the subject's train of thought changing repeatedly in mid sentence in response to distracting stimuli, words with double meanings or new but related ideas.

But it is common for the patient to be in tears and prey to gloomy thoughts for a few moments once or twice a day and suicide is by no means rare. Moreover, something like 25 per cent of manic illnesses are preceded by a period of mild depression lasting for days or weeks.

Severe untreated mania is a dangerous condition. The disease may expose the patient and others to the risk of serious accidents. Mild mania, so called hypomania, on the other hand, may in

Schizophrenia ranks as one of the most common mental disorders. It affects about 1 percent of the population. About 75 percent of all cases develop the disease between the ages of 15 and 25. While the incidence is low, the disease tends to be chronic, causing a major disruption of the victim's life. Recent studies have shown that more individuals with schizophrenia make a partial or complete recovery than was previously thought. Schizophrenics often suffer disturbances in mood and behavior. Some patients seem to feel no emotions, but others may display inappropriate emotions, such as laughing at sad situations. Some schizophrenics withdraw from their family and friends. Others develop extreme delusions and suffer additionally from hallucinations, most commonly the hearing of voices.

Physicians do not know the cause of schizophrenia. However, there is increasing evidence that the disease results from an inherited defect involving certain brain chemicals. These chemicals, called *neurotransmitters*, enable the nerve cells of the brain to communicate with one another. Schizophrenics may be born with a defect that causes certain brain cells to release excess amounts of *dopamine*, a neurotransmitter.

Before the 1950's, most schizophrenics had to remain in mental hospitals. Since then, scientists have developed drugs that block the action of dopamine on certain nerve cells. In most cases, these drugs do not cure schizophrenia, but they may reduce the symptoms so that many patients

some circumstances be positively advantageous. The increased energy, heightened creativity and greater self confidence may enable him or her to achieve things they would not normally be capable of, particularly in the artistic and social spheres.

can leave the hospital. In addition, psychotherapy can help prepare patients for life outside the hospital. But even with drug treatment and psychotherapy, some schizophrenics must remain hospitalized for much of the lives.

	<u>Mania</u>	<u>Schizophrenia</u>
Speech		
Thought		
Perceptions		
Mood		
Cognitive state		
Insight		

STRIDOR

Part I

I. Practise the pronunciation

- | | |
|----------------|-----------------|
| 1) stridor | [ˈstrɪdə] |
| 2) acute | [əˈkju:t] |
| 3) sign | [saɪn] |
| 4) respiratory | [resˈpɪ:rətəri] |
| 5) larynx | [læriŋks] |
| 6) trachea | [trəˈkiə] |
| 7) inspiratory | [ɪnsˈpɪ:rətəri] |
| 8) wheeze | [wi:z] |
| 9) expiration | [ekspəɪəˈreɪʃn] |
| 10) benign | [biˈnæn] |

11) threatening	[ˈθretənɪŋ]
12) croup	[kru:p]
13) epiglottitis	[əpɪgləˈtəɪtɪs]
14) obscure	[əbˈskjuə]
15) agioneurotic	[,ændʒɪənjuˈrɒtɪk]
16) oedema	[əˈdi:mə]
17) allergic	[əˈlɜ:dʒɪk]
18) viral	[ˈvəɪrəl]
19) typically	[ˈtɪpɪkəlɪ]
20) exhausted	[ɪgˈzɔ:stɪd]
21) deterioration	[dɪˈtɪəriəˈreɪʃn]
22) intubation	[ɪntjuˈbeɪʃn]
23) insertion	[ɪnˈsɜ:ʃn]

II. Learn the words

1) stridor	[ˈstrɪɪdə]	1) стридор
2) sign	[səɪn]	2) признак
3) harsh	[hɑ:ʃ]	3) жесткий
4) obstruction	[əbˈstrʌkʃn]	4) обструкция, блокада
5) noise	[nɔɪz]	5) шум
6) to differ (from)	[ˈdɪfə]	6) отличаться (от)
7) wheeze	[wɪ:z]	7) стертородное дыхание (свистящее)
8) to originate (from)	[əˈrɪdʒɪneɪt]	8) происходить от
9) benign	[bɪˈneɪn]	9) доброкачественный
10) croup	[kru:p]	10) круп
11) epiglottitis	[əpɪgləˈtəɪtɪs]	11) эпиглоттит
12) obscure	[əbˈskjuə]	12) неясный, непонятный
13) oedema	[əˈdi:mə]	13) отек
14) infancy	[ˈɪnfənsɪ]	14) детство
15) viral	[ˈvəɪrəl]	15) вирусный
16) due to	[dju]	16) из-за
17) to cry	[krɪ]	17) плакать
18) mild	[məɪld]	18) легкий
19) severity	[sɪˈverɪtɪ]	19) тяжесть
20) increase (in)	[ɪnkˈrɪ:z]	20) увеличение
21) recession	[rɪˈseʃn]	21) смещение (рецессия)
22) to overcome	[ouvəˈkɒm]	22) преодолеть
23) to exhaust	[ɪgˈzɔst]	23) изнурять
24) deterioration	[dɪˈtɪəriəˈreɪʃn]	24) ухудшение
25) insertion	[ɪnˈsɜ:ʃn]	25) введение
26) intercostal	[,ɪntəˈkɒstəl]	26) межреберный

III. Read and translate

- 1) *sign*: an important sign; a bad sign; many signs; a good sign; to notice signs; not to see signs of stridor; signs of an illness;
- 2) *noise*: an inspiratory noise; respiratory noise; loud noise; to make much (little) noise; noisy;
- 3) *to differ (from)*: to differ from the previous signs; to differ from the origin; to differ from respiratory noise; different; difference;
- 4) *benign*: benign tumor; benign sign; benign feature;
- 5) *obscure*: obscure condition; obscure sign; obscure symptom; obscure picture;
- 6) *oedema*: angioneurotic oedema; large oedema; to reveal oedema; to see oedema; mucosal oedema;
- 7) *infancy*: in infancy; good infancy; bad infancy; problems of infancy; diseases of infancy; infant;
- 8) *due to*: due to mucosal oedema; due to illness; due to stridor; due to croup; due to wheeze; due to loud noise;
- 9) *to cry*: to cry badly; to cry little; Don't cry! Why are you crying? I can't help crying.
- 10) *severity*: severity of stridor; severity of the disease; severity of croup; severity of his condition; severe;
- 11) *increase (in)*: increase in heart rate; increase in pulse rate; increase in metabolic rate; to increase;
- 12) *recession*: intercostal recession ; What do you know about intercostal recession? What are the symptoms of intercostal recession?
- 13) *to overcome*: to overcome the upper airway obstruction; to overcome hardships; overcome difficulties;
- 14) *to exhaust*: to exhaust a lot; to be exhausted; the child is exhausted; exhaustion;
- 15) *deterioration*: signs of deterioration; to notice deterioration; to be afraid of deterioration; deterioration of the condition; to deteriorate;
- 16) *insertion*: insertion of a tube; insertion of the needle; insertion of the instrument; to insert;
- 17) *harsh*: harsh sound; harsh noise.

IV. Match the synonyms

- 1) sign a) to come from;
- 2) harsh b) to tire;
- 3) noise c) because of;
- 4) obstruction d) swelling;
- 5) infancy e) feature;
- 6) due to f) introduction;
- 7) insertion g) loud;
- 8) to exhaust h) illness;

- 9) disease i) childhood;
- 10) to originate (from) j) blocking;
- 11) oedema k) quietness.

V. Give the antonyms

- 1) benign a) expiration;
- 2) deterioration b) lower;
- 3) mild c) disease;
- 4) increased d) to block;
- 5) to exhaust e) malignant;
- 6) acute f) to relax;
- 7) upper g) improvement;
- 8) inspiration h) chronic;
- 9) to obstruct i) severe.

VI. Read and translate the text

VII. Give the medical term

- 1) inserting of a tube into the trachea;
- 2) how to breathe in order to overcome the upper way obstruction;
- 3) acute laryngo-tracheo-bronchitis;
- 4) harsh inspiratory noise occurring in upper airways obstruction;
- 5) soft respiratory noise on expiration in lower airways obstruction;
- 6) an allergic condition causing swelling of the face and larynx.

VIII. Answer the questions

1. What is acute?
2. What is stridor?
3. What noise is stridor?
4. What does it differ from?
5. What is wheeze?
6. Name the causes of stridor.
7. What is croup?
8. What is epiglottitis?
9. How is an allergic condition causing swelling of the face and larynx called?
10. What is croup caused by?
11. What is the age of children having croup?
12. What are the symptoms of croup?
13. What are the attacks of croup indicated by?
14. What is intercostal recession?
15. What is the treatment of croup in mild cases?
16. What is done in severe cases?

IX. Give equivalents to the words in bold type

1. Acute, in this can text, means of sudden beginning.
2. Stridor is one of the most important features of respiratory disease in children.
3. It is harsh sound caused by blocking at the level of the upper airway.
4. A wheeze is a softer sound occurring on breathing out, and resulting from obstruction of the bronchioles.
5. Causes range from not malignant to life threatening.
6. Croup is a caused by a viral infection, which leads to the narrowing of the airway because of mucosal oedema and secretions.
7. The attack is indicated by the gravity of the stridor, by a rise in heart rate and respiratory rate and by the degree of intercostal recession.
8. The parents should watch for signs of worsening.
9. One per sent of children need insertion of a tube into the trachea to stop it blocking.

X. Translate into English

1. Стридор — один из важных признаков дыхательной болезни у детей.
2. Жесткий звук вызывается обструкцией гортани и трахеи.
3. Инспираторный шум отличается от экспираторного.
4. Стерторозное дыхание является результатом обструкции бронхиол.
5. Причины стридора могут быть как нетяжелые, так и угрожающие жизни.
6. Причинами стридора являются круп, эпиглоттит, вдыхание инородного тела, ангионеврический отек и редко дифтерия.
7. Круп вызывается вирусной инфекцией, ведущей к сужению дыхательного пути из-за отека слизистой.
8. Кашель при крупе ухудшается ночью, и когда ребенок плачет.
9. Температура обычно невысокая.
10. При тяжелых приступах и изнурении ребенок должен госпитализироваться. Иногда ему делают интубацию.
11. При легких приступах за ребенком ухаживают дома. Родители должны следить за признаками ухудшения.

Part II

I. Pronounce the words

1) associated	[ə'souʃiətid]
2) drooling	[ˈdru:lɪn]
3) swallow	[ˈswɒləu]
4) extremely	[ɪksˈtri:mli]
5) mandatory	[ˈmændətəri]
6) pediatrician	[ˌpi:diəˈtriʃ(ə)n]

7) intubate	[ɪntjuˈbeɪt]
8) intravenous	[ɪntrəˈviːnəs]
9) curious	[ˈkjʊəriəs]
10) peanut	[ˈpiːnʌt]
11) culprit	[ˈkʌlprɪt]
12) radiolucent	[ˈreɪdɪvˈluːsnt]
13) proceed	[prəˈsiːd]
14) laryngoscopy	[ləˈrɪŋgəˈskəʊpi]
15) fibre-optic	[fəɪbəʊptɪk]
16) visualize	[ˈvɪzjuəlaɪz]

II. Memorize the words

1) pattern	[pætn]	1) картина (здесь)
2) to associate with	[əˈsəʊʃieɪt]	2) связывать с
3) to drool	[druːl]	3) стекать (о слюне)
4) to swallow	[ˈswɒləʊ]	4) глотать
5) extremely	[ɪksˈtriːmlɪ]	5) крайне
6) dangerous	[ˈdeɪndʒrəs]	6) опасный
7) to suspect	[səsˈpekt]	7) подозревать
8) mandatory	[ˈmændətəri]	8) обязательный
9) to intubate	[ɪntjuˈbeɪt]	9) интубировать
10) completely	[kəmˈpliːtli]	10) полностью
11) toddler	[ˈtɒdlə]	11) ребёнок, начинающий ходить
12) curious	[ˈkjʊəriəs]	12) любопытный
13) safety pin	[seɪftɪpɪn]	13) английская булавка
14) button	[ˈbʌtn]	14) пуговица
15) fit	[fɪt]	15) приступ
16) peanut	[ˈpiːnʌt]	16) арахис
17) culprit	[ˈkʌlprɪt]	17) обвиняемый, преступник
18) radiolucent	[ˈreɪdɪvˈluːsnt]	18) рентгенопрозрачный
19) to proceed	[prəˈsiːd]	19) продолжать
20) to visualize	[ˈvɪzjuəlaɪz]	20) визуализировать (показывать)

III. Read and translate

1) *to associate with*: to associate with “high t”; to associate with cough; to associate with bad headache; to associate with a sore throat; to associate with bad complications; to be associated with; in association with;

2) *to swallow*: to swallow a tablet; to swallow a button; to swallow safety pin; . to swallow some mixture; on swallowing; to feel pain on swallowing;

3) *extremely*: extremely dangerous; extremely high; extremely low; extremely curious; extremely surprising; extreme;

4) *dangerous*: dangerous to life; dangerous for me; a dangerous case; a dangerous mistake; a dangerous condition danger; to endanger;

5) *to suspect*: to suspect epiglottitis; to suspect stridor; to suspect croup; to suspect wheeze; to suspect benign tumor; suspicion; to be suspected;

6) *mandatory*: hospitalizing is mandatory; medical examination was mandatory; what is mandatory?

7) *to intubate*: to intubate the child; to intubate on suspicion of epiglottitis; to be intubated; intubation;

8) *completely*: completely ill; completely well; completely blocking the airway; completely done; complete;

9) *curious*: curious by nature; a curious case; a curious condition; a curious question; a curious cause; curiosity;

10) *fit*: a short fit; a long fit; a bad fit; some severe fits; a fit of coughing;

11) *to proceed*: to proceed to laryngoscopy; to proceed to X-ray examination;

12) *to visualize*: to visualize the object directly.

IV. Give synonyms

1) *fit* a) connected;

2) *to visualize* b) to find out;

3) *mandatory* c) straightly;

4) *associated* d) to go on;

5) *blocking* e) attack;

6) *careful* f) to like;

7) *condition* g) obligatory;

8) *to proceed* h) state;

9) *to reveal* i) to show;

10) *to enjoy* j) thorough;

11) *directly* k) obstruction.

V. Give antonyms

1) *dangerous* a) gradual;

2) *well-known* b) absence;

3) *acute* c) low;

4) *to proceed* d) backward;

5) *presence* e) careless;

6) *high* f) to stop;

7) *careful* g) safe;

8) *forward* h) unknown.

VI. Read and translate the text.

VII. Answer the questions

1. What is stridor associated with in severe cases?

2. Why is the child sitting forwards drooling?

3. What is acute epiglottitis caused by?

4. What is done if this condition is suspected?
5. Why do some paediatricians intubate all such children for 24 hours?
6. What is the cardinal rule in examining any child with stridor?
7. What is the treatment of acute epiglottitis?
8. Why do toddlers often swallow small objects?
9. What are the symptoms of inhalation of a foreign body?
10. How can the presence of a foreign body be revealed?
11. What is laryngoscopy?
12. How is a foreign body removed?

VIII. Complete the sentences

1. In the child between 3–5 years of age stridor is more ..., and it is ... with a high t°.
2. The child is sitting forwards ... because he cannot swallow.
3. Acute epiglottitis is caused by infection of the epiglottis with the
4. This is an ... dangerous condition, and, if it is suspected, admission to hospital is
5. Such children are ... for 24 hours, because there is a real danger of the swollen epiglottis ... blocking the airway.
6. Treatment of acute epiglottitis is with ... antibiotics.
7. Toddlers are ... by nature, and enjoy putting objects like ... and ... into their mouths.
8. Often there is a short ... of coughing in a child playing with small objects.
9. Peanuts are well-known
10. Some objects such as peanuts are
11. In ... a surgeon passes a small fibre-optic instrument into the airway to ... the object directly.

IX. Choose the word

1. In a small but important group of children, the pattern of stridor is difference/different.
2. It is associated/associating with high/highly t°.
3. The child is sitting forwards drooling/drooled.
4. The condition is called acute/acute epiglottitis.
5. It's an extreme/extremely dangerous condition.
6. Some paediatricians/pediatrics intubate such children for 24 hours.
7. There is a real/really danger of the swelling/swollen epiglottis.
8. Last but not least comes inhalation/exhalation of a foreign body.
9. Small children are curious/curiously by nature/origin.
10. Sometimes the presence/present of a foreign body can be revealed on X-ray.
11. A foreign body can be removed with a special/specially instrument.

X. Translate into English

1. У детей 3–7-летнего возраста картина стридора отличается.
2. Обычно ребенок чувствует себя очень плохо, у него высокая температура, и он сидит, наклонившись вперед, потому что не может глотать.
3. Острый эпиглоттит вызывается инфекцией надгортанника, бактерией *Haemophilus influenzae*.
4. Многие дети интубируются из-за опасности полного закрытия отеком надгортанником воздухоносного пути.
5. Лечение острого эпиглоттита — введение антибиотиков внутривенно.
6. Одна из частых причин стридора — вдыхание инородных тел.
7. Диагноз ставится после тщательного анамнеза.
8. Обычно у ребенка нет температуры, и чувствует он себя неплохо.
9. Наличие инородного тела диагностируется рентгенообследованием или ларингоскопией.
10. Ларингоскопия — это введение небольшого волоконно-оптического инструмента в воздухоносный путь, чтобы визуализировать предмет.
11. Этот предмет удаляется специальными инструментами.

XI. Fill in the Table

	Croup	Acute epiglottitis	Inhalation of a foreign body
1. Age			
2. Symptoms			
3. Temperature			
4. Causative Agent			
5. Affected part of the Respiratory tract			
6. Treatment			

HEART FAILURE

Part 1

Pre-listening

I. Memorize the vocabulary of the lecture

- 1) *heart failure* — сердечная недостаточность, паралич сердца
- 2) *to fail* — 1) не удаваться, провалиться; 2) сдавать (о здоровье, зрении);
- 3) *failure* — 1) неудача, провал; 2) нехватка, недостаток; 3) неудачник;
- 4) *heart failure* — паралич сердца
- 4) *efficient* — 1) действенный, эффективный, продуктивный; 2) квалифицированный, умелый;
- 5) *efficiency* — 1) действенность, эффективность; 2) производительность; 3) зд. способность;

- 6) *to increase* — 1) увеличивать; 2) увеличиваться, возрастать;
 7) *to decrease* — 1) уменьшать; 2) уменьшаться, убывать;
 8) *congestion* — застой;
 9) *to release* — 1) освобождать; 2) выпускать;
 10) *sign* — 1) признак; 2) знак; 3) делать знак;
 11) *loss* — потеря, убыток;
 12) *to distend* — расширяться, надуваться, вздуться;
 13) *output* — продукция, выпуск;
 14) *to prop up* — подпирать, поддерживать, подкладывать;
 15) *to occur* — случаться, происходить, иметь место (при причинно обусловленных событиях);
 16) *to swell* — 1) надуваться, раздуться; 2) увеличиваться, расширяться;
 17) *tender* — 1) нежный, мягкий; 2) чувствительный;
 18) *to drop* — падать, снижаться

II. Practise the pronunciation

through	[θru:]
although	[ˈɔlðəu]
jugular vein	[ˈdʒʌgjulə]
an angle of 30°	[æŋgl]
oedema	[əuˈdi:mə]
appetite	[ˈæpitait]

III. Place the following words in three groups: nouns, verbs, adjectives

Efficient, efficiency; absorption, absorb; strong, strength; press, pressure; swell, swelling; large, enlarge, enlargement; listen, listener; breath, breathe, breathless, breathlessness; suffer, sufferer; character, characterize, characteristic, characteristics; congestion, congestive; class, classify, classification; occur, occurring.

IV. Work in pairs. Check up your neighbour's knowledge of the words

происходить, случаться Коклюш в большинстве случаев у маленьких детей.	to occur Whooping cough occurs mainly in young children.
неудача, провал, выход из строя Он умер от почечной недостаточности. Планы Гарри закончились провалом.	failure He died of kidney failure. Harry's plans ended in failure.
дальний, далекий, сдержанный После ссоры она была холодна и сдержанна. Этот случай был в далеком прошлом.	distant After the argument she remained cold and distant. That case was in the distant past.

<p>причина, повод; вызывать, причинять Рак груди — одна из главных причин смерти у женщин. Извините, я не хотел причинять неудобства.</p>	<p>a cause, to cause Breast cancer is one of the leading causes of women's death. Sorry, I didn't mean to cause any troubles.</p>
<p>отсутствие, неимение Ее работа предусматривает ее отсутствие из дома и семьи. Что-то случилось с вами в мое отсутствие?</p>	<p>absence Her work involves absences from home and family. Did anything happen to you in my absence?</p>
<p>условие, состояние, обстановка Его сестра в интересном положении. (о беременности) На какие условия вы согласились?</p>	<p>condition His sister is in a delicate condition. What conditions have you agreed on?</p>
<p>затор, скопление, застой Пробка на дороге — это головная боль для всех водителей. На автотрассе был дорожный знак “Затор на дороге”.</p>	<p>congestion Road congestion is a headache for all the drivers. There was a sign of road congestion on the motorway.</p>
<p>эффективный, квалифицированный; результативность, действенность Квалифицированного секретаря — нелегко найти. Чтобы улучшить уровень чтения по-английски надо читать вслух.</p>	<p>efficient / efficiency An efficient secretary is not easy to find. To improve the efficiency of reading in English you have to read aloud.</p>
<p>падать, опускаться Цены упали в этом году. Я опустил монету в автомат. Его голос перешел в шепот.</p>	<p>to drop The prices have dropped this year. I dropped a coin into the slot. His voice dropped to a whisper.</p>
<p>продукция, выпуск изделий Завод удвоил выпуск своей продукции.</p>	<p>output The factory has doubled its output.</p>

IV. Read and translate the following words and word word combinations

1) *to fail*: to fail an attempt; to fail a plan; to fail in an examination; he failed in Anatomy; to fail a student on an examination; he failed to comprehend the seriousness of the problem; he tried to learn to sing but failed; I wanted to finish the work by Wednesday, but I failed; he was sure he would not fail this time.

2) *failure*: to be a failure; he was a failure as an actor; to end in failure; to experience failure; a complete failure; a hopeless failure; the patient's failure to

respond to treatment was discouraging; heart failure; the right heart failure, the left heart failure.

3) efficiency (n.): to impair efficiency; fighting efficiency; maximum efficiency; peak efficiency; efficiency in combating absenteeism; at a certain efficiency; at peak efficiency.

4) efficient (adj.): she was very efficient in reducing waste; it is not efficient to hire poorly trained workers; the efficiency of the heart as a pump.

5) to increase: everything is being done to increase output, the number of foreign students has increased; an increased blood pressure.

6) decrease: a gradual decrease; a sharp decrease; a decrease in the pumping action of the heart; crime is on the decrease.

7) tender: tender skin, a tender spot, to be tender; to be tender to something cold and hot; the liver or the stomach are sometimes tender on palpation.

8) congestion: active congestion, functional congestion, passive congestion, congestive; traffic congestion; nasal congestion; lung congestion; pulmonary congestion; congestion in the veins of the intestine (gut).

9) to release: he has been released from prison; to release oxygen; to release carbon dioxide; carbon dioxide is released; release me, darling, let me go (from a song).

10) sign: to show signs of love; to show signs of hate; to be a sign of improvement; to be a sign of increase; to classify on the basis of some signs; he showed signs of advanced emphysema; they showed no signs of life; an encouraging sign; an unmistakable sign; traffic signs; symptoms and signs of a disease.

11) to distend: distended, distending; distention; blood distended the vein; the vein is distended with blood

12) loss: to lose (lost, lost); our forces inflicted heavy losses on the enemy, an irreparable loss; losses in dead and wounded; an irreplaceable loss to our nation; loss of appetite; weight loss occurs; a hearing loss; memory loss

13) output: to increase output, to reduce output, annual output, daily output, monthly output, the factory has doubled its output.

14) to prop: props, propped, propped, propping; use these heavy books to prop the door open; propping myself up on my elbow, I could talk more easily to my visitors; he propped himself against the door; to prop a patient

15) to occur: occurs, occurred, occurring; storms often occur in this part of the ocean in winter; a number of serious crimes occurred in the city during the week-end; this particular conversation was reported to have occurred yesterday at 5 p.m.; to occur again.

16) to swell: swelled, swollen, swelling; to swell with blood; to swell with pride; the swelling goes down; the swelling went down; the swelling subsided; the liver becomes swollen with blood..

17) to drop: dropped, dropping; prices have dropped to the lowest point in a year; the temperature has dropped; the book dropped from her hand; she dropped a book on the floor; I dropped a coin into the slot; to drop out of sight; his voice dropped to a whisper; urine output drops.

V. Answer the questions and translate into English (you may do it in writing)

distant

1. When do you feel distant?
2. Необходимо ли общаться с дальними родственниками?
3. Его речь была короткой и сдержанной.

failure / to fail

1. Have you ever failed anything?
2. Он провалил вступительные экзамены в прошлом году.
3. Врач поставил диагноз сердечной недостаточности.

cause / to cause

1. What might cause you to change your mind?
2. How do you behave if you have caused some troubles?
3. Какая причина вашего опоздания?
4. Что вызвало приступ одышки?

condition

1. What is the best living conditions for you when you travel?
2. Какие условия для поступления в университет?
3. Она была в интересном положении и не могла вести активный образ жизни.

efficiency / efficient

1. What are the top secrets of your work efficiency?
2. Эффективность труда повышается с каждым годом.
3. Наш новый кондиционер работает гораздо эффективнее прежнего.

VI. Translate (do it in writing)

1. Назовите различные симптомы сердечной недостаточности.
2. Кровяное давление повышается в венах, возвращая кровь к сердцу.
3. При каких условиях печень увеличивается в размерах?
4. Что происходит при повышенном давлении?
5. Пневмония может случиться как осложнение после простуды.
6. Его планы закончились неудачей.
7. Температура упала до нормальной.
8. Мне и в голову не пришло извиниться.
9. Что вызвало потерю аппетита?
10. Как уменьшить отек? (опухоль)
11. Он не жаловался на болезненность при физической нагрузке.
12. Его новый диск будет выпущен в следующем году.
13. Причины несчастного случая — неизвестны.

Listening

Section I

Complete the sentences:

1. Heart failure is the condition ...
2. The right heart receives ...
3. The left heart receives ...

Section II

Answer the questions:

1. What are the symptoms in heart failure caused by?
2. What happens to the veins, the tissues of the legs, the liver, the gut and the kidneys?

Post-listening

I. Give English equivalents

Сердечная недостаточность, способность, насос, признак, обратное давление, под углом 30 градусов, отсутствие, ткань, жидкость, набухание, отек, увеличение, размер, застой, потеря веса, продукция мочи, являться результатом, увеличиваться, уменьшаться, высвободить, происходить, вызывать, освободиться от крови, раздуваться от крови, выдавливать, падать, сильный, сильнее, быть удаленным от, хотя.

II. Match the synonyms

to be unable to do smth.	to decrease
ability to do smth.	occur
capable of smth.	prop up
to enlarge, extend	congestion
to reduce, lessen	to fail
stagnation	efficiency
intestine	squeeze
stretch apart	output
to free	tender
indication	to increase
to enlarge	sign
delicate, sensitive	gut
production	release
underlay, support	efficient
happen	drop
fall	distend

III. Match the antonyms

to be a success	congestion
to capture	increase

reduce
passing

release
to fail

IV. Answer the questions

1. What is the function of the right heart?
2. What is back pressure in the right heart failure?
3. Why is the jugular vein distended with blood in right heart failure?
4. Why is fluid squeezed into the tissues of the legs and into the abdomen?
5. Why does the liver become swollen with blood, enlarged and tender?
6. Why does weight loss often occur? 7. Why does urine output drop?

V. Agree or disagree with the statements

1. The right heart receives blood from the lungs and pumps it round the body.
2. The left part of the heart is stronger than the right.
3. The right and left heart failure occur together.
4. The symptoms in heart failure are caused by high blood pressure.
5. In right heart failure there is high blood pressure in the veins returning blood to the heart.
6. Normally, the jugular vein is not distended with blood.
7. The tissues swell because people take a lot of fluid.
8. The liver becomes swollen with fluid.
9. The patients often lose weight because the liver doesn't work properly.

VI. Complete the sentences

1. Heart failure is the condition
2. There are ... sorts of heart failure ... , because
3. The symptoms produces different symptoms to ... , though the two may occur together.
4. The symptoms in heart failure are caused when
5. In right heart failure there is increased ... in
6. Back pressure from the right heart has into the tissues of the legs and The liver may have little appetite because of ... , and weight loss
7. The kidneys ... as a result of

VII. Translate into English

1. Сердечная недостаточность возникает, когда насосная деятельность сердца снижается.
2. Левая часть сердца сильнее, чем правая.
3. Симптомы и признаки сердечной недостаточности удалены от самого сердца.
4. Правая и левая сердечная недостаточность могут возникать вместе.

5. При правожелудочковой сердечной недостаточности вены раздуваются от крови.
6. Жидкость нагнетается в тканях ног и живота.
7. Печень раздувается от крови и увеличивается в размере.
8. У пациента снижен аппетит из-за застоя в венах кишечника.
9. Продукция мочи падает.

VIII. Read a short text on heart failure and find some new information in it

Heart failure is a condition in which the pumping action of the ventricle of the heart is inadequate. This results in back pressure of blood, with congestion of the lungs and liver. The veins in the neck become engorged* and fluid accumulates in the tissues (oedema). There is a reduced flow of arterial blood from the heart, which in extreme cases results in peripheral circulatory failure (cardiogenic shock). Heart failure may result from any condition that overloads, damages, or reduces the efficiency of the heart muscle.

Common causes are coronary thrombosis, hypertension, chronic disease of the valves, and arrhythmias. The patient experiences breathlessness, even when lying flat, and oedema of the legs.

Treatment consists of rest, a low salt diet, diuretic drugs (e. g. frusemide), and digitalis derivatives (e. g. digoxin).

Structural abnormalities, such as defective valves, may be corrected surgically.

* Engorged — наполненный, застойный, растянутый жидкостью

IX. Read a short text on oedema and answer the questions

Oedema is an excessive accumulation of fluid in the body tissues: popularly known as *dropsy*. The resultant swelling may be local, as with an injury or inflammation, or more general, as in heart or kidney failure. In generalized oedema there may be collection of fluid within the chest cavity (*pleural effusions**), abdomen (*ascites**), or within the air spaces of the lung (*pulmonary oedema*). It may result from heart or kidney failure, cirrhosis of the liver, acute nephritis, the nephritic syndrome, starvation, allergy, or drugs (e. g. phenylbutazone or cortisone derivatives). In such cases the kidneys can usually be stimulated to get rid of the excess fluid by the administration of diuretic drugs. *Subcutaneous oedema* commonly occurs in the legs and ankles due to the influence of gravity and (in women) before menstruation; the swelling subsides with rest and elevation of the legs.

**effusion* — fluid that escaped into a body cavity (выпот)

**ascites* — the accumulation of fluid in the peritoneal cavity, causing abdominal swelling (асцит)

1. What is oedema?
2. What is local and generalized oedema?
3. Where may fluid collect in oedema?
4. What may cause it?
5. What oedema often occurs? How is it treated?

Part II

Pre-listening

I. Memorize the vocabulary of the lecture

- 1) *to frighten* — (ис-)пугать;
- 2) *flat* — плоский, ровный; плоско, ровно;
- 3) *amount (n.)* — количество, общий итог; (v.) составлять, быть равным;
- 4) *to eject* — извергать, выбрасывать, выталкивать;
- 5) *exit* — выход;
- 6) *narrow* — узкий;
- 7) *to supply* — снабжать, поставлять, доставлять;
- 8) *excess* — избыток, излишек;
- 9) *excessive* — непомерный, чрезмерный;
- 10) *to leak* — пропускать (воду), давать течь, подтекать, протекать.

II. Practise the pronunciation

1) audible	[ˈɔːdɪbl]
2) phenomenon	[fəˈnɪmɪnən]
3) orthopnoea	[ɔːˈθɒpnə]
4) mechanism	[ˈmekənɪzəm]
5) strength	[streŋθ]
6) ischaemic	[ɪsˈkiːmɪk]
7) coronary arteries	[ˈkɒrənəri ˈɑːtəriːz]
8) chronic anaemia	[ˈkrɒnɪk əˈniːmiə]
9) thyrotoxicosis	[ˌθaɪrətɒksɪˈkəʊsɪs]
10) exit	[ˈegzɪt]
11) excess	[ɪkˈses]
12) excess	[ˈeksəs]

III. Work in pairs. Check up your neighbour's knowledge of the words

испугать, пугать Сиди тихо, а то спугнешь кролика. Цены в магазине испугали покупателей.	to frighten Keep still or you'll frighten the rabbit. The prices in this shop frightened the customers.
ровный, плоский; ровно Он лежал ровно на полу без подушки. Крыша дома была абсолютно плоской. Это был совершенно равнинный песочный пляж.	flat He was lying flat without a pillow on the floor. The roof of the house was absolutely flat. It was a perfectly flat sandy beach.

<p>количество, общий итог; составлять, быть равным Счет составляет 40 долларов. Пожалуйста, заплати всю сумму (о деньгах) к концу месяца. Они провели одинаковое количество времени как в НьюЙорке, так и в Токио.</p>	<p>amount / to amount The bill amounts to 40\$. Please pay the full amount by the end of this month. They spent equal amounts of time in New York and Tokyo.</p>
<p>извергать, выбрасывать, выталкивать Пьяного мужчину выставили из бара. Магнитофон выбрасывает кассету автоматически.</p>	<p>to eject The drunken man was ejected from the bar. The tape-recorder ejects the tape automatically.</p>
<p>выход Это аварийный выход. Из этого здания не было запасного выхода.</p>	<p>exit This is an emergency exit. There was no spare exit from that building.</p>
<p>узкий Длинная узкая дорога ведёт в деревню. Лестница была слишком узкой.</p>	<p>narrow A long narrow road leads to a village. The stairs were far too narrow.</p>
<p>снабжать, поставлять, доставлять У меня (есть) только недельный запас таблеток. Мужчина снабдил полицию нужной информацией.</p>	<p>supply / to supply I've only got a week's supply of tablets. The man supplied the police with the necessary information.</p>
<p>избыток, излишек; чрезмерный Любая чрезмерность – порочна. Плата за лишний вес багажа была слишком высокой. Его чрезмерная выпивка убила его.</p>	<p>excess / excessive All excess is vicious. The charge for the excess baggage was too high. His excessive drinking killed him.</p>
<p>течь, протечка; пропускать воду, давать течь, подтекать Утечка газа вызвала взрыв. Новости просочились в прессу.</p>	<p>leak / to leak A gas leak caused the explosion. The news has leaked to the press.</p>

IV. Read and translate

1) *to frighten*: frightened, frightening, to frighten a child, to frighten a bird; you frightened me to death; how you frightened me!; he frightened me into signing the document; to be frightened about (at, of) smth.;

- 2) *flat*: to lie flat without a pillow; the earthquake laid the city flat;
- 3) *amount*: in small /large amounts; the full amount; what is the amount of the students studying at our University? The bill amounts to 100 dollars;
- 4) *to eject*: ejected, ejecting, to eject steam, to eject smoke, to eject flame; to eject from a disabled plane; they were ejected from the room for disorderly conduct;
- 5) *exit*: emergency exit; to exit to the system on a computer; the valves at the exit of the heart; a wide exit; a narrow exit;
- 6) *to supply*: supplied, supplying; to supply with; to supply from; we can supply goods from our main store; the construction must be supplied with water; the secretary will supply you with all the information you need;
- 7) *excess*: we have bread in excess of our needs; this year we have an excess of apples; excess weight excess luggage;
- 8) *to leak*: leaked, leaking; the boat leaked; the roof leaked; gas is leaking in the kitchen; water was leaking from the pump; water leaked into the basement; to leak away; to leak out; to leak to; the news has leaked to the press.

V. Answer the questions and translate into English (you may do it in writing)

to frighten

1. What frightens you in your life?
2. What frightens you mostly in learning English?
3. Темнота испугала ребенка.
4. Что тебя так напугало?

to supply

1. Is it necessary to supply your parents with money?
2. Рынок снабжает нас хорошей продукцией, не так ли?
3. Интернет снабжает нас нужней информацией?

excess / excessive

1. What is not excessive in one's life?
2. Чрезмерное питье может привести к отеку.
3. Излишек денег привёл к неудачам в жизни.

to increase / to decrease

1. How can we increase the standard of our living?
2. How can we decrease the crime rate in our country?
3. Расход топлива уменьшился.
4. Температура поднимается. Вызывайте врача!

strength

1. How do you find strength to beat your laziness?
2. Сколько у Вас сил и мужества! Вы никогда не сдаётесь!
3. У меня нет сил закончить это.

VI. Translate (do it in writing)

1. Деньги для проекта доставлялись местным правительством.
2. Поверхность стола — плоская.
3. Лежите ровно! Не шевелитесь!
4. Выход находится справа.
5. Большое количество дыма было выброшено вулканом.
6. Что пугает пожилых людей?
7. Выход был очень узким, что вызвало затор на дороге.
8. Кто снабжает нашу страну топливом?
9. Тренировка английской грамматики не может быть излишней.
10. Течет труба! Вызовите специалиста!
11. Запасы топлива не будут длиться вечно.

Listening

Section III.

Answer the questions:

1. What are the symptoms of left heart failure?
2. What is orthopnoea?

Section IV.

Complete the sentences:

1. An increase in after-load means ... it occurs
2. Secondly, there is ... it occurs
3. Excessive pre-load means ... it occurs

Post-listening

I. Give English equivalents

Снабжать, пугать, пугающий, выталкивать, подтекать, вызывать, сила, количество, избыток, отек, клапаны, выход, явление, механизм, причина, тиреотоксикоз, ишемия, обратное давление, грудная клетка, одышка, много подушек, дозагрузка, послезагрузка, плоский, узкий, чрезмерный, слышимые звуки, хронический.

II. Match the synonyms

be out	eject
provide	supply
go out	leak
surplus	excess
scare	frighten
total quantity	amount
way out	exit

III. Match the antonyms

wide	excess
pull in	narrow
carry out	leak
shortage of	eject
be glad about	supply
flow	frighten
entrance	hypertension
hypotension	exit

IV. Answer the questions

1. What is the function of the left heart?
2. What is back pressure in the left heart failure caused by?
3. Where does oedema result in left heart failure?
4. What are its symptoms?
5. What can be found with a stethoscope while examining a patient?
6. What kind of breathlessness comes on left heart failure?
7. What effect does left heart failure produce on right heart failure?
8. What is an increase in after-load?
9. What conditions cause it?
10. What else decreases strength and efficiency of the heart? What happens when the heart muscle is diseased?
11. What is excessive pre-load? What does it cause?
12. In what diseases must blood be pumped faster? Why?

V. Complete the sentences

1. In left heart failure back pressure results in
2. Oedema results
3. Fluid in the lungs
4. Oedema causes
5. Orthopnea is a phenomenon
6. The back pressure from the failing left heart increases ... to pump
7. In this way ... may result in
8. An increase in after-load is an increase in
9. An increase in after-load occurs in
10. The disease of the heart muscle itself
11. An excessive pre-load means
12. If the heart valves become incompetent
13. In such diseases as beri-beri, chronic anaemia and thyrotoxicosis

VI. Agree or disagree

1. The same oedema results in the left and right heart failure.
2. Breathlessness is worse when lying propped up in bed at an angle of 30 degrees.

3. An increase in after-load occurs only in hypertension.
4. In ischaemic heart disease there is increased pressure in the veins returning blood to the heart.
5. When coronary arteries become narrowed, the strength and efficiency of the heart decreases.
6. An excessive pre-load is caused by back pressure from the heart which is not clearing blood quickly enough.
7. This can occur when the heart valves become incompetent and blood which has already been pumped leaks back into the heart.
8. An excessive pre-load occurs in beri-beri, chronic anaemia and thyrotoxicosis.

VII. Translate into English

1. При левой желудочковой сердечной недостаточности обратное давление приводит к застою в легких.
2. Отек вызывает одышку.
3. Одышка возникает внезапно и чрезвычайно пугает пациентов.
4. Одышка ухудшается в положении лежа. Пациентам необходимо спать, подперевшись подушками.
5. Причины сердечной недостаточности делятся на три группы.
6. Когда возникает ишемическая болезнь сердца?
7. Почему сужаются коронарные артерии?
8. Кровь, которая была уже вытолкнута, попадает обратно в сердце.
9. Это возникает при сужении клапанов на выходе из сердца.

VIII. Speak on the topics

1. Left heart failure.
2. The mechanisms, producing heart failure.

THE TREATMENT OF CANCER

Pre-listening

I. Memorize the vocabulary of the lecture.

1) cancer	[ˈkænsə]	1) рак
2) heading	[ˈhedɪŋ]	2) направление, название
3) site	[saɪt]	3) участок
4) tumour	[ˈtʃʊmə]	4) опухоль
5) shed	[ʃed]	5) выбрасывать, избавиться
6) to resect	[riˈsekt]	6) производить резекцию
7) beam	[bi:m]	7) луч, пучок лучей

8) expansion	[iks`pænfɪn]	8) распространение
9) resistance	[rizistəns]	9) сопротивление
10) postpone	[pəʊst`pəʊn]	10) откладывать
11) defence	[di`fens]	11) защита
12) divide	[di`vaɪd]	12) делить
13) misery	[`mɪzəri]	13) страдания, невзгоды
14) nausea	[`nɔ:sjə]	14) тошнота

II. Practise the pronunciation

cancer	[`kænsə]
cancerous	[`kænsərəs]
tumour	[`tju:mə]
laser	[`leɪzə]
genetic	[dʒə`netɪk]
engineering	[endʒɪ`niəriŋ]
biological	[baɪə`lɒdʒɪkl]
nausea	[`nɔ:siə]

III. Read and translate the following words and word combinations

- 1) *cancer*: cancerous cells, cancer therapy;
- 2) *local*: local treatment, location, local form of treatment, localized tumour;
- 3) *special*: specialized surgical techniques;
- 4) *radiation*: radiotherapy, lower-dose beams of radiation, the effects of radiation;
- 5) *gene*: genetic engineering; genetic information, abnormal gene;
- 6) *to divide*: tumour cells are dividing, division;
- 7) *resect*: resection, the tumour has been resected.

IV. Work in pairs. Check up your neighbour's knowledge of the words

направление, заголовок, название Названия глав были написаны заглавными буквами. Куда направляется автобус?	heading / to head The headings of the chapters were written in capital letters. Where is the bus heading to?
место, участок Операция проводилась на месте повреждения.	site The surgery was held at the site of injury.
опухоль К несчастью, у него была неоперабельная опухоль. Хирург удалил злокачественную опухоль.	tumour Unfortunately he had an inoperable tumour. The surgeon removed a malignant tumour.

<p>избавиться, выбрасывать, вы- талкивать Деревья сбрасывают листья осенью. Животные сбрасывают зимний мех. Психотерапия помогла ему частич- но избавиться от его страхов.</p>	<p>to shed Trees shed their leaves in autumn. Animals shed their winter coats. Psychotherapy helped him shed some of his fears.</p>
<p>луч, пучок лучей Только этот доктор способен опе- рировать лазерным лучом (устрой- ством).</p>	<p>beam Only this doctor is able to operate with a laser beam (device).</p>
<p>распространение, увеличение в объ- еме Распространение страхования здо- ровья – очень популярно сегодня. Надеемся, этот год принесет новый период экономического роста.</p>	<p>expansion Expansion of health insurance is very popular today. Hopefully this year will bring a new period of economic expansion.</p>
<p>преимущество Западные страны имеют огромное преимущество в технологиях. У нее было огромное преимущество над всеми.</p>	<p>advantage Western countries have a huge ad- vantage in technologies. She had a big advantage over the oth- ers.</p>
<p>правильность, точность Очень сложно достигнуть точности в диагностике этого заболевания.</p>	<p>accuracy It is very hard to achieve diagnostic accuracy in this disease.</p>
<p>достигать, достижение Вы должны работать усердно, что- бы достигнуть этих целей. Это было его самое главное дости- жение в этой сфере.</p>	<p>to achieve / achievement You must work hard to achieve these goals. It was his major achievement in this field.</p>
<p>направлять, направление, прямой У него был прямой рейс до НьюЙорка. Доктор направил пациента пройти курс лечения.</p>	<p>to direct / direction / direct He has a direct flight to New York. The doctor directed the patient to un- dergo a course of treatment.</p>
<p>защищать, защита Лучшая защита – это нападение. Его защита была слабая и он проиг- рал дело в суде.</p>	<p>to defend / defence Best defence is offence. His defence was weak and he lost the case in the court.</p>
<p>страдания, невзгоды С меня хватит твоего плохого настроения! Слава принесла ему ничего кроме несчастий.</p>	<p>misery I've had enough of your misery! Fame brought her nothing but misery.</p>

тошнота Чувство тошноты внезапно овладело ей.	nausea A feeling of nausea suddenly came over her.
подавлять, подавить Он подавил свои истинные чувства к ней.	to suppress He suppressed his real feelings towards her.

V. Answer the questions and translate into English (you may do it in writing)

advantage / disadvantage

1. What are the advantages of learning English abroad?
2. What are the disadvantages of being a doctor?
3. Какие недостатки в системе образования в нашей стране?
4. Здесь нет преимуществ, только одни недостатки.

damage

1. What can cause serious damage to people's life?
2. При аварии машина получила серьезные повреждения.
3. Что вредит здоровью?

to achieve / achievement

1. What are the achievements in your life?
2. Have you achieved anything in your career?
3. Какие достижения кафедры в этом году?

to direct / direction

1. What do you do to direct your children in their lives?
2. Спросите у него, и он направит вас.
3. У вас прямой рейс до Москвы?

to suppress

1. How do you suppress your negative emotions and feelings?
2. Он смог подавить в себе чувство голода.
3. Он не смог сдержать свой смех.

VI. Translate (do it in writing)

1. Он почувствовал тошноту и головокружение.
2. Результаты исследований, возможно, прольют свет на эту проблему.
3. Компания провалила план дальнейшего расширения.
4. Сильно ли была повреждена ваша машина?
5. Вы достигните своих целей, если постараетесь.
6. Перестань курить! Ты повредишь свое здоровье.

7. Какое заглавие вашей книги?
8. Вы доверяете точности этих цифр?
9. Врач направил пациента в палату интенсивной терапии, не так ли?
10. Эта диета поможет сбросить тебе несколько килограммов.
11. Опухоль была резецирована опытным хирургом.
12. Очень трудно подавить чувство тревоги.
13. Это лекарство подавляет развитие злокачественных клеток.

Listening

Section I

Answer the questions:

1. What are the two headings in cancer treatment?
2. How does the cancer begin and grow?

Section II

Answer the questions:

1. In what way are the operations performed?
2. What device can help to get rid of cancer cells?

Section III

Answer the questions:

1. What specialized surgical techniques are used in cancer treatment?
2. What is the second form of cancer treatment?
3. What are the peculiarities of this treatment? Why are radiotherapy and surgery used together?

Section IV

Complete the sentences:

1. Chemotherapy means
2. Complications of chemotherapy are

Section V

Complete the sentences:

1. Biological therapy means
2. The so called monoclonal antibodies can be injected

Post-listening

I. Give English equivalents

Принципы лечения, лечение рака, два направления, раковые клетки, возможность лечения, раковая опухоль, опухоль может быть полностью удалена, определенный участок, страдания пациента, лазерная хирургия, лазеры имеют преимущество, радиотерапия, чувствительный к воздей-

ствию радиации, волосы выпадают, иммунная система, генная инженерия, защита организма, надежда на будущее.

II. Find in the text the sentences with

- A. Passive Voice.
- B. Modal Verbs.

III. Answer the questions

1. Why isn't local treatment for cancer sufficient?
2. Why may it not be possible to resect a tumour in its entirety?
3. What are the advantages of laser surgery?
4. How can high doses of radiation be delivered to a tumour without destroying normal tissues?
5. How do cytotoxic drugs work?
6. What are some of their side-effects?
7. Why is treatment with one drug not usually enough?
8. Why would the use of drugs attached to monoclonal antibodies be preferable to ordinary chemotherapy?

IV. Fill in the blanks with prepositions where it is necessary

1. All sorts of treatment are necessary ... most cases.
2. Cells travel ... other locations ... the body and begin to grow there.
3. The surgeon operates ... the patient and tries to cut ... the tumour.
4. In laser surgery the tissue is literally burnt
5. Beams of high voltage radiation are directed ... the area of the tumour.
6. It is important to kill the cancerous cells ... damaging the normal healthy tissues ... the body.
7. Not all tumours are sensitive ... the effects of radiation.
8. The last twenty years have seen a great expansion ... cancer chemotherapy, which means treatment ... drugs.

V. Complete the sentences

1. Systemic treatment of cancer means
2. The tumour sheds cells into
3. The main local form of treatment is
4. Lasers have the advantage of
5. Radiotherapy and surgery are used together in the treatment of
6. The last twenty years have seen a great expansion in cancer chemotherapy, which means....
7. The most exciting developments in cancer therapy have to do with

VI. Draw up a small table of the methods of treating cancer

If you were suffering from a cancer for which treatment is largely ineffective, would you wish to undergo every form of treatment available, however unpleasant? Or would you choose to let nature take its course? Explain your reasons.

VII. Translate into English

1. Мы рассмотрим два направления лечения от рака.
2. Рак начинается и растет в одном определенном месте.
3. Опухоль выбрасывает клетки в кровяное русло и лимфатическую систему.
4. Пока все канцерогенные клетки не уничтожены, не будет никакой возможности исцеления.
5. Хирург должен оперировать пациента и иссекать злокачественные клетки как можно точнее.
6. Какие преимущества и недостатки использования лазерных лучей?
7. Низкая доза радиации лишь частично позволяет достичь сохранения здоровых тканей.
8. Последние 20 лет явились огромным ростом в онкохимии терапии.
9. Это токсичные препараты подавляют работу костного мозга.
10. Пациент чувствует себя чрезвычайно плохо из-за тошноты, рвоты и диареи.
11. При наименее благоприятных случаях комбинируют радиотерапию и хирургическое вмешательство.
12. В конце концов врач может отложить лечение так называемыми моноклонными антителами.

VIII. Speak on the topic

The problem of the treatment of cancer.

LANGUAGE OF SURGERY

Part I

Pre-listening

Before listening to the lecture do some training to prevent difficulties in understanding.

I. Practise the pronunciation

- | | |
|-------------|-------------|
| 1) diagram | [ˈdaɪəgræm] |
| 2) vertical | [ˈvɜ:tɪkl] |
| 3) central | [ˈsentrəl] |

4) lateral	[ˈlætərəl]
5) umbilical	[ˌʌmbɪˈlaɪəkl]
6) epigastrium	[əpɪˈgæstriəm]
7) suprapubic	[ˌsjuːprəˈpjuːbɪk]
8) cholecystitis	[kəˈlɪsɪsˈtaɪtɪs]
9) area	[ˈeəriə]
10) quadrant	[ˈkwɔːdrənt]
11) iliac fossa	[ˈɪliək ˈfɒsə]

II. Memorize the vocabulary of the lecture

1) common	[ˈkɒmən]	1) обычный, общеизвестный
2) to represent	[reprɪˈzent]	2) представлять, изображать
3) similar	[ˈsɪmɪlə]	3) похожий, сходный
4) contents	[ˈkɒntents]	4) содержание, содержимое
5) border	[ˈbɔːdə]	5) край, предельная линия на поверхности
6) margin	[ˈmɑːdʒɪn]	6) край, полоса, граница
7) edge	[ˈɛdʒ]	7) край, конечная линия, максимально удалённая от центра
8) inguinal	[ˈɪŋɡwɪnəl]	8) паховый
9) bottom	[ˈbɒtəm]	9) днище, подножие, внизу
10) above	[əˈbʌv]	10) наверху, выше, над
11) below	[biˈləʊ]	11) ниже, под
12) between	[biˈtwiːn]	12) между

III. Place the following words in the groups: verbs, nouns, adjectives, adverbs

describe, descriptive, description descriptively; represent, representative, representatively; similar, similarly; divide, division; end, ending; horizon, horizontal.

IV. Work in pairs. Check up your neighbour's knowledge of the words.

ниже (под) Температура была ниже нуля.	below The temperature was below zero.
граница Можете показать границу между этими двумя странами?	border Can you show me the border between these two countries?
дно (низ), подножие, нижний Что лежит на нижней полке?	bottom What is there on the bottom shelf?
обычный, общий Почему вы не знаете эти общеизвестные факты?	common Why don't you know these common facts?
содержимое, содержание Вы знаете содержание этой книги?	contents Do you know the contents of this book?

край Посмотри на край монитора ноутбука.	edge Look at the edge of the laptop monitor.
представлять Кто представляет ваш кружок на конференции?	to represent Who represents your circle at the conference?
похожий, подобный Они вполне похожи.	similar They are quite similar.

V. Answer the questions and translate into English (you may do it in writing)

contents

1. Do you like reading a book if you know its contents?
2. Каково содержимое брюшной полости?
3. В этой коробке было много интересного содержимого.

common

1. Do you always behave according to common sense?
2. У нас нет ничего общего.
3. В этом нет никакого здравого смысла.

represent

1. Have you ever represented your group at any conferences?
2. Они представляют две различные группы людей.
3. Эта фотография отражает мое детство.

edge

1. Have you ever been on the edge of a nervous breakdown?
2. Будь осторожен! Край этого ножа очень острый.
3. Мы были на грани чего-то нового и необычного.

similar

1. Are you similar to your parents in anything?
2. Вы должны делать аналогичные упражнения каждое утро.
3. Я надеюсь ничего подобного не произойдет в будущем.

VI. Translate (do it in writing)

1. Дорога к подножию горы будет очень трудной.
2. Ваша проблема подобна моей?
3. У нас было много общего, потому что мы росли вместе.
4. Будь внимательным! Мы приближаемся к северной границе другого государства.
5. Она представляла нашу страну на последних олимпийских играх.

6. Его квартира как раз под нашей.
7. Полицейские начали осматривать содержимое его карманов.
8. Над нами не было света.

Listening

Now you are going to hear last two sections of the lecture. The list of new vocabulary given above will help you understand it.

Section I

Answer the questions:

- How many sides represent the abdomen? What are they?

Section II

Answer the questions:

- What areas does the abdomen have?
- What do all the areas have?

Post-listening

I. Give English equivalents

язык хирургии, обычные термины, которыми пользуются хирурги, изображать, линия, граница, край, вверху, внизу, ниже, реберный край, боковые края живота, подвздошная ямка, паховые связки, пупочная область, фланг, квадрант, надчревьё, лобковая область, содержимое.

II. Match the synonyms

usual	edge
margin	the lower border of the ribs
the top	common
side	below
the bottom	line
area	the lower part
costal margins	region
inferior	the highest point

III. Match the antonyms

upper	below
above	superior
inferior	at the bottom
at the top	lower
rare	common

IV. Answer the questions

1. What are the six sides representing the abdomen?

2. What is the central area?
3. What is lateral to it?
4. What is above and below the flanks?
5. What is between the quadrants?
6. What is below the umbilical region?
7. Why do surgeons expect to get pain in this or that area?

V. Agree or disagree with the statements

1. Diagram (a) shows how the body is often represented in medical notes.
2. The right and left flanks are lateral to the umbilical region.
3. Above the flanks are quadrants.
4. Below the flanks are iliac fossae (sing. fossa).

VI. Complete the sentences

1. Diagram (a) shows The six sides of the diagram representsThe upper sides are ... The vertical lines areThe two lines at the bottom are
2. The abdomen is divided into 8 areas andThe right side of the diagram representsEach area has its

VII. Translate (do it in writing)

1. Шесть линий представляют границы живота.
2. Вертикальные линии это боковые края.
3. Как называются линии внизу живота?
4. Живот делится на девять областей.
5. Что лежит справа и слева от пупочной области?
6. Надчревьё находится между квадрантами.
7. Под флангами лежат подвздошные ямки.
8. Что находится между подвздошными ямками?
9. Все области имеют содержимое.

VIII. Speak on the following topics

1. How the abdomen is represented in medical notes.
2. The names that surgeons give to the areas of the abdomen.

Part II

Pre-listening

Before listening to the lecture do some training to prevent difficulties in understanding.

I. Memorize the vocabulary

1) to encounter	[ɪn`kauntə]	1) встречать, наталкиваться
2) communication	[kəmju:nɪ`keɪʃn]	2) сообщение
3) loop	[lu:p]	3) петля

4) to alter	[`ɔ:ltə]	4) изменять, переделывать
5) to cut	[kʌt]	5) резать
6) to mention	[`menʃn]	6) упоминать
7) outlet	[`autlət]	7) выход
8) total	[təʊtl]	8) полный, абсолютный
9) particular	[pɑ:ˈtɪkjʊlə]	9) особый, особенный
10) oblique	[ɒbˈli:k]	10) косой
11) loin	[lɔɪn]	11) поясница
12) grid-iron	[`grɪd`aɪən]	12) разрез Волковича — Дьяконова

II. Practice the pronunciation

1) jejunum	[dʒə`dʒu:nəm]
2) pyloroplasty	[`paɪlərə`plæstɪ]
3) through	[θru:]
4) although	[`ɔ:lθəʊ]
5) Kocher	[`kɔhə]
6) Pfannenstiel	[`fænənʃtiəl]

Pay attention to prepositional phrases.

1) for instance	например
2) cut out	удалить, вырезать
3) through	через
4) although	хотя
5) to use for	использовать для
6) opening onto the skin	вывод на поверхность кожи
7) to be called after	быть названным в честь
8) by-pass	обходить, огиать
9) lie across	лежать вдоль (поперек)
10) to the left of	налево от

III. Form the words using the following suffixes and prefixes

-ing, -re, -ed, -tion, -ly

(v.) alter, (v.) cut, (adj.) total.

Pay attention to the suffixes para- (par-, paro-) – возле, мимо, вне.

e. g. paramedian incision

IV. Work in pairs. Check up your neighbour's knowledge of the words.

изменять, переделывать Мы должны слегка изменить эту форму.	to alter We must alter this form slightly.
встречать, наталкиваться Он не встретил никого знакомого по пути в аэропорт.	to encounter He didn't encounter anyone on his way to the airport.

сообщение (связь) Качество связи стало намного хуже.	communication The communication quality became much worse.
петля Какая длина этой петли?	loop What is the length of this loop?
упоминать Кто упоминал эти данные в статье?	to mention Who mentioned these data in the article?
особый Мы обратили больше внимания на этот особый случай.	particular We paid more attention to this particular case.
поясница У меня сильно болит поясница.	loin My loin hurts a lot.
косой Хирург сделал косой разрез.	oblique The surgeon made an oblique incision.

V. Answer the questions and translate into English (you may do it in writing)

total

1. Have you ever felt total happiness?
2. Мы сидели в абсолютной тишине.
3. Какое общее количество студентов на этом курсе?

mention

1. How do you feel if your name is mentioned in a large audience?
2. Она не упомянула ни слово о своей семье.
3. Почему вы не упомянули эти данные в своем докладе?

communication

1. What means of communication do you prefer?
2. Что вы будете делать, если не будет связи?
3. Сообщение особенно важно в этой части страны.

particular

1. Is there anything particular you like to do in your spare time?
2. Не было ничего особого, что бы ей хотелось добавить.
3. Она одевается без какого-либо особого стиля.

alter

1. Do you sometimes alter any clothes you buy?
2. Ваша помощь не сможет улучшить или изменить его состояние.
3. Эти сплетни не изменяют их мнение.

describe

1. Can you describe your typical working day?
2. Is it easy or difficult for you to describe your feelings?
3. Кто описал вам это событие?
4. Много интересных фактов было описано в этой статье.

VI. Translate (do it in writing)

1. Что не в порядке с вашей поясницей?
2. Зачем вы все это перечислили?
3. У вас когда-нибудь были травмы поясницы?
4. Ваш коллега не хочет ничего переделывать.
5. Факты, упомянутые выше, были получены на днях.
6. Сначала вы должны сделать длинную петлю.
7. Она нарисовала кривую линию через всю страницу.
8. Это было какое-то особое чувство, которое она никогда не испытывала.
9. Нам пришлось обогнуть эту часть острова.
10. Плохая связь приводит к непониманию.

Listening

Now you are going to hear last two sections of the lecture. The list of new vocabulary given above will help you understand it.

Section I

Answer the questions:

- What do words ending in –ostomy mean? Could you give an example?
- What does the ending –plasty mean? Could you give an example?
- What's the meaning of the ending –ectomy? Could you give an example?
- What does –otomy mean? Could you give an example?

Section II

Answer the questions:

- What is an incision?
- What incisions are mentioned? Where are they located?

Post-listening

I. Give English equivalents

встречать общеизвестные термины, это слово означает, переделка, чтобы оно заработало, изменение размера хирургическим путем, буквально означает, удаление, даже если; назван в честь, как предполагает само название, особый разрез, особая операция, косой разрез, огибать, поясничный.

II. Match the synonyms

a midline incision	alter
remake	for instance
cut out	refashion
the end	similarly
special	remove
renal	encounter
meet	mention
for example	outlet
in analogy	particular
near	a laparotomy incision
change	kidney
say	para-

III. Match the antonyms

obstruction	ending
straight	communication
on the contrary	common
beginning	oblique
rare	similarly

IV. Answer the questions

1. What do words ending in –ostomy mean?
2. What does –plasty mean?
3. And what about –ectomy and –otomy?
4. What does laparotomy (appendicectomy, colostomy) mean?
5. Do you agree that a) –ostomy means opening onto the skin; b) –otomy means cutting out; c) –ectomy means cutting out?

V. Develop the idea

The words ending in –ostomy ..., for example

The words ending in –plasty ..., for example

The words ending in –ectomy ..., for example

The words ending in –otomy ..., for example

It is important to know WHAT these endings mean because

VI. Find in the text the sentences with

1. The equivalent of the modal verb ‘can’;
2. The Infinitive;
3. Passive voice.
4. Complex subject.
5. Subjunctive mood.

VII. Express the same idea using the words and word combinations from the text

the costal margins	the outlet of the stomach
the two lines forming a V shape	the lower end of the rib cage
pylorus	the inguinal ligaments
— plasty	cutting something out
— otomy	refashioning something to make it work
— ectomy	cutting open the abdomen
laparotomy	cutting something open
an incision	laparotomy incision
the midline incision	lies in the right iliac fossa
a horizontal line lying across the suprapubic region	an opening cut in the skin through which an operation is performed
Kocher`s incision	kidney
the loin incision	the Pfannenstiel incision
the grid-iron incision	the incision used for extracting the gall bladder
renal	is used in kidney surgery

VIII. What questions would you ask to receive the following information

1. It is an opening cut in the skin through which an operation is performed.
2. Yes, there are different incisions.
3. Six different incisions are used in abdominal operations.

IX. In what operations are these incisions used

Kocher`s incision	appendicectomy
Right paramedian	major abdominal operations
Grid-iron	cholecystectomy
Laparotomy (midline)	renal surgery
Loin	
Pfannenstiel	

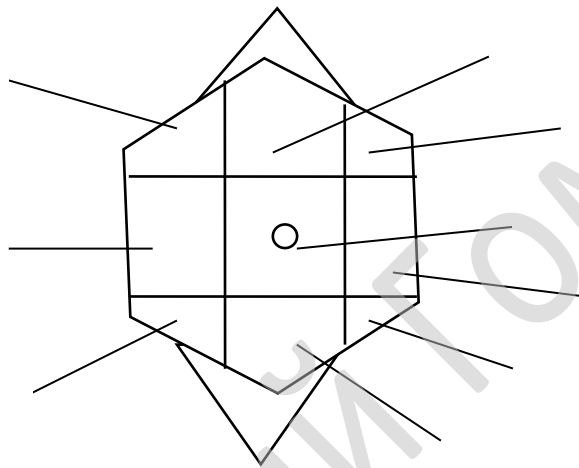
X. Translate (do it in writing)

1. Нам нужно сделать соединение между желудком и петлёй тощей кишки.
2. Хирургам пришлось изменить размер привратника.
3. Хирурги проводят операции через разрез.
4. Определенные разрезы используются для определенных операций.
5. Как называется этой косо́й разрез?
6. Кто описал этот разрез?
7. Этот разрез огибает пупок.
8. Поясничный разрез используется при операциях на почках.
9. Она только что перечислила всех участников соревнований.

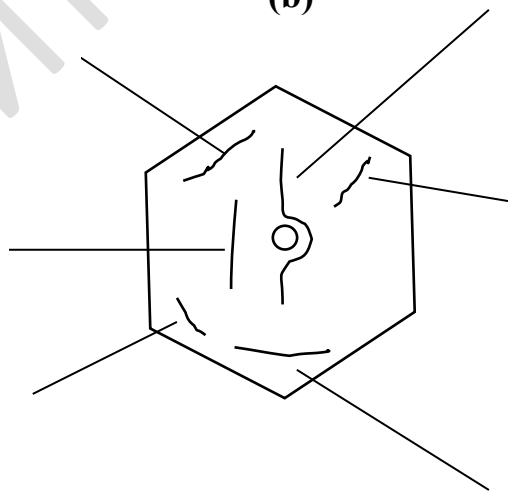
XI. Role-play

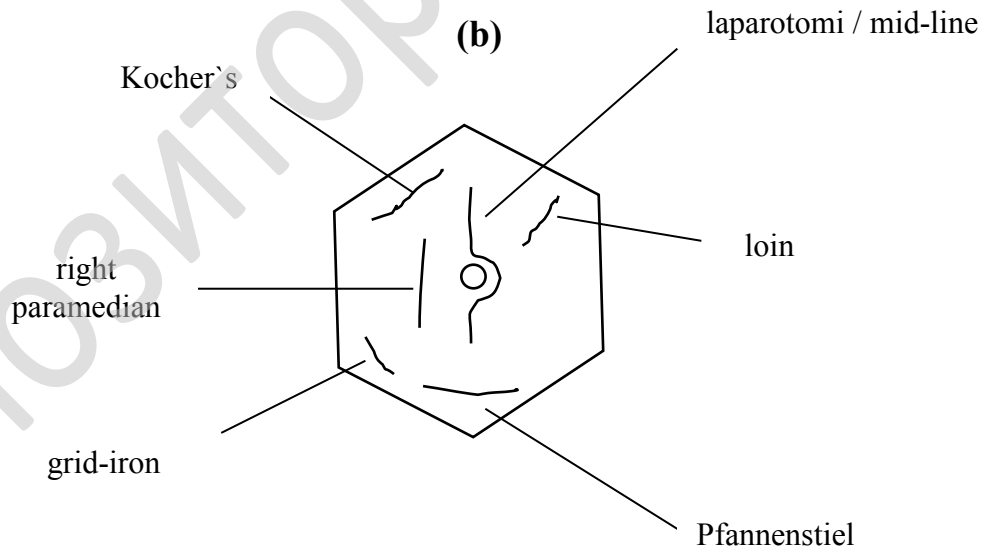
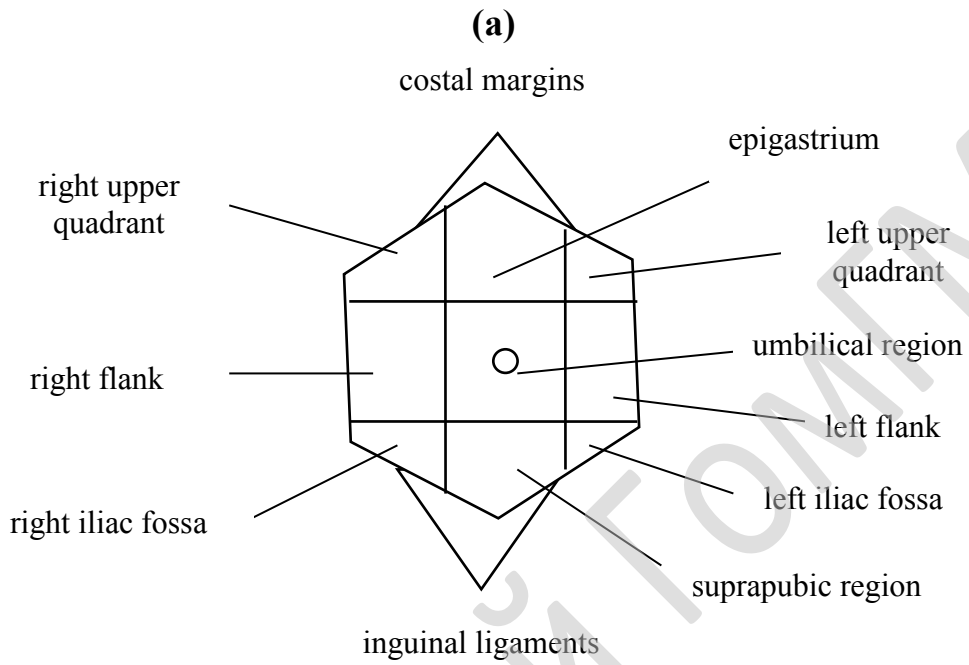
You are taking an exam in Surgery. Your question is «Surgical incisions». Draw a diagram with lines representing particular incisions and give your answer. We wish you success.

(a)



(b)





Additional exercise

Read and translate the following medical terms with the above mentioned suffixes.

Laparotomy, thoracotomy, cerebellotomy, ureterotomy, piectomy, iridotomy, cerebrotomy, osteotomy, enterotomy, vagotomy, cervicotomy, thalamotomy, arthrotomy, gastrotomy, thoracotomy, glossotomy, herniectomy, neurotomy, phlebotomy, venotomy, valvotomy, tracheotomy, rechiotomy, craniotomy, cleidotomy, vasectomy, colectomy, gastrectomy, pneumonectomy, cystectomy, urethrectomy, esophagectomy, nephrectomy, prostatectomy, costectomy, arthrectomy, ureterectomy, tonsillectomy, appendectomy, ilectomy, hysterectomy, orchidectomy, aneurismectomy, adenoidectomy, pulmonectomy, lobectomy, laminectomy, adrenalectomy, thymectomy, pancreatectomy.

Colostomy, tracheostomy, nephrostomy, enterostomy, jejunostomy, ileocostomy, pyelostomy, ureterostomy, salpingostomy.

THE MEDICAL RESEARCH

Pre-listening

I. Memorize the vocabulary of the lecture

1) to set up		1) учреждать, устанавливать, открывать(дело)
2) hypothesis	[hai'pɒθəsis]	2) гипотеза, предположение
3) search	[sə:tʃ]	3) исследование, поиск, изыскание
4) to assume	[ə'sju:m]	4) предполагать, присваивать себе, принимать на себя
5) ethical	['eθikəl]	5) нравственный, эстетический
6) approval	[ə'pru:vəl]	6) одобрение, рассмотрение
7) research	[ri'sə:tʃ]	7) научное исследование, исследовательская работа

II. Read and translate the following words and word combinations

a) assume:	to assume the worst; to assume responsibility; to assume command; to assume control; his illness assumed a very grave character; let us assume.
b) hypothesis:	to discuss smb's hypothesis; to formulate a hypothesis; put smth. forward as a hypothesis; to assume smth. as a hypothesis.
c) search:	to be in search of a house; a search for a missing aircraft.
d) research:	to be engaged in research; his researches have been fruitful; to carry out a research into the causes of cancer; research work.
e) approval:	he gave his approval to our plan; to meet with approval; to submit for approval.
f) to set up	It is a way in which smth is organized; to set up business. She set up her stereo in the living room.

III. Work in pairs. Check up your neighbour's knowledge of the words.

<p>нравственный, этический Его поведение не было этическим.</p>	<p>ethical His behavior has not been ethical.</p>
<p>предполагать, принимать на себя Допустим, что... Его болезнь приняла очень серьезный характер. принимать меры</p>	<p>to assume Let us assume that... His illness assumed a very grave character. to assume measures</p>
<p>требовать Это требует тщательного рассмотрения. Вам приказано отправиться туда. Каковы его условия?</p>	<p>to require It requires careful consideration. You are required to go there. What are his requirements?</p>
<p>рассмотрение, обсуждение принимать во внимание Мы примем это во внимание. ни под каким видом</p>	<p>consideration take into consideration We'll take it into consideration. on(under) no consideration</p>
<p>современный (новейший) Используйте современные методы лечения.</p>	<p>up-to-date Use up-to-date methods of treatment.</p>
<p>проводить обзор, вести научное наблюдение Кто ведёт наблюдение за ними сейчас? быть пунктуальным соблюдать этические законы</p>	<p>to observe Who is observing them now? to observe the time to observe ethical laws</p>
<p>сбивать с толку, спутывать Не сбивайте меня с толку! Я уверен, что прав!</p>	<p>to confuse Don't confuse me! I am sure I am right!</p>
<p>одобрять, подтверждать (подтверждение) Он одобрил наш план.</p>	<p>to approve(v.), approval He gave his approval to our plan.</p>
<p>учреждать, открывать (дело) Компания открыла несколько новых офисов в разных странах.</p>	<p>to set up The company has set up several new offices in different countries.</p>
<p>исследование научное исследование заниматься научно-исследовательской работой Его изыскания были плодотворными.</p>	<p>research scientific research to be engaged in research His researches have been fruitful.</p>
<p>предположение, гипотеза рабочая гипотеза Это лишь рабочая гипотеза, не так ли?</p>	<p>hypothesis a working hypothesis It's only a working hypothesis, isn't it?</p>

IV. Give English equivalents

Представить на рассмотрение; предполагать; искать лекарство; заниматься научно-исследовательской работой; выдвинуть гипотезу; принимать на себя; получить одобрение; поиски древнего мира; исследовать причины заболевания раком; эта болезнь приняла очень серьезный характер; его изыскания были плодотворными; брать на себя ответственность; он одобрил наш план.

V. Answer the questions and translate into English (you may do it in writing)

research

1. What do your researches show?
2. Эта научная тема уже хорошо исследована.
3. Мы участвуем в исследовании причин возникновения близорукости у детей школьного возраста.

to observe

1. Do you observe Christmas?
2. Они заметили крошечные пятнышки на крыльях птиц.
3. Это очень интересно наблюдать за дельфинами.

approve (approval)

1. Who usually approves your actions?
2. Все результаты опытов должны быть доказаны.
3. Сначала комитет по науке должен подтвердить план.

to set up

1. What is the set up in your company?
2. Банковский кредит (bank loan) помог ему создать свой собственный бизнес.
3. Выиграв все эти деньги в лотерею, она почувствовала себя устроенной в этой жизни.

to require

1. When do you require any assistance?
2. Ситуация требует моего присутствия.
3. Это очень старое здание, которое не отвечает стандартам безопасности.

VI. Guess the meaning of the following statements

- | | | |
|--|--|----------|
| 1. An idea or a suggestion that is based on known facts and is used as a basis for reasoning or further investigation. | | ethical |
| 2. Moral principles | | research |

- | | |
|--|------------------------------------|
| 3. To accept smth before as true before there is proof. | hypothesis
 search
 assume |
| 4. A careful study or investigation, esp. in order to discover new facts or information. | |
| 5. To look carefully in order to find smth. | |

Listening

Try to answer the questions while listening to the lecture "Medical Research".

Section I

1. Who explained the listeners how to set up a research topic?
2. What does the researcher have to do at the very beginning?
3. Where is it possible to find the idea for any research?
4. It is very important to make a specific statement about the subject of the research, isn't it?
5. What is the third thing that the researcher has to do?
6. What is the role of special computer programmes?

Section II

- a. Why is it necessary to design a way of testing the research work?
- b. What do you think about the time and money, that should be spent on the project?
- c. What does the word "protocol" mean?
- d. How is the detailed written plan of the research called?
- e. What should be taken into consideration to protect the interests of patients?
- f.

Section III

1. How is the limited smaller version of the project called?
2. What may happen if the researcher can't find all the data?
3. What step of the research may take more time than all the other steps put together?
4. It is very hard to work at any scientific research, isn't it?

Post-listening

1. Complete the sentences

- 1) We'll take the subject step ...
- 2) ... testable hypothesis.
- 3) So the third thing you ...
- 4) ... to think of completely new ...
- 5) ... in planning a huge project ...
- 6) ... in setting up your project: these are ...
- 7) The pilot study can be very ...

II. Find in the text sentences with

- a) have to; can; may;
- b) Participle I; Participle II.

III. Answer the questions using your own experience and the information from the lecture;

1. What is this lecture about?
2. List all the main steps described in the lecture.
3. What reasons is the literature search useful for?
4. Why shouldn't the size of a project be too large?
5. What is the purpose of running a pilot project?
6. How much time may it take to complete the scientific research?

IV. Ask questions and answer them

Model: *The researcher uses a new technique.*
 — *Does the researcher use a new technique?*
 — *Yes, he does.*
 — *Yes, the researcher uses a new technique.*

1. The biologists use up-to-date methods.
2. The paper gives new data on the subject.
3. The scientists use the method widely.
4. The study gives insight into the phenomenon.

V. Translate into English

1. Первое, что вы должны сделать — это найти тему, которая вам интересна.
2. Второе, что вы должны сделать — это сформулировать варианты тестирования вашей гипотезы.
3. Подбор научной литературы тоже важен.
4. Специальные компьютерные программы могут помочь найти тот материал, который вы ищете.
5. Довольно трудно найти совершенно новую тему для медицинского исследования.
6. Протокол — это детальное описание пошагового плана вашей научной работы в письменном виде.
7. Интересы пациентов должны быть защищены с точки зрения этики.
8. Что касается вложений, то любое исследование требует денежных затрат.
9. После того, как вам удалось собрать весь материал для вашей научной работы, вы должны проанализировать его и сделать выводы.
10. Где вы работаете / учитесь?
11. Вы лечите больных?

12. Над какой проблемой вы работаете?
13. Разрабатываете ли вы какой-либо новый научный проект?
14. Проводите ли вы обзор научной литературы?
15. Мы должны рассмотреть эти данные в свете новых научных открытий.
16. Тема моей научно-исследовательской работы очень актуальна.

VI. Discuss with your group mates

1. Have you got any idea of a research that you would like to test?
2. The majority of the medical research projects are very complicated.
3. How would you set up the testing programme?
4. Give us as much details as possible about your testable hypothesis.
5. If you can't think of an idea, ask your scientific adviser to produce one for you.

THE FUTURE OF MEDICINE

Pre-listening

I. Memorize the vocabulary of the lecture

1) health care	[ˈhelθ kɛə]	1) здравоохранение
2) to affect	[əˈfekt]	2) воздействовать, затрагивать
3) to confront	[kənˈfrʌnt]	3) противостоять
4) average	[ˈævərɪdʒ]	4) средний
5) average life expectancy	[ˈɪksˈpektənsɪ]	5) средняя продолжительность жизни
6) a shift	[ʃɪft]	6) смена
7) to contribute (v)	[kənˈtrɪbjʊ:t]	7) способствовать, делать вывод
8) welfare	[ˈwɛlfɛə]	8) благополучие, благо
9) provision	[prəˈvɪʒən]	9) обеспечение, снабжение, условие
10) reconsideration	[ˈrɪ:kənˈsɪdəˈreɪʃn]	10) перерассмотрение
11) to encourage	[ɪnˈkʌrɪdʒ]	11) одобрять, поддерживать
12) solution	[səˈlu:ʃən]	12) решение (задачи) разрешение (вопроса)
13) spent	[spent]	13) затрата
14) gross	[grɔ:ʊs]	14) валовой
15) gross national product		15) валовой продукт страны
16) efficient	[ɪˈfɪʃɪənt]	16) действенный, эффективный умелый, квалифицированный (о человеке)

17) prevention	[pri'venʃən]	17) предупреждение, предотвращение
18) initiation	[ɪˌnɪʃi'eɪʃn]	18) введение, учреждение к-л проекта
19) gain	[geɪn]	19) выгода, прибыль добывать, извлекать пользу (выгоду)
20) profit	[ˈprɒfɪt]	20) польза, выгода
21) to make a profit		21) извлечь выгоду

II. Read and translate the following words and word combinations

1) <i>gain</i> :	One man's loss is another man's gain; we hope for some gain from our investment; gain in weight of 2 kg.
2) <i>confront</i> :	confronted by an angry crowd; the problems, confronting us; to confront danger; she had to confront her parents. Ann's parents always encouraged her. The doctor is very attentive towards his patients and encourages them. To be encouraged by smb; to feel encouraged.
3) <i>to encourage</i> :	Does smoking contribute to lung cancer; the chairman encouraged every one to contribute to the discussion; he contributes regularly to science; contribute to a charity; contribute aid for refugees; we contributed 10\$.
4) <i>to contribute</i> :	efficient heating equipment; more efficient use of energy; we offer a last efficient and friendly service; an efficient secretary.
5) <i>efficient</i> :	the initiation of the investigation; an initiation ceremony; her initiation into the project; the initiation of the scientific work; to initiate social reforms;
6) <i>initiation</i> :	Prevention is better than cure; it is easier to prevent smth happening than to undo the damage later; your prompt action prevented a serious accident; to prevent the spread of a disease; nobody could prevent them; preventive measures.
7) <i>prevention</i> :	

III. Give English equivalents

- Противостоять, ободрять кого-либо, способствовать развитию науки; валовой продукт страны; извлечь выгоду.
- Смотреть в лицо опасности; учредить план; выгода; предупреждение лучше лечения.
- Квалифицированный врач; обеспечение; затрата.
- Стоять лицом к лицу; врач поддерживает (поощряет) своих пациентов.
- Ввести новый метод исследования; прекрасное решение какого-либо вопроса.

6. Внести вклад в благотворительную организацию; умелый администратор; прибавление в весе; предотвратить распространение инфекционной болезни; благополучие.

IV. Work in pairs. Check up your neighbour's knowledge of the words

<p>решение (задач, вопросов) Это хороший способ решения трудных проблем.</p>	<p>solution It is a good way of solving difficult problems.</p>
<p>богатство духовное богатство Чем богаты, тем и рады Говорят, что он очень богатый человек. Благополучие, благо(общества)</p>	<p>wealth a spiritual wealth You are welcome to what we have. They say he is a man of great wealth. welfare</p>
<p>тратить тратить ч.-л на ч.-л тратить немало труда на ч.-л Он тратит слишком много денег на одежду. тратить(проводить) время Мои друзья провели свои выходные в столице.</p>	<p>to spend to spend smth on smth. to spend much trouble on smth. He spends too much money on clothes. to spend time on My friends have spent their weekend in the capital.</p>
<p>предотвращение, предупреждение предотвратить пожар Предупреждение лучше лечения.</p>	<p>prevention to prevent fire Prevention is better than cure.</p>
<p>средняя продолжительность жизни ниже среднего выше среднего в среднем 10 % Какая средняя продолжительность жизни в вашей стране?</p>	<p>average life expectancy below the average above the average average 10 % What's the average life expectancy in your country?</p>
<p>эффективный, действенный эффективнее использовать ч.-л. Начальник выявил, что его коллектив является на удивление практичными и эффективными работниками.</p>	<p>efficient more efficient use of smth. The chief revealed his staff to be surprisingly practical and efficient workers.</p>
<p>одобрять, поощрять, поддерживать Студенты любят, когда их поощряют. Не поощряйте плохие привычки у ребенка!</p>	<p>to encourage Students like being encouraged. Don't encourage bad habits in a child!</p>
<p>подразумевать Что подразумевает это выражение?</p>	<p>to imply What does this expression imply?</p>

полагать, считать Мы полагаем, что она опытный врач. Он считается известным ученым.	to consider We consider her to be an experienced doctor. He is considered to be a famous scientist.
--	--

V. Guess the meaning of the following statements

- | | |
|---|------------------|
| 1) to face and deal with a problem, difficulty | a) to contribute |
| 2) to give support; confidence or hope to smb | b) gain |
| 3) the action of starting smth | c) initiation |
| 4) to give smth, esp. money or goods; to help a person or an organization | d) prevention |
| 5) able to work well and without wasting time or resources (about people) | e) confront |
| 6) an increase in wealth, advantage, profit | f) efficient |
| 7) the action of preventing smth, to stop smth happening | g) to encourage |

VI. Answer the questions and translate into English (you may do it in writing)

average

1. What is the average age of the students in your University?
2. В среднем каждая семья имеет двоих детей.
3. Безработица в этой стране составляет в среднем 5 %.

to reconsider (reconsideration)

1. How often do you reconsider your plans?
2. Компания вынуждена была пересмотреть свой план, чтобы расширить производство.
3. Есть сомнения по поводу предыдущего решения, поэтому надо пересмотреть его.

solution

1. Refusing to talk about the problem is not the best solution, is it?
2. Попробуйте найти лучшее решение этой проблемы.
3. Мы не находим легкого решения этой проблемы, поэтому мы решили проконсультироваться у вас.

prevention

1. Is it easier to prevent something or to undo the damage later?
2. Водитель сделал все возможное, чтобы предотвратить несчастный случай.
3. Новая вакцина предотвратила вспышку инфекционного заболевания.

wealth

1. What person is considered to be a wealthy one?
2. Никто не знает как она приобрела такое богатство.
3. Богатство не принесло им счастья.

to spend

1. How do you usually spend time with your family?
2. Я собираюсь потратить немного денег на покупку книг.
3. Как вы проводите свое свободное время?

efficient (efficiency)

1. Why were you impressed by the efficiency with which the government handled the crisis?
2. Надо заставить промышленность работать более эффективно.
3. Мы были очень благодарны за эффективно организованный форум.

encourage (encouragement)

1. Who needs encouragement to try something new?
2. Поощрение преподавателя помогло ученику в его дальнейшей учебе.
3. Родители должны всегда поощрять своих детей.

Listening

Try to answer the questions while listening to the lecture "The Future of Medicine".

Section I

1. Many European countries are confronting the same difficulties in the field of health care, aren't they?

Section II

1. What changes are occurring in the West nowadays?
2. How can you characterize the average life expectancy and the birth rate in the 21st century?
3. What do you know about the contribution of elderly people to the creation of wealth?
4. What has resulted in a fundamental reconsideration of systems of health provision?

Section III

1. People in Britain are encouraged to pay for their health care rather than expect it from the state system, aren't they?

2. Are elderly chronically ill people in Britain able to buy the care they need?
3. Why can't an increase in the private sector provide a realistic solution to the funding problem?
4. The increasing needs have to be met with increased resources, don't they?
5. What do you know about the public health care system in Britain?
6. Are the private health care companies interested in competing over most of the field of health care?

Section IV

1. What does the idea of prevention in medical care mean?
2. What is cheaper for the country: to treat a disease or prevent it?
3. What have you learnt from the lecture about the interests of businessmen and politicians?
4. Could you tell us the main idea of Section 4?

Post-listening

I. Complete the sentences

1. ... demographic changes
2. The proportion of young people
3. ... reconsideration of system
4. Whilst I'll concentrate
5. If sickness and disease
6. ... proportion of the population.
7. ... environment and working conditions.
8. ... health care system in Britain
9. The initiation of preventive

II. Find in the text sentences with

- a) the Infinitive;
- b) Model Verbs and their equivalents;
- c) Passive Voice.

III. Answer the questions

1. What is the lecture about?
2. What issues do the three main sections deal with?
3. In what way is the age profile changing in Western countries?
4. What implications does it have for state-assisted health care systems?
5. Four reasons are given why a switch from public to private health care would not provide a solution to the problem. What are they?
6. Which social matters would need consideration in a preventative strategy?

IV. Ask questions and give answers to them

Model: "I have a bad headache".
What does the patient say?
The patient says that he has a headache.
What does the patient say to his district doctor?
The patient tells his district doctor that he has a bad headache.
What did the patient say?
The patient said that he had a bad headache.
What did the patient say to his district doctor?
The patient told his district doctor that he had a bad headache.

1. My pulse is slow.
2. I feel rotten.
3. I have a sore throat.
4. I can't see clearly.
5. I stopped smoking.

V. Translate into English

1. Многие страны в мире сталкиваются с одинаковыми проблемами.
2. Средняя продолжительность жизни медленно повышается.
3. Рождаемость остается на том же самом уровне.
4. Частные компании не стремятся к тому, чтобы отвечать за все здравоохранение в стране.
5. Медицинское обслуживание очень дорого, поэтому нужно вести здоровый образ жизни.
6. Будущее медицины в отдельно взятой стране во многом зависит от политики государства.
7. Решение многих проблем в медицине спасет человечество.

VI. Discuss with your group mates

1. Medical care must be free of charge.
2. The role of modern medical equipment in medical examination.
3. How do you see the Future of medicine in Belarus?

TAPESCRIPT

ILLNESS AND DISEASE

Section I

Hello! In this lecture, we are going to look at what we mean by illness and diseases. You might think that illness and disease are synonymous, that they mean the same thing. But that's not quite true. Let me explain the difference. Illness is the experience of feeling unwell: it is feeling of ill-health that often accompanies disease. Disease is a disturbance of the structure or function of part of the body, for instance by cancer or infection with micro-organisms. It is something that can usually be measured in some way or looked at under a microscope. But is this difference of any importance? And if so why? That's what we'll be considering today.

Section II

When a person feels that something is wrong with part of their body, such as pain, weakness or nausea, this subjective complaint is called a symptom. That's spelt S-Y-M-P-T-O-M — symptom. When people feel ill, they complain of symptoms. But it is quite possible to have a disease and not feel ill at all. Does that sound complicated? Perhaps an example will make it clearer. Let's take the example of hypertension. You may not have heard that word before, so I'll spell it. H-Y-P-E-R-T-E-N-S-I-O-N — hypertension. It means high blood pressure. You can't feel it when you've got it, but it results in disease developing inside your body, particularly in your blood vessels. You can see the damage if you look at the back of someone's eye with special instrument, which is called an ophthalmoscope — O-P-H-T-H-A-L-M-O-S-C-O-P-E. Ophthalmoscope.

Section III

When a doctor finds something abnormal on examining a patient, this is called a clinical sign. S-I-G-N. So, a symptom is something the patient reports, and a sign is something the doctor may find when examining the patient. When someone feels unwell, the doctor tries to find out what the problem is. This process is called diagnosis. D-I-A-G-N-O-S-I-S. Diagnosis. It involves asking the patient about his or her symptoms and examining the patient to look for signs. Each disease has a characteristic pattern of symptoms and signs. The doctor fits them into a pattern, like a jigsaw, and with luck finds the answer.

Section IV

But a person with a disease such as hypertension doesn't feel ill, how do they come to see a doctor? The answer is that often they don't until it's too late. By then, some catastrophe has occurred, such as a heart attack. You can't do much about such things when they've happened. But you can prevent them. For instance, everyone over a certain age can have their blood pressure measured every year, just in case. If it's too high, they can take tablets to make it lower.

Prevention is much better than cure. It is fairly cheap, whereas modern technological treatment is too expensive for most countries to afford. And cures are rare, except with infectious diseases. Did you think medicine in the developed world was about curing people? I'm afraid that's rather an idealistic notion. Much of medicine is descriptive or palliative. You can remove people's symptoms. If you are lucky, you can stop the disease getting worse. But you can't often get rid of it completely.

COMPOSITION OF FOODSTUFFS

Section I

Good morning, ladies and gentlemen. You've been reading about problems of nutrition, and considering some aspects of the relationship between dietary habits and disease. Before we look into this any further, we must refresh our memories about the chemical constituents of food and make sure that we are familiar with basic chemical terminology. I shall call this lecture "the macromolecules of life".

Section II

I mentioned the word "macromolecules". What does this mean? "Macro" simply means large. And I expect you remember what a molecule is. It is the structure formed when two atoms become bound together. Atoms are the smallest possible particles of an element. The hundred or so elements in nature are substances which can't be split into simpler substances by chemical means. The atom, of course, is itself composed of smaller particles. But these are the concern of subatomic physics, not biochemistry. A further term of which we should remind ourselves is compound. A compound is a substance made by the chemical combination of two or more elements.

Section III

The elements are represented by symbols, C for carbon, H for hydrogen, N for nitrogen and so on. Compounds can be represented in two ways. Firstly by writing the letters of the constituents down in formulae. If you look at the table of frequently occurring organic groupings in your book, you will see for instance that the grouping carbon-oxygen-oxygen-hydrogen is represented as-COOH; this is known as an acid. Similarly an alcohol is denoted by the formula, -CH₂OH. The second way of representing molecules is by drawing expanded formulae, which are two-dimensional pictures. The elements are joined together by lines, each line representing a chemical bond. Each atom of an element can make a certain number of bonds with other atoms: the number for each type of atom is constant and is known as its valency. Hydrogen, for instance, has a valency of one, and carbon has a valency of four. The atoms may be joined together in branching rows and also in rings. At the bottom of the table, you can see a drawing of a benzene ring, that's spelt B-E-N-Z-E-N-E. Of course, mole-

cules in living systems are often very large, and can be folded round in complex three-dimensional structures. A well-known example is that of deoxyribonucleic acid or DNA. This is the substance in the nucleus of every cell which contains the genetic code which determines how an organism grows or develops. It takes the form of a double helix.

Section IV

The three main types of macromolecule in foodstuffs are proteins, carbohydrates and fats. Proteins are made up of smaller molecules called amino acids, which are given this name because they contain both amino and acid groups. Proteins form the main structures of human cells. They are found in meat and in some plant foodstuffs such as beans. The second main group of macromolecules is called carbohydrates. These are made up of smaller molecules called sugars. They are found mainly in plants especially in so-called starchy foods like cereals or root vegetables. The third main type of macromolecule is fats, which are composed of chains of fatty acids. Fats are also sometimes known as lipids. L-I-P-I-D-S.

Section V

When food is digested, the macromolecules are broken down into their constituent molecules and absorbed as such. Amino acids are used to form protein in cells. Sugars are broken down to form energy in a process called glycolysis. Fats provide a way of storing surplus food intake, and they can be converted into the sugar, glucose, in the liver in a process known as gluconeogenesis. Sugars can also be converted into fats. If too much fat or carbohydrate is eaten regularly, obesity may result. If not enough food is eaten to provide energy, the body will first of all use up its stores of fat. When these are exhausted, it will begin to break down the structural protein of which the tissues are composed. For amino acids can be used to create energy too. The individual may slowly waste away. You will be going on to consider the effects of starvation very soon.

DRUG ABUSE

Section I

Drug abuse is an area in which terminology can be confusing. Terms are often used in a way which implies moral judgement. And people often mix up the questions of whether a drug is harmful and whether or not it is illegal. The potential harm of a drug is of course something that does not change. But legality and the way the drug is seen by society may vary widely. It is a curious fact some societies have at times allowed the free use of drugs which at other times or in other societies have been considered so dangerous as to require the strictest forms of legal control.

Section II

By the term abuse, we don't simply mean use. We mean that the drug is being used to a degree which causes either physical harm to the user or damage to his relationships or to those around him. Nor is abuse the same thing as dependence. By dependence, we mean that the user cannot do without the drug. This includes psychological dependence where the drug is regarded as an indispensable prop in the user's life and he is consequently not motivated stop using it. But the main form of dependence with which we are concerned is true physical addiction. This is due to a direct chemical effect of the drug on the body. If the person stops taking the drug, very unpleasant and sometimes dangerous withdrawal effects occur. But, as I mentioned, addiction or dependence is not the same thing as abuse. Some drugs can be abused, but are not addictive.

Section III

But what about the legality of drugs? How is related to abuse? Well, drugs can only be widely abused if they are freely available. What do you think is the greatest drug abuse problem in Britain? Do you think it might be heroin or cocaine, or some other exotic compound that makes headlines in the press? No. In fact the most serious problem of abuse is with alcohol. This causes a huge amount of death disease, crime, family break-up and economic loss to the country. Second comes tobacco which is legal, but causes the deaths of 100,000 people in Britain every year, as well as enormous costs to the National Health Service and to the economy in terms of working days lost. The third most important drugs of abuse are medically prescribed minor tranquillisers. Like alcohol and tobacco, these are addictive.

AIDS

Section I

Today, I am going to talk about acquired immunodeficiency syndrome, popularly known as AIDS for short. AIDS is the end-stage of a chronic infection with a virus known as the human immunodeficiency virus or HIV. The virus slowly destroys the body's immune system.

Section II

As far as the history of AIDS is concerned, it appears to be a new disease. It was first recognized in 1981 in the United States of America. The Centre for Diseases Control in Atlanta noted a surprisingly large number of cases of some extremely unusual diseases. One was Kaposi's sarcoma (or KS), a rare form of skin cancer. Another was pneumocystis carinii pneumonia or PCP, a rare lung infection. In normal circumstances, both these conditions were seen only in patients whose immune systems had been destroyed. But the new cases were all in previously healthy young people. And, curiously, ninety-two per cent of the cases involved homosexual men in three American cities. It was recognized that

something new was happening, although the virus responsible for the disease was not isolated until 1983.

Section III

The transmission of the human immunodeficiency virus is through blood or blood products. The most common methods of transmission are: firstly, through sexual activity, particularly anal intercourse; secondly, through the sharing of infected needles by those injecting drugs; and thirdly, through the accidental transfusion of patients in hospitals with infected blood. A fourth type of transmission which is becoming more common is the infection of unborn children by a mother who carries the virus. This is known as congenial infection.

Section IV

The course of the disease involved four stages as follows. Firstly, when the person becomes infected, they may feel generally unwell for a few days, as if they have a very bad cold. Afterwards, this disappears and they feel perfectly; this is known as the asymptomatic stage. The person may continue to feel healthy for several years. The third stage is known as persistent generalized lymphadenopathy, or PGL for short. In PGL, most of the patient's lymph nodes swell up, but he still does not feel ill. The fourth stage is AIDS itself. Here, the patient suffers from unusual infections or tumours which the immune system is too weak to resist. The patient feels very unwell. After a period lasting months or even a year or two, the patient dies.

Section V

The prognosis of the disease – that means the eventual outcome — is very poor. It is likely that everyone infected with HIV will eventually get AIDS. AIDS is thought to be fatal in all cases. There is no treatment for HIV infection. Nor has any method of preventing HIV infection been discovered.

ACTION OF DRUGS

Section I

Good afternoon! My lecture today deals with the factors that influence the action of drugs. You might think that once you prescribe a person a pill to swallow, that is the end of the matter. But, in fact, it is much more complicated than that. You have to get the dose right, and you have to alter it according to the patient's response. Some patients need drugs in doses which to others would be poisonous. What, then, are the factors which affect the action of a drug? That is what I shall be talking about today.

Section II

First of all, the patient has actually to take the pills which have been prescribed. This is known as compliance. This might seem an obvious point, but research has shown that millions of pounds worth of drugs prescribed by doctors every year are never in fact taken. I'm sure you're all been prescribed antibiotics

at some point. How often have you actually finished the prescribed course? But presuming that the patient has taken the pill, what happens next? Well, this can be influenced by the composition of the tablet itself, known as the formulation. The tablet is not 100 % drug. The drug is mixed with other substances and these can influence the rate of absorption of the drug.

Section III

Next comes the process of absorption itself — in other words, the process by which the drug is taken in from the gut into the blood-stream. This can be a passive process or an active process, depending on the chemical structure of the drug. Some drugs, like insulin, cannot be taken by mouth, because they are broken down in the gut before they can be absorbed. Most drugs are absorbed in the upper part of the small bowel, so any disease that interferes with the small bowel will affect absorption of the drug. Once the drug has been absorbed from the gut, the blood in which it is contained has to pass through the liver before it reaches the general circulation. Some drugs are largely destroyed by the liver at this stage, so large doses need to be given. If the liver is diseased, more drug than expected will enter the body.

Section IV

Then there is distribution. Once in the body, the drug is distributed around the tissues. Some drugs diffuse freely around the body. Others become attached to proteins. When this happens, it increases the amount of drug that needs to be absorbed before the right concentration in the tissues is reached. Some proteins bind two sorts of drug but prefer one sort to the other. Two drugs may compete for the protein. If the protein is initially bound to the first sort, and then the second sort appears in the blood-stream, the proteins release the first drug. This means that the concentration of the first drug is suddenly increased by taking the second drug. This can be dangerous. As for the protein which binds the drug, it is manufactured in the liver. If the liver is diseased, there will be less of the protein and so smaller doses of the drug will produce higher concentrations of the drug in the blood than would otherwise be the case.

Section V

Finally, we must consider the elimination of the active drug from the body. This happens in two ways; by metabolism and by excretion. Metabolism occurs in the liver, which changes active drugs into inactive substances which can be excreted by the kidney. Some drugs can be excreted directly by the kidney without being metabolized. Any disease that interferes with the liver or the kidney is going to affect the levels of drug achieved by a given dose. And the function of these organs declines with age, so that older people need smaller doses of drugs. And, of course, if a person is taking a drug which interferes with the function of the liver or kidney, this will also affect the elimination of any other drug taken and so affect concentrations in the body and the dosages required. So you see, there is a lot more to it than just swallowing a pill.

MAKING A DIAGNOSIS

Section I

Good morning! There are three main elements in the gathering of information upon which to form a diagnosis. These are: the history, the physical examination and special investigations. Each is approached in a logical order, which remains much the same every time that the process is gone through. History-taking begins with the patient giving his own account of the problem in his own words. The doctor will then seek clarification about particular details, such as the exact character and duration of the symptoms. There follows questioning about the patient's past, in particular his previous illnesses and the presence or absence of disease in his family. Details are then taken of his personal life and social circumstances and of the drugs he is taking, both social and medicinal. At the end, the doctor usually goes through a check-list of symptoms relating to the different organ systems of the body — respiratory, cardiovascular, genito-urinary, gastro-intestinal, neurological and so on. By this stage, the doctor should have enough information to decide which diagnoses are likely.

Section II

The physical examination is used to confirm and refine the diagnosis. It is conducted in a standardized fashion, beginning with the general appearance of the patient and then going through each system in turn. More time may be spent on areas in which abnormalities are expected and less on areas likely to remain unaffected, but no area must be left unexplored or important information may be missed. By the end of the examination, the doctor will have discovered a pattern of abnormalities, which indicate a specific diagnosis.

Section III

Sometimes it is necessary to obtain further information to assist in diagnosis and treatment, by the use of special investigations. The range of these is wide, and the doctor in a large hospital may be able to call upon the services of a small army of experts and technicians. Let's look at a list of a few of these investigative methods on this overhead slide. The list is really self-explanatory. Haematology involves the study of the constituents of the blood. Biochemistry involves examination of various chemicals in the blood or other body fluids which reflect the state of body organs, such as the liver and kidneys. Microbiology laboratories examine and culture micro-organisms from samples taken from patients. Histologists examine tissue samples from patients.

Section IV

There is wide range of radiological techniques which allow imaging of the interior of the body. I expect you are familiar with most of these terms. Contrast studies involve the injection of radio-opaque liquid into the body to outline structures; an example is angiography, in which the course of blood vessels is examined. Nuclear imaging involves the use of radioactively labelled substances

to delineate organs such as the lungs and brain. Then there are the highly specialized techniques. Computerized axial tomography known as CT scanning is available in large hospitals. The remaining techniques, NMR and PET scanning, remain prohibitively expensive and are used mainly as tools in specialized research. Lastly, we should mention special instrumental techniques, such as gastroscopy in which the stomach is visualised through a flexible fiberoptic tube passed down the oesophagus. Similar instruments are used for examining the interior of other bodily orifices.

HUMAN HEREDITY

Section I

Today, we shall consider mechanisms of human heredity. This is important in medicine, because it is not only physical and intellectual characteristics that are influenced by heredity. Various forms of illness can also be transmitted from parent to child.

Section II

All heredity information is transmitted from parent to offspring through the inheritance of deoxyribonucleic acid or DNA. DNA codes for the production of ribonucleic acid or RNA. Through this, it determines protein synthesis. The DNA forms genes. A gene is a sequence of a single polypeptide chain in a protein molecule. That amount of DNA in each human cell is sufficient to make up more than 50,000 genes and so to specify more than 50,000 polypeptide chains. The genes are arranged in a linear sequence of DNA, which forms rod-shaped bodies known as chromosomes.

Section III

Each human cell contains 46 chromosomes. Two of these concern the sex of the individual. These sex chromosomes are named X and Y. The female possesses two X chromosomes, whereas the male possesses one X chromosome and one Y chromosome. The remaining 44 chromosomes are non-sex chromosomes, also known as autosomes. There are in fact 22 pairs of these in each cell. They can be made visible under the microscope by special staining techniques.

Section IV

To understand how genetic information is passed on, we must look at what happens when cells divide. Of course, cells in the body are dividing all the time. And when the nuclei of such cells divide, the chromosome material is duplicated. In other words, both cells end up with a full set of chromosomes. This process is known as mitosis, M-I-T-O-S-I-S. But there is another sort of cell division which occurs in the formation of gametes in the ovary and testis. In this process, the number of chromosomes is reduced by half. The resulting cells each have half of the 22 pairs of autosomes and one of the sex chromosomes — in other words, 23 chromosomes in all. This type of division is known as meiosis,

M-E-I-O-S-I-S. When the sperm and the egg combine, the resulting embryo has cells with 46 chromosomes, 23 from the father and 23 from the mother.

Section V

Now, some individuals possess genes which are abnormal and so may lead to disease. These may be passed on to the offspring. For some conditions to appear, it is necessary that the individual possess a double dose of the abnormal gene, one from each parent. These are known as recessive conditions. An example of an autosomal recessive condition is sickle-cell anaemia. Usually both parents are normal because they each only possess one dose of the gene. They can each pass on either a normal or an abnormal gene to their offspring. So one in four of their children will have a double dose of the abnormal gene and so be affected by the disease. Two in four of their children will have a single dose, and so not show the condition; but they can of course transmit the abnormal gene to their own offspring. One in four will have only the normal gene.

In some conditions, only one dose of the abnormal gene is necessary for the disease to be expressed. Such genes are known as dominant. An example of an autosomal dominant disease is Huntingdon's chorea. In dominant conditions, each affected individual will have an affected parent. On average, half the children of an affected individual will be affected.

PSYCHIATRIC DISEASES

Section I

Good afternoon, ladies and gentlemen! How do you examine a patient to look for psychiatric illness? Well, in many ways, it's similar to examining a patient with a physical illness. You still find out what the patient is complaining of before you examine them, and when examining them you go through the parts to be examined in a logical order. What you're examining is the person's state of mind at the time that you see them. This is known as the mental state. But, in one way, examination of the mental state is obviously very different from examination of the body. You are dealing with things that have no physical form. In other words, they are abstract. There are no lumps or bumps to feel or prod. You can't look into the mind with any instrument. You simply have to use your powers of observation and your skill in analysing what people say.

Section II

The mental state examination falls into a number of parts, and we'll go through these one by one. You begin by examining the person's appearance and behaviour. This means what they look like and what they do interview. They may be dressed in a peculiar way, or react to the situation in a way which is quite inappropriate. You then consider their speech. They may not speak at all, or they may speak terribly fast or use words that don't exist. Next comes their thought. First, you look at the form of their thought. Can you follow it? Some

people may jump from idea to idea in a way that doesn't make sense. For instance, in mania, they may switch from one subject to another simply because two words rhyme. It may be quite impossible to understand what they're talking about. The patient himself may have funny ideas about his thoughts. He may think they belong to someone else, or that everyone else can read them or that they're being broadcast on radio or TV. Such ideas generally indicate a diagnosis of schizophrenia. After considering the form of thought, you can look at the content of a person's thought. Does he have any strange ideas or beliefs that are evidently not true? Some people might believe, for example, that their movements are being followed by small green men from the planet Mars. Such a false belief is called a delusion.

Section III

Next you go to look at their perceptions. That means what they are told by their senses — hearing, seeing, smelling and so on. Some people hear voices when there is no one there. This can be very upsetting. And some people feel compelled to do what the voices tell them. Perceptions in the absence of any form of stimulus are known as hallucinations. Hallucinations of hearing are called auditory hallucinations. You can get hallucinations of any modality of sensation — seeing visions, smelling strange odours and so on.

Section IV

There are three more areas of a person's mental function that you look at. Firstly, their mood. Are they depressed, anxious or elated? Then you look at their cognitive state. This means their mental processes, such as memory and concentration. Some people, for instance, might be able to remember very little. They might not know where they are or what day it is. Such abnormalities often indicate a physical disease which is affecting the brain. Lastly, you look at their insight. This means their ability to see situation for what it is. Many people who have delusions or hallucinations do not believe they are ill. In other words, they lack insight.

Section V

At the end of your examination, you probably have a list of abnormalities. You then fit these together in a pattern and look for the illness that this pattern fits best. This gives you the diagnosis. Sometimes it's easy and sometimes it's difficult. The only way to learn it is watching someone else do it, and then practising it yourself.

ACUTE STRIDOR

Section I

Good afternoon! The subject of today's lecture is acute stridor. Acute, in this context, means of sudden onset. Stridor is one of the most important signs of respiratory illness in children. It is a harsh sound caused by obstruction at the level of the upper airway — that is to say the larynx or trachea. The important

thing to remember is that it is an inspiratory noise. Here it differs from that other important respiratory noise, the wheeze. Remember that a wheeze is a softer sound, occurring on expiration, and originating from obstruction of the lower airways, known as bronchioles. Stridor is an important subject to consider because there are several different causes which range from the relatively benign to the life-threatening.

Section II

So let's just run through a short list of causes, before considering the main ones in detail. The first to consider is croup or acute laryngo-tracheo-bronchitis, which is by far the most common. Rarer, but important, causes are acute epiglottitis and the inhalation of a foreign body. Rarer still are some more obscure conditions such as angioneurotic oedema, an allergic condition causing swelling of the face and larynx. Diphtheria was once a common cause, but is now rare since the introduction of immunisation in infancy.

Section III

Croup as its longer name suggests is an inflammation of the larynx, trachea and bronchi. It is caused by a viral infection, which leads to the narrowing of the airway due to mucosal oedema and secretions. Typically, the child is between the ages of 1 and 3 years. He has had a cold for a few days and the mother has noticed a 'croupy' cough which is worse at night or when the child cries. Otherwise, the child is usually not very unwell and only has a mild temperature. Sometimes the attack may be more severe. This is indicated by the severity of the stridor, by an increase in heart rate and respiratory rate and by the degree of intercostal recession — that is to say, how hard the child is having to breathe in order to overcome the upper airway obstruction. In severe attacks or when the child is exhausted, then he should be admitted to hospital for observation. Otherwise, if the parents are confident, then the child can be cared for at home and the parents instructed to watch for signs of deterioration. Of those children admitted to hospital, one per cent need intubation — in other words, the insertion of a tube into the trachea to stop it blocking.

Section IV

In a small but important group of children, the pattern of stridor is different. The stridor is more severe and it is associated with a high temperature. Typically, the child is between the ages of 3 to 7 years, is very unwell and is sitting forwards drooling because he cannot swallow. The condition is called acute epiglottitis and is caused by infection of the epiglottis with the bacterium, *Haemophilus influenzae*. This is an extremely dangerous condition, and, if it is suspected, admission to hospital is mandatory. Some paediatricians incubate all such children for 24 hours, because there is a real danger of the swollen epiglottis completely blocking the child's airway. In fact, the cardinal rule in examining any child with stridor is never to examine the throat as this may cause the airway to obstruct. Treatment of acute epiglottitis is with intravenous antibiotics.

Section V

Last but not least comes inhalation of a foreign body. Toddlers are curious by nature, and enjoy putting objects like safety pins and buttons into their mouths. The diagnosis is usually revealed by a careful history. Often there has been a short fit of coughing when a child has been playing with small objects. Peanuts are well-known culprits. There is no temperature and the child, illness seriously obstructed, is not unwell. Sometimes the presence of a foreign body can be revealed on X-ray, but some objects such as peanuts are radiolucent. It is often necessary to proceed to laryngoscopy, in which a surgeon passes a small fibre-optic instrument into the airway to visualise the object directly. It can then be removed with special instruments.

HEART FAILURE

Section I

Heart failure is the condition that results when the efficiency of the heart as a pump is decreased. There are two sorts of heart failure, right failure and left heart failure. This is because the heart really consists of two pumps. The right heart receives blood from the body and pumps it through the lungs, where carbon dioxide is released and oxygen absorbed. The left heart receives blood from the lungs and pumps it round the body. The left part of the heart is stronger than the right.

Section II

The symptoms and signs of heart failure are generally distant from the heart itself. Right heart failure produces different symptoms to left heart failure, although the two may occur together. The symptoms in heart failure are caused by back pressure from the heart which is not clearing blood quickly enough. In right heart failure, there is increased pressure in the veins returning blood to the heart. This can be seen in the jugular vein in the neck, which should be examined with the patient propped up at an angle of 30°. In right heart failure, the vein is distended with blood. In the absence of failure, it is not. Back pressure from the right heart has many other effects. Fluid is squeezed into the tissues of the legs and into the abdomen, which swell with fluid. This swelling is known as oedema. The liver becomes swollen with blood and enlarged in size. This enlargement can be felt when examining the patient's abdomen, and the liver is found to be tender. The patient may have little appetite because of congestion in the veins of the gut, and weight loss often occurs. The kidneys become less efficient as a result of increased venous pressure, and urine output drops.

Section III

In left heart failure, the back pressure results in congestion of the lungs. here, also, oedema results. Fluid in the lungs produces audible sounds which can be found on listening to the chest with a stethoscope. Oedema causes breathless-

ness which may come on suddenly and be extremely frightening to the sufferer. The breathlessness is characteristically worse when lying flat, a phenomenon known as orthopnoea. Patients with chronic left heart failure often describe having to sleep propped up in bed with lots of pillows. The back pressure from the failing left heart increases the amount of work that has to be done by the right heart to pump blood through the lungs. In this way, left heart failure may result in right heart failure.

Section IV

There are many causes of heart failure. These can be divided into three groups, according to the mechanism which heart failure is produced. The first is an increase in after-load. This means an increase in the pressure necessary to eject blood from the heart. It occurs in high blood pressure or hypertension. It also occurs if the valves at the exit of the heart have become narrowed. Secondly, there is disease of the heart muscle itself which decreases its strength and efficiency. This is most commonly produced by ischaemic heart disease, when the coronary arteries supplying the heart become narrowed. The third mechanism that produces failure is excessive pre-load. This means that the heart has more blood than usual to pump. This can occur when the heart valves become incompetent and blood which has already been pumped leaks back into the heart. It also occurs in diseases in which the blood must be pumped through the system faster such as beri-beri, chronic anaemia and thyrotoxicosis.

TREATMENT OF CANCER

Section I

Good afternoon! Now, we've already looked at some general aspects of cancers. In this lecture, we'll go on to consider the principles of treatment. We can look at this under two headings — local treatment and systemic treatment. Systemic means involving the whole body. Both sorts of treatment are necessary in most cases. The cancer begins and grows in one particular site but it isn't enough simply to treat that site. This is because the tumour sheds cells into the blood stream and lymphatic system. These travel to other locations in the body and begin to grow there. Unless all these cancerous cells are killed, there will be no possibility of cure.

Section II

The main local form of treatment is surgery. The surgeon operates on the patient and tries to cut out as much of the tumour as possible. Sometimes, all visible tumour can be cut out or resected. In other cases, the tumour may have invaded nearby structures in the body and so cannot be fully removed without extensive and mutilating surgery. Nevertheless, it is important to remove as much as possible so as to increase the chances of kitting off the tumour by other methods. Sometimes specialised surgical techniques are used such as laser sur-

gery in which the tissue is literally burnt away. Lasers have the advantage of great accuracy and of sealing small blood vessels.

Section III

The second local form of treatment is radiation therapy or radiotherapy. Beams of high voltage radiation are directed at the area of the tumour. The problem is to kill the cancerous cells without damaging the normal healthy tissues of the body. This can be partly achieved by directing several lower-dose beams of radiation at a tumour from different angles. In this way, normal tissues receive only small doses, while the tumour where the beams cross receives higher doses. But not all tumours are sensitive to the effects of radiation, and so it is far less effective in some sorts of cancer than in others. Sometimes, radiotherapy and surgery are used together in the treatment of a localised tumour, because the two together can be more effective than one alone.

Section IV

But even if a tumour has been completely resected or has shrunk away with radiotherapy, it's still likely that some tumour cells will have travelled elsewhere in the body, where they'll have seeded and be silently growing. For this reason, the last twenty years have seen a great expansion in cancer chemotherapy, which means treatment with drugs. These drugs are known as cytotoxic drugs, because they kill cells. They work by killing the tumour cells when they are dividing. But they also kill other dividing cells and so are very poisonous. They suppress the bone marrow, thus interfering with the formation of blood components and with resistance to infection. They make the patient feel extremely ill with nausea and vomiting and diarrhoea, and all the patient's hair falls out. Also, tumours can quickly develop resistance to one drug used alone, so several drugs are usually used in combination. So far, cancer chemotherapy has not been particularly successful. In a few sorts of cancer, chemotherapy can produce a total cure. But in most cancers, the effects are limited and the eventual progression of the disease is not stopped. In the least favourable cases, the misery caused to the patient by the drugs is probably not worth the very short time by which death is postponed.

Section V

But let's turn to something more optimistic. The most exciting developments in cancer therapy have to do with the immune system and with genetic engineering. This is usually known as biological therapy. There have been attempts for many years to find ways of stimulating the body's own defences to attack cancer cells. Recent research has concentrated on techniques of producing antibodies against cancers in the laboratory, the so-called monoclonal antibodies. There is a possibility that these can be injected into a patient to attack a tumour directly. Also, drugs could be attached to the antibodies. The drugs would then be delivered only to the cancer cells. The problems of poisoning normal cells could be avoided and much higher doses achieved in the tumour itself, it is this technique that offers the most promise for the future.

LANGUAGE OF SURGERY

Section I

The subject of today's lecture is 'the language of surgery' and in it we shall look at common descriptive terms used by surgeons. First of all look at the first diagram(a) in your books. This shows how the abdomen is often represented in medical notes. The six sides represent the borders of the abdomen. The upper two are the costal margins, that is, the lower end of the cage. The vertical lines are the lateral edges of the abdomen, and the two lines forming a 'V' shape at the bottom are the inguinal ligaments.

Section II

The diagram shows abdomen divided into eight areas. The central area is the umbilical region. Lateral to this are the right and left flanks. Above the right flank and below the right costal margin is the right upper quadrant. Note that the left side of the diagram as you look at it on the paper represents the right side of the abdomen. Between the right and left upper quadrants lies the epigastrium. Inferior to or below the right and left flanks lie the right iliac fossa and the left iliac fossa. Between these lies the suprapubic area. All these areas are said to have contents; for example, in the right upper quadrant lie the liver and gall bladder. If a patient had an inflammation of the gall bladder, which is known as cholecystitis, you would expect to get pain in this area. Similarly, pain in the right iliac fossa could be caused by appendicitis, as the appendix is found in this region.

Section III

Now let's look at some of the more common terms you will encounter. Words ending in -ostomy, that's O-S-T-O-M-Y, mean 'opening onto the skin'. For example, a colostomy means that the colon is opened onto the skin. Similarly, a gastrojejunostomy is the result of making a communication between the stomach and a loop of jejunum. Another common ending is -plasty, that's P-L-A-S-T-Y. This means refashioning something to make it work. For example, pyloroplasty means surgically altering the size of the pylorus, which is the outlet of the stomach. The ending -ectomy, that's E-C-T-O-M-Y, means cutting something out. For instance, appendectomy literally means cutting out the appendix. The last ending that I'll mention today is -otomy, O-T-O-M-Y, which means cutting something open; laparotomy means cutting open the abdomen. If you remember what these endings mean, you will be able to understand words which contain them, even if the words are totally new to you.

Section IV

Now look at the second diagram. This shows a number of lines which represent incisions. An incision is an opening cut in the skin — in this case in the anterior abdominal wall — through which an operation is performed. Particular incisions are used for particular operations. For example, the incision used for extracting the gall bladder (the operation of cholecystectomy) is an oblique inci-

sion below the right costal margin. It is called Kocher's incision after the surgeon who first described it. The mid-line or laparotomy incision lies in the mid-line, as its name suggests, although the cut by-passes the umbilicus. The Pfannenstiel incision is a horizontal line lying across the suprapubic region. The Gilchrist incision used for appendicectomies lies in the right iliac fossa. The right paramedian incision lies to the right of the mid-line. The loin incision is used in renal, or kidney, surgery and lies in the upper quadrant and flank regions. Nearly all abdominal operations will use one of these incisions that I've listed.

MEDICAL RESEARCH

Section I

Good morning, ladies and gentlemen. Today I'm going to talk about how to do research in medicine. We'll take the subject step by step and I'll explain how to set up a research project. Right, then. The first thing you have to do is find a subject that interests you and think of an idea. This usually involves thinking of some problem that you would like to look at or test in some way. You may find your ideas from what is going on around you, or you may develop them from reading textbooks or other people's research. Secondly, you have to formulate a testable hypothesis! This means that you make a specific statement about the subject that you are going to try and prove or disprove in your research. At this point, it's important to find out exactly what is already known about the subject. So the third thing you have to do is a literature search. You can begin by looking in textbooks. Then you can ask the advice of someone who specializes in the subject. You can look in all the specialist journals to see what others have written, and these days there are special computer programmers to help you find what you're looking for. The literature search is important because there's no point in doing something that has been done fifty times before. It's difficult to think of completely new ideas and often you may find that someone else has thought of them first.

Section II

Let's assume that you've got a testable hypothesis and that it hasn't been looked at before. Now you have to design a way of testing it. You have to decide exactly what you are going to measure and what method you are going to use to measure it. You've also got to think about how many subjects you will need and how long you're going to do it for. There is no point in planning a huge project, because it's unlikely that you'll ever have the time or the money to finish it. Looking at the literature will help you design a method. When you've got this far, you should write a protocol. This is a detailed written plan of your research. You can use it for the next two steps in setting up your project: these are applying for ethical approval and funding. If the project involves forms of treatment, such as drugs, such as drugs, it is usually necessary to seek the approval of a

special body which looks at the ethics of the experiment and protects the interests of the patients. As far as funding is concerned, most research costs money. You may have to pay people to carry out the research, to take part in it, or to analyse the results. Even simple things like paper and getting things typed cost money.

Section III

At this point, you should run a pilot project. This means that you do a limited smaller version of your project in order to see what difficulties you are going to have. Often these are things that you hadn't thought of. The pilot study can be very useful in allowing you to make changes to your method before it is too late. Finally, you get to run the main project and the hard work really begins. But what about when you've managed to gather all your data? Well, you still have to analyse them and work out what they mean. Then you have to try and write them up in a publishable form. This may take as long as all other steps put together. And there's no guarantee that all your hard work is going to produce anything interesting. It can be a hard life doing research.

THE FUTURE OF MEDICINE

Section I

Good afternoon! Today, I'm going to talk about some problems affecting health care systems in Western countries. Whilst I'll concentrate on issues affecting the British health service, other countries are confronting the same difficulties to a greater or lesser degree.

Section II

First amongst these are the demographic changes occurring in the West. As the average life expectancy slowly increases and the birth rate stabilises at a low level, the result is a shift in the age profile of the population. In other words, more people are old these days. The elderly, who no longer contribute to the creation of wealth, form a greater proportion of the population. They are intensive users of health care resources. The proportion of young people, whose tax payments finance all forms of welfare provision, is at the same time decreasing. The danger is that there may not be enough money available to support health care systems in their current form. This has resulted in a fundamental reconsideration of systems of health provision.

Section III

In Britain, recent government dogma has been that people should be encouraged to pay for their health care, rather than expect it from the state system. Some people could certainly afford to pay for health care, but the people who need the care most, such as the old and the chronically ill, are the ones least able to buy the care they need. And there are two, more fundamental, reasons why an increase in the private sector cannot provide a realistic solution to the funding

problem. The first is that increasing needs have to be met with increased resourced. A switch from public to private finance would not increase the overall total spent on care. And this is less in Britain as a percentage of gross national product than in most other West European countries or in the USA. The second reason is one of efficiency. It is a simple fact that the public health care system in Britain is more efficient and cost-effective than any other health system, public or private. And it's noticeable that private health care companies are not interested in competing over most of the field of health care, because there is no money in it.

Second IV

There is, however, another more forward-looking approach to health care. This is idea of prevention. If sickness and disease are expensive, than it will be cheaper to prevent them where this can be done. The initiation of preventative policies requires major changes in society with attention turned to such matters as nutrition, housing, environment and working conditions. Unfortunately, this conflicts with the interests of businessmen and politicians who deal principally with short-term profit rather than long-term gain. At present, the political will to bring about social change in the interests of health is largely lacking. But the realities of the situation suggest that it is unlikely to remain so.

CONTENTS

ILLNESS AND DISEASE	4
COMPOSITION OF FOODSTUFFS	12
DRUG ABUSE	19
AIDS	25
ACTION OF DRUGS	35
MAKING A DIAGNOSIS	42
HUMAN HEREDITY	50
PSYCHIATRIC ILLNESSES	55
STRIDOR	66
HEART FAILURE	74
THE TREATMENT OF CANCER	87
LANGUAGE OF SURGERY	93
THE MEDICAL RESEARCH	105
THE FUTURE OF MEDICINE	110
TAPESCRIPT	117

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