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The chair of Foreign Languages

MEDICINE

Manual of English for medical students

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Данное учебное пособие предназначено для студентов-медиков 1 и 2 курсов, продолжающих изучение английского языка в вузе, и является частью как обязательных, так и элективных учебных материалов программы. Цель данного пособия — подготовить студентов к осознанному восприятию и пониманию оригинальных медицинских аудиотекстов и развитие навыков общения на английском языке на материале лекций.

Утверждено и рекомендовано к изданию Центральным учебным научно-методическим советом учреждения образования «Гомельский государственный медицинский университет» 11 апреля 2008 г., протокол № 5.

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ПРЕДИСЛОВИЕ

Данное пособие предназначено для студентов-медиков 1 и 2 курсов, продолжающих изучение английского языка в вузе, и является частью как обязательных, так и элективных учебных материалов программы. Цель данного пособия — подготовить студентов к осознанному восприятию и пониманию оригинальных медицинских аудиотекстов и развитие навыков общения на английском языке на материале лекций.

Тематика текстового материала соответствует основным требованиям программы и обусловлена уровнем профессиональной подготовки студента-медика с опорой на такие профилирующие дисциплины, как анатомия, физиология и патологическая физиология. Темы пособия разработаны преподавателями кафедры иностранных языков УО «Гомельский государственный медицинский университет» Н. М. Ильиной, И. Н. Киселевич, А. Ф. Максименко, И. Ю. Моисеенко, О. А. Пристромовой, Н. А. Швец, А. А. Шиханцовой.

Данное учебно-методическое пособие составлено на основе лекций, представленных в книге D. V. James «Medicine». Были отобраны наиболее актуальные и значимые аудиотексты в рамках учебной программы. 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 студентов дисциплин профессиональной направленности, тем самым активизируют фоновый языковой и междисциплинарный запас.

Некоторые лекции сопровождаются наличием диаграмм, таблиц и графиков, что значительно облегчает непосредственное восприятие аудиотекста. Обязательным заданием каждой лекции является создание учебной коммуникативной ситуации, которая стимулирует студентов 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	[`fʌŋkʃən]
2. infection	[ɪn`fekʃən]
3. microorganism	[`maɪkrəu`ɔ:gənɪzm]
4. microscope	[`maɪkrəuskəup]
5. symptom	[`sɪmptəm]
6. hypertension	[`haɪpə(:)`tenʃən]
7. ophthalmoscope	[ɔfˌθælmə`skɔup]
8. subjective	[səb`ʤektɪv]
9. abnormal	[æb`nɔ:məl]
10. clinical	[`klɪnɪkəl]
11. diagnosis	[ˌdaɪəg`nəusi:z]
12. tablet	[`tæblɪt]
13. instrument	[`ɪnstrumənt]
14. patient	[`peɪʃənt]
15. problem	[`prɔbləm]

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 therapeutist 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 ____.

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

you might think	вы не можете чувствовать
it can be measured	доктор мог найти
you may not have heard	вы можете предотвратить
you can't feel	это можно измерить
you can see	вы можете подумать
the doctor may find	вы можете увидеть
you can prevent	вы можете не слышать
	доктор может найти
	вы могли бы подумать
	вы могли не слышать

Name the modal verbs used in:

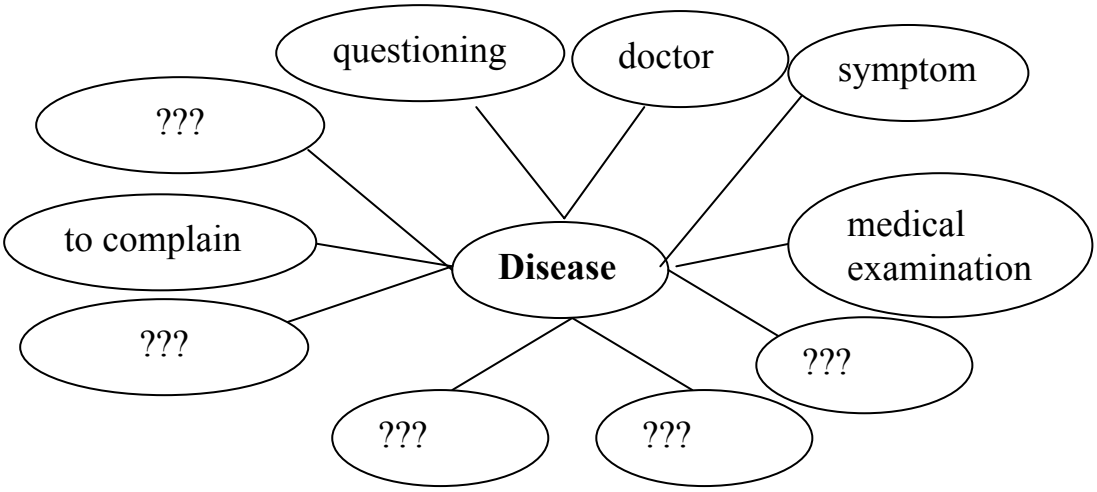
a) the Past form; b) the Perfect form; c) the Present form; d) the Passive form; e) the Present negative form

IV. While listening you'll encounter some clinical terms. Explain their meaning.

microorganism; hypertension; ophthalmoscope; microscope

The following terminological elements will help you:
micro-: small in size; small in amount;
ophthalm-: eye;
-*scopia*: examination of the inner organs with special instruments
-*tensio*: blood pressure
hyper-: increasing

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



Listening

VI. Now you are going to hear the lecture divided into four sections. The list of new vocabulary given below will help you understand it. During the pause after each section you'll have to

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

Section I

1. New Vocabulary

1. synonymous	[sɪ`nɔnɪməs]	синонимичный
2. experience	[ɪks`pɪərɪəns]	опыт, переживание
3. to accompany	[ə`kʌmpənɪ]	сопровождать, сопутствовать
4. disturbance	[dɪs`tə:bəns]	нарушение
5. cancer	[`kænsə]	рак
6. to measure	[`meʒə]	измерять, мерить

2. Questions
   - What will the talk be about?
   - What examples of disease does the lecturer give?
3. Key words: _____
4. Title: _____

Section II

1. New Vocabulary

1. weakness	[`wi:knɪs]	слабость
2. nausea	[`nɔ:sjə]	тошнота
3. complaint	[kəm`pleɪnt]	жалоба, недовольство
4. to result in	[rɪ`zʌlt]	кончаться, иметь результатом, привести к
5. to develop	[dɪ`veləp]	развиваться, распространяться
6. vessel	[`vesl]	сосуд
7. damage	[`dæmɪʤ]	вред, повреждение

2. Questions
   - What does "hypertension" mean?
   - What is the name of the instrument for examining eyes?
3. Key words:_____
4. Title:_____

Section III

1. New Vocabulary

1. sign	[`saɪn]	знак, признак, симптом
2. to report	[rɪ`pɔ:t]	сообщать, рассказывать
3. to involve	[ɪn`vɔlv]	включать в себя
4. to look for	[`lu:k]	искать
5. characteristic	[ˌkærɪktə`rɪstɪk]	характерный
6. pattern	[`pætən]	образец, модель, шаблон
7. to fit	[`fɪt]	приспосабливать, подгонять
8. jigsaw	[`ʤɪgsɔ:]	составная картинка-загадка

2. Questions

- What is the name of an abnormality found by a doctor when examining a patient?
- Name the process by which a doctor finds out what is wrong with a patient?

3. Key words: _____

4. Title: _____

Section IV

1. New Vocabulary

1. to occur	[ə`kə:]	случаться, происходить
2. heart attack	[`ha:t ə`tæk]	сердечный приступ
3. to prevent	[prɪ`vent]	предотвратить, предупредить
4. cure	[`kjuə]	вылечивать, исцелять
5. to afford	[ə`fɔ:d]	позволить себе
6. rare	[`rɛə]	редкий
7. notion	[`nəuʃən]	понятие, идея
8. descriptive	[dɪs`krɪptɪv]	описательный
9. palliative	[`pælɪətɪv]	паллиативный, смягчающий
10. to remove	[rɪ`mu:v]	устранить, удалить
11. to get rid of smth	[`rɪd]	избавиться от чего-либо

2. Questions

- What is cheaper, prevention or treatment?
- For what sort of disease are cures quite common?

3. Key words: _____

4. Title: _____

Post-Listening

VII. 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.

VIII. 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 ____.

IX. Listen to the lecture for the second time and dwell on the following ideas proving them with the concrete examples

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

X. 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.

XI. 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?

XII. 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

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

Illness	Disease	Symptom	Sign

cancer; bad electrocardiogram; pain in the heart; a sore throat; high blood pressure; swollen tonsils; the grippe; feeling tired; moist rales; a high temperature; quinsy; a bad cough; nausea; a red throat.

XIV. 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

THE COMPOSITION OF FOODSTUFFS

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

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

II. Read and translate the following words and word combinations

1. molecule:	macromolecules, the way of representing molecules, molecules in living systems, molecules can be folded round in complex three-dimensional structures, three main types of macromolecules in foodstuffs, proteins are made up of smaller molecules, the macromolecules are broken down
2. constituent:	chemical constituents, to write the letters of the constituents down in formulae, to break down into constituent molecules
3. bind:	bound, when two atoms become bound together
4. bond:	a chemical bond, a certain number of bonds, each line representing a chemical bond
5. element:	the smallest possible particles of an element, elements in nature, the chemical combination of two or more elements, the elements are represented by symbols, the elements are joined together by lines
6. compound:	a compound is a substance made by the chemical combination of two or more elements, compounds can be represented in two ways
7. dimension:	dimensional, two-dimensional pictures
8. acid:	amino acids, fatty acids
9. contain:	the cell which contains the genetic code, to contain both amino and acid groups
10. find:	to be found, proteins are found in meat and some plant foodstuffs such as beans, sugars are found mainly in plants
11. compose:	composed, fats are composed of fatty acids, the atom is itself composed of smaller particles, to break down the structural protein of which the tissues are composed
12. fold:	molecules can be folded round in complex three-dimensional structures
13. to break down:	macromolecules are broken down into their constituent molecules, sugars are broken down to form energy, to break down the structural protein

III. 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, истощаться, исчерпывать, распадаться, голодание, бензоловое кольцо, складываться, пространственный, богатая крахмалом пища, кушанье из круп, продукты питания, обозначать, связанный.

IV. 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 ... .

V. 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.

VI. 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.
3. The atom is itself composed	3. very large and can be folded round in complex three-dimensional structures.
4. A compound is a substance	4. how an organism grows or develops.
5. Compounds can be represented	5. the structure formed when two atoms become bound together.
6. Each atom of an element	6. of every cell which contains the genetic code.
7. The number for each type of atom is constant	7. because they contain both amino and acid groups.
8. The atoms may be joined together	8. obesity may result.
9. Molecules in living systems are often	9. in two ways.
10. DNA is the substance in the nucleus	10. to form energy in a process called glycolysis.

11. The genetic code determines	11. the smallest possible particles of an element.
12. Amino acids are given this name	12. in branching rows and also in rings.
13. Sugars are found mainly in plants especially	13. and is known as its valency.
14. Sugars are broken down	14. of smaller particles.
15. If too much fat or carbohydrate is eaten regularly,	15. the body will first of all use up its stores of fat.
16. If not enough food is eaten to provide energy,	16. in so-called starchy foods like cereals or root vegetables.

VII. 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?

VIII. Translate the sentences into English

1. Элементы соединяются линиями, каждая из которых представляет химическую связь.
2. Молекулы могут складываться в сложные трехмерные структуры.
3. ДНК — это вещество в ядре каждой клетки, которое содержит генетический код, который определяет, как организм растет и развивается.

4. Каждый атом элемента может иметь определенное число связей с другими атомами: это число для каждого типа атома постоянно и известно как валентность.

5. Белки содержатся в мясе и в таких растительных продуктах питания, как бобы.

6. Углеводы в основном содержатся в растениях, особенно в таких продуктах, содержащих крахмал, как хлебные злаки или корнеплоды.

7. Когда пища переваривается, макромолекулы распадаются на составные части и затем всасываются.

8. Сахара распадаются, чтобы выработать энергию в процессе, который называется гликолиз.

9. Жиры могут превращаться в сахар, глюкозу в печени.

10. Регулярное употребление в пищу большого количества жира или углеводов может привести к ожирению.

11. Если съедается недостаточно пищи для обеспечения организма энергией, организм будет, прежде всего, использовать запасы жира.

12. Человек может истощиться и скоро почувствует результаты голодания.

DRUG ABUSE

I. Memorize the vocabulary of the lecture

1. to confuse	[kən´fju:z]	1. смешивать, спутывать
2. confusing	[kən´fjuzıŋ]	2. путающий
3. to imply	[ımp´laı]	3. подразумевать
4. judgement	[´ʤʌʤmənt]	4. суждение, мнение
5. harmful	[´ha:mful]	5. вредный
6. illegal	[ı´li:g(ə)l]	6. нелегальный, незаконный
7. to vary	[´vɛərı]	7. разниться, расходиться
8. to allow	[ə`lau]	8. позволять
9. to require	[rı`kwaıə]	9. требовать
10. damage	[´dæmıʤ]	10. повреждение
11. relationship	[rı´leıʃnʃıp]	11. связь, отношение
12. dependence	[dlı´pendəns]	12. зависимость, подчинение
13. to regard	[rı´gɑ:d]	13. считать
14. indespensable	[ındıs´pensəbl]	14. совершенно необходимый
15. prop	[prɔp]	15. опора
16. to motivate	[´moutıveıt]	16. побуждать, мотивировать
17. to concern	[kən´sə:n]	17. интересоваться, беспокоиться
18. addiction	[æ´dıkʃ(ə)n]	18. наркомания, зависимость

19. addictive	[æ´dıktlv]	19. вызывающий зависимость
20. due to	[dju:]	20. благодаря, из-за
21. withdrawal effect	[wıð´drɔ:əl ı´fekt]	21. синдром отмены
22. available	[ə´veıləbl]	22. имеющийся в распоряжении, наличный
23. huge	[hju:ʤ]	23. огромный
24. amount	[ə´maunt]	24. количество
25. crime	[kraım]	25. преступление
26. enormous	[ı´nɔ:məs]	26. огромный
27. to abuse	[ə´bju:z]	27. злоупотреблять
28. abuse	[ə´bjus]	28. злоупотребление

II. Practise the pronunciation

terminology	[tə:mı´nɔlɔʤı]
moral	[´mɔrəl]
legality	[lı:´gælıtı]
psychological	[ˌsaıkə´lɔʤıkəl]
physical	[´fızıkəl]
chemical	[´kemıkəl]
effect	[ı´fekt]
heroin	[´herɔın]
cocaine	[kə´keın]
alcohol	[´ælkəhɔl]
tobacco	[tə´bækɔu]
economic	[I:kə´nɔmIk]
tranquilizer	[ˌtræŋkwə´laızə]

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); caoncern (v); adict, wide (adj); danger (adj); abuse (v)

IV. Read and translate the following words and word combinations

a) term: common terms, terminology;

b) harm: to do harm, harmful, to cause physical harm;

c) damage: to cause the damage, to damage the relationship;

d) dependence: psychological dependence, physical dependence;

e) effect: chemical effect, withdrawal effect, due to a direct effect, chemical effect on the body;

f) addiction: physical addiction, addictive;

g) abuse: drug abuse, abused, the greatest drug abuse problem;

h) in a way, to mix up, at times, at other times, to a degree, to do without, as well as.

V. 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.

VI. 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

VII. Match the antonyms.

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

VIII. Find in the text the sentences with

a) Passive Voice; b) Modal Verbs

IX. 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?

X. 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 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 ... death, disease, crime, family break-... .

XI. 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 ... .

XII. 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.

XIII. Speak on the topic

The problem of drug abuse.

AIDS

PART I

I. Practise the pronunciation

1. acquired	[ə´kwaıəd]	9. carinii	[kə´ri:nii]
2. immunodeficiency	[i´mjunədi´fiʃənsi]	10. circumstance	[´sə:kəmstəns]
3. chronic	[´krɔnik]	11. immune	[i´mju:n]
4. virus	[´vəirəs]	12. previously	[´pri:vjəsli]
5. surprisingly	[sə´praiziŋli]	13. curiously	[´kjuəriəsli]
6. extremely	[iks´tri:mli]	14. although	[ɔ:l´ðɔu]
7. cancer	[´kænsə]	15. isolated	[´aisəleitid]
8. pneumocystis	[nju:mə´sistis]		

II. Learn the following words

1. to acquire	[ə´kwaiə]	1. приобретать
2. immunodeficiency	[i´mjunədi´fiʃənsi]	2. иммунодефицит
3. virus	[´vairəs]	3. вирус
4. to destroy	[dis´trɔi]	4. разрушать
5. to recognize	[´rekəgnaiz]	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´vɔlv]	10. поражать, вовлекать
11. responsible for	[ris´pɔnsəbl]	11. ответственный за
12. to isolate	[´aisəleit]	12. изолировать, выделить
13. to happen	[´hæpən]	13. происходить

III. Translate the following into Russian

1. *to acquire:* a habit, to acquire knowledge, to acquire skills, to acquire experience, acquired, acquisition;

2. *virus:* an unknown virus, different viruses, an unusual virus, to reveal virus, viral;

3. *to destroy:* to destroy the virus, to destroy the immune system, to destroy the house, to destroy the cells, destroyed, destroying;

4. *to recognize:* to recognize quickly, to recognize slowly, to recognize at once; to recognize by sight, I didn't recognize you, recognized; recognition;

5. *surprisingly:* surprisingly high, surprisingly low, surprisingly unusual, surprisingly rich, surprisingly poor, surprisingly large, surprise, surprising;

6. *rare:* a rare disease, a rare symptom, a rare syndrome, a rare book, a rare form, rarely, rarity;

7. *circumstance:* normal circumstance, bad circumstances, good circumstances, unusual circumstances, rare circumstances;

8. *curiously:* curiously interesting, curiously experienced, curiously destroyed, curiously independent, curiously rare, curious, curiosity;

9. *to involve:* to involve the whole system, to involve the knee, to involve everybody;

10. *responsible for:* responsible for the treatment, responsible for the children, responsible for care, responsible for disease, responsibility;

11. *to isolate:* to isolate the virus, to isolate completely, to isolate partly, isolated, isolation.

IV. 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

V. 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

VI. 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.

VII. 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.

VIII. Answer the questions

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

IX. 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.

PART II

I. Practise the pronunciation

through	[θru:]
sexual	[ˊsekʃuəl]
unborn	[ʌnˋbɔ:n]
asymptomatic	[æsimptəˊmætik]
generalized	[ˊʤenərəlaizd]
lymphadenopathy	[limfədiˊnɔ:pəθi]
prognosis	[prɔgˊnousis]
outcome	[ˊautkʌm]

II. Learn the following words

1. to share	[ʃɛə]	1. разделять
2. needle	[ˊni:dl]	2. игла
3. to inject	[inˊʤekt]	3. вводить (лекарство)
4. accidental	[æksiˊdentəl]	4. случайный
5. to carry	[ˊkæri]	5. нести
6. congenital	[kɔnˊʤenitl]	6. врожденный

7. course	[kɔ:s]	7. течение
8. to continue	[kən´tinju:]	8. продолжать
9. stage	[steidʒ]	9. стадия
10. node	[noud]	10. узел
11. tumour	[´tju:mə]	11. опухоль
12. weak	[wi:k]	12. слабый
13. to resist	[ri´zist]	13. сопротивляться
14. eventually	[i´ventʃuəli]	14. в конце концов
15. to discover	[dis´kʌvə]	15. обнаружить
16. to swell up	[swel]	16. опухнуть
17. to disappear	[disə´piə]	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. 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

V. 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

VI. Translate into English

Передача вируса, продукты крови, особенно (2 вар.), 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.

VII. Answer the questions

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

VIII. Give the full form of the words

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

IX. 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.

X. Translate into English.

1. ВИЧ медленно разрушает иммунную систему организма.
2. К 1981 было замечено большое число крайне необычных заболеваний.
3. В нормальных условиях эти болезни отмечались только у людей с разрушенной иммунной системой.
4. В 1983 г. был выделен вирус, отвечающий за эту болезнь.
5. Передача вируса происходит через кровь и её продукты.
6. Основные методы включают: половую активность, общее пользование зараженными шприцами, случайное переливание инфицированной крови и передача инфекции матерью, переносящей вирус. Течение болезни включает четыре стадии.
8. Когда человек инфицируется, он может несколько дней чувствовать себя нехорошо, как при сильной простуде.
9. Потом все симптомы исчезают.
10. На третьей стадии большинство лимфатических узлов опухает.
11. При самом СПИДе человек страдает от необычных инфекций и опухолей из-за неспособности им сопротивляться.
12. Человек умирает через год или два.
13. СПИД считается смертельным во всех случаях.

THE ACTION OF DRUGS

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

I.

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	['kɔmplɪkeɪt]	усложнять
6. to alter	['ɔ:ltə]	изменять, менять
7. response	[rɪs'pɔns]	ответ, отклик, реакция
8. poisonous	['pɔɪznəs]	ядовитый

II.

1. actually	['æktʃuəlɪ]	фактически, на самом деле
2. compliance	[kəm'plaɪəns]	согласие; податливость, уступчивость
3. obvious	['ɔbvɪəs]	очевидный, ясный
4. point	[pɔɪnt]	момент, дело, вопрос, пункт
5. pound	[paund]	фунт (453,6г)
6. worth	[wə:Θ]	цена, стоимость, ценность
7. at (some) point		в какой-то момент
8. presume	[prɪ'zju:m]	предполагать, допускать
9. composition	[ˌkɔmpə'zɪʃən]	состав
10. formulation	[fɔ:mju'leɪʃən]	состав, формула

III.

1. gut	[gʌt]	кишка, пищеварительный канал
2. bloodstream	[blʌdstrɪm]	кровяное русло, кровоток
3. to break down	[breɪkdaun]	разрушать(ся), распадаться
4. bowel	['bauəl]	кишка
5. to interfere	[ˌɪntə'fɪə]	вредить, мешать, быть помехой
6. to affect	[ə'fekt]	воздействовать, влиять
7. largely	['lɑ:ʤlɪ]	значительно
8. to absorb	[əb'sɔ:b]	всасывать, абсорбировать, поглощать

IV.

1. distribution	[ˌdɪstrɪ'bju:ʃən]	распределение
2. to distribute	[dɪs'trɪbju:t]	распределять, распространять
3. tissue	['tɪʃu:]	ткань
4. to diffuse	[dɪ'fjuz]	распространять, диффундировать
5. to attach	[ə'tætʃ]	прикреплять, присоединять
6. to increase	[ɪn'kri:z]	возрастать, увеличиваться
7. amount	[ə'maunt]	количество
8. to bind, (bound, bound)	[baɪnd]	связывать, задерживать
9. sort	[sɔ:t]	сорт, вид
10. to compete for	[kəm'pi:t]	состязаться, соревноваться, конкурировать из-за (ради)
11. initially	[ɪ'nɪʃəlɪ]	в начальной стадии, в исходном положении
12. otherwise	['ʌðəwaɪz]	или же, в противном случае
13. to release	[rɪ'li:s]	освобождать
14. once	[wʌns]	(для усиления) сто́ит ...
15. elimination	[ɪˌlɪmɪ'neɪʃən]	удаление из организма
16. excretion	[eks'kri:ʃən]	выделение
17. to decline	[dɪ'klaɪn]	ухудшаться, уменьшаться
18. dosage	['dɔusɪʤ]	дозировка; доза
19. to require	[rɪ'kwaɪə]	требовать, нуждаться
required		необходимый, обязательный

II. 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

III. Read and translate the following words and word combinations

1. *to absorb*: the process of absorption; most drugs are absorbed; they can be absorbed;

2. *to affect*: the factors which affect the action of a drug; to affect concentrations in the body; to affect the elimination of any drug; to affect the levels of drug achieved by a given dose; the disease will affect absorption of the drug;

3. *to interfere*: a drug which interferes with the function of the kidney; any disease that interferes with the liver; any disease that interferes with the small bowel; the end of the matter; in fact; at some point; otherwise; once; in other words.

IV. 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

V. Find in the text the sentences with

a) Passive Voice

b) Modal Verbs

c) Future Indefinite

VI. Give the definition of the following notions

— compliance

— formulation

— absorption

— distribution

— elimination

VII. 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?

VIII. 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.

IX. 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 ... .

X. Translate into English

1. Вам нужно изменять дозировку лекарства согласно реакции пациента.
2. Некоторым пациентам нужны лекарства в таких дозах, которые для других 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. Стоит лекарству абсорбироваться в кишечнике, кровь, в которой оно содержится, должна пройти через печень до поступления в большой круг кровообращения.
8. Попав в организм, лекарство распределяется по тканям.
9. Некоторые белки связывают два вида лекарства, но предпочитают один вид другому.
10. Если белок в начальной стадии связан с первым видом лекарства, а затем в кровотоке появляется второй вид, белки освобождают первый медикамент.
11. Белок, который связывает лекарство, вырабатывается печенью.
12. Обмен веществ происходит в печени, которая 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	[`elɪmənt]
2. information	[ˌɪnfə`meɪʃən]
3. diagnosis	[ˌdaɪəg`nəusɪs]
4. physical	[`fɪzɪkəl]
5. special	[`speʃəl]
6. logical	[`lɔʤɪkəl]
7. process	[`prəusəs]
8. detail	[`di:teɪl]

9. symptom	[`sɪmptəm]
10. personal	[`pə:snl]
11. social	[`səuʃəl]
12. medicinal	[me`dɪsɪnl]
13. organ system	[`ɔ:gən `sɪstəm]
14. service	[`sə:vɪs]
15. expert	[`ekspə:t]
16. list	[`lɪst]
17. radiological	[ˌreɪdɪə`lɔdʒɪkəl]
18. contrast	[`kɔntrəst]
19. injection	[ɪn`dʒekʃən]
20. structure	[`strʌktʃə]
21. instrumental	[ˌɪnstu`mentəl]

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

1. cardiovascular	[ˌka:dɪə`væskju:la:]
2. gastro-intestinal	[`gæstrəɪn`testɪnəl]
3. neurological	[njuərə`lɔdʒɪkəl]
4. haematology	[ˌhi:məu`tɔlədʒɪ]
5. biochemistry	[`baɪə`kemɪstrɪ]
6. microbiology	[`maɪkrəubaɪ`ɔlədʒɪ]
7. microorganism	[`maɪkrəu`ɔ:gənɪzm]
8. histology	[hɪs`tɔlədʒɪ]
9. interior	[ɪn`tɪərɪə]
10. angiography	[`ændʒɪ`ɔgræfɪ]
11. axial	[`æksɪəl]
12. tomography	[tə`mɔgræfɪ]
13. gastroscopy	[gæs`trɔskəpɪ]
14. oesophagus	[ɪ`sɔfəgəs]

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?

Listening

VI. Now you're going to hear the lecture divided into four sections. Below you are given a list of new vocabulary and some tasks to each section

A. Section I

1. New Vocabulary

1. to gather	[`gæðə]	собирать
2. investigation	[ɪnˌvestɪ`geɪʃn]	исследование
3. to approach	[ə`prəutʃ]	приближаться, подходить

4. account	[ə`kaunt]	счёт, мнение, оценка
5. to seek	[`si:k]	искать, разыскивать
6. clarification	[ˌklærıfı`keıʃn]	прояснение, объяснение
7. character	[`kærıktə]	характер
8. duration	[djuə`reıʃn]	продолжительность
9. previous	[`pri:vjəs]	предыдущий
10. circumstance	[`sə:kəmstəns]	обстоятельство, случай
11. stage	[`steıʤ]	стадия, этап, ступень
12. to be likely	[`laıklı]	вероятно

2. Dwell on the key ideas of the section
   a. History-taking begins …..
   b. The doctor seeks …..
   c. There follows questioning …..

B. Section II

1. New Vocabulary

1. to confirm	[kən`fə:m]	подтверждать
2. to refine	[rı`faın]	очищать, повышать качество
3. to conduct	[kən`dʌkt]	вести, проводить
4. standardized	[`stændədaızd]	стандартизированный
5. appearance	[ə`pıərəns]	внешний вид
6. in turn	[`tə:n]	по очереди
7. to affect	[ə`fekt]	действовать, влиять
(un)affected		(не)поражённый болезнью
8. to explore	[ıks`plɔ:]	исследовать, изучать
(un) explored		(не)изученный
9. to miss	[`mıs]	попускать, упускать
10. to discover	[dıs`kʌvə]	обнаружить, раскрыть, узнать
11. pattern	[`pætən]	образец, модель
12. abnormality	[ˌæbnɔ:`mælıtı]	аномалия
13. to indicate	[`ındıkeıt]	указывать, показывать

2. Answer the questions
— What is the purpose of the physical examination?
— How does it begin?
— What is explored during the physical examination?

C. Section III

1. New Vocabulary

1. to obtain	[əb`teın]	получать, приобретать
2. to assist	[ə`sıst]	помогать, содействовать
3. investigative	[ın`vestıgətıv]	исследовательский
4. range	[`reınʤ]	линия, ряд

5. to call upon	[`kɔ:l]	вызывать, взывать
6. technician	[tek`nıʃən]	специалист
7. constituent	[kən`stıtjuənt]	составная часть
8. chemicals	[`kemıkəlz]	химические препараты
9. fluid	[`flu:ıd]	жидкость
10. to reflect	[rı`flekt]	отражать, показывать
11. to culture	[`kʌlʧə]	выращивать, разводить
12. sample	[`sa:mpl]	образец, проба
13. tissue	[`tıʃu:]	ткань

2. Explain the meaning of these special investigations
— Haematology
— Biochemistry
— Microbiology
— Histology

D. Section IV

1. New Vocabulary

1. imaging	[`ımıʤıŋ]	изображение
2. to be familiar with	[fə`mıljə]	знать что-либо
3. radioopaque	[`reıdıəu`peık]	рентген непроницаемый
4. to outline	[`autlaın]	обрисовать в общих чертах
5. nuclear	[`nju:klıə]	ядерный
6. labeled	[`leıbld]	маркированный
7. to delineate	[dı`lınıeıt]	изображать, описывать
8. available	[ə`veıləbl]	доступный
9. tool	[`tu:l]	инструмент
10. research	[rı`sə:ʧ]	исследование, изучение
11. to visualize	[`vızjuəlaız]	делать видимым
12. flexible	[`fleksəbl]	гибкий, эластичный
13. fibreoptic	[`faıbə`ɔptık]	фиброоптический
14. similar	[`sımılə]	подобный, похожий
15. orifice	[`ɔrıfıs]	отверстие

2. Speak on the key elements of the section
1. Radiological techniques
a. X-ray
b. ultrasound
c. contrast imaging (e.g. angiography)
d. nuclear imaging
e. highly specialized techniques
— computerized axial tomography (CT scanning)
— nuclear magnetic resonance (NMR scanning)

— positron emission tomography (PET scanning)

2. Specialized instrumental techniques (e.g. gastroscopy)

Post-Listening

VII. 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).

VIII. 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.

IX. Listen to the lecture for the second time 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?

X. 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.

XI. 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 epigastrial 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)?

XII. 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

I. Memorize the vocabulary of the lecture

1. heredity	[hə`rediti]	1. наследственность
2. influence	[`influəns]	2. влияние
3. to transmit	[trænz`mit]	3. передавать, отправлять
4. offspring	[`ofspriŋ]	4. отпрыск, потомок
5. inheritance	[in`heritəns]	5. наследство
6. determine	[di`tə:min]	6. определять, устанавливать
7. chain	[`ʧein]	7. цепь, цепочка
8. sufficient	[sə`fiʃiənt]	8. достаточный
9. concern	[kən`sə:n]	9. забота, беспокойство

10. to divide	[di`vaid]	10. делить
11. ovary	[`ɔuvɔri]	11. яичник

II. Practise the pronunciation

chromosomes	[`krɔuməsəum]
gametes	[`gæmit]
technique	[tek`nik]
gene	[ʤen]
genetic	[ʤə`netik]
duplicate	[`djuplikeit]
embryo	[`embriɔu]
anaemia	[ə`ni:miə]
dominant	[`dominənt]
chorea	[kə`riə]

III. Read and translate the following words and word combinations

a) divide: division, cells divide

b) chain : chain of genes, chain of mountains; polypeptide chains;

c) heredity: human heredity, hereditary disease, inheritance, heredity information;

d) influence: under the influence of something, heredity has an influence on character;

e) transmit: to transmit information, blood transmission, radio transmission;

f) determine: determinative, determination;

g) gene: genetic information, abdominal gene;

IV. 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, передавать своему потомку, наследственность влияет на здоровье (характер).

V. Find in the text the sentences with

a) Passive Voice

b) Modal Verbs

VI. 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?

VII. 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 rodshaped 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.

VIII. 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 … .

IX. 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 outosomes
   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 Huntingdon's chorea
c. one parent will be affected
d. 1 in 4 children will be affected

X. Speak on the topic

The problem of human heredity.

PSYCHIATRIC ILLNESSES

Part I

I. Memorize the vocabulary of the lecture

1. similar	[ˊsɪmɪlə]	1. схожий; подобный
2. order	[ˊɔ:də]	2. порядок; последовательность
3. mind	[maɪnd]	3. ум; разум
4. lump	[ˊlʌmp]	4. бугор; выступ; шишка
5. bump	[ˊbʌmp]	5. шишка; выпуклость
6. to prod	[pr ɔd]	6. наткнуться
7. power/powers	[ˊpauə]	7. сила; степень/способности; возможности
8. observation	[ˌɔbzə:ˊveɪʃn]	8. наблюдение; наблюдательность
9. skill	[skɪl]	9. умение; мастерство
10. appearance	[əˊpɪərəns]	10. внешность; наружность
11. behaviour	[bɪˊheɪvjə]	11. поведение; манеры
12. peculiar	[pɪˊkju:ljə]	12. необычный; странный; своеобразный
13. appropriate	[əˊprouprɪɪt]	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	[ˊbr ɔ:dka:st]	17. передавать по радио
18. content	[ˊkɔntənt]	18. содержание
19. false	[f ɔ:ls]	19. ложный; неверный; ошибочный
20. belief	[bɪˊlɪ:f]	20. убеждение; мнение; верование

21. to consider	[kən´sɪdə]	21. рассматривать; считать(-ся)

II. Practise the pronunciation

physical	[´fɪzɪkəl]
psychiatric	[ˌsaɪkɪ´ætrɪk]
abstract	[´æbstrækt]
to analyse	[´ænəlaɪz]
mania	[´meɪnjə]
schizofrenia	[ˌskɪtsə´frɪ:njə]
Mars	[mɑ:z]
delusion	[dɪ´lu:ʒn]

III. Read and translate the following words and word combinations

1. *psychiatric:* psychiatric illness; psychiatric clinic; psychiatrist [ˌsaɪ´kaɪətrɪst]; psychiatry [ˌsaɪ´kaɪətrɪ];

2. *power :* powers of observation; it's in your power to do it; he did everything in his power; powerful;

3. *to consider:* to consider one's speech; to consider the form of thoughts; to consider the content of thoughts;

4. *to make sense:* Does it make any sense? It doesn't make sense. His ideas make sense;

5. *belief:* strange belief; false belief; to believe;

6. *skill:* practical skills; skills in analysing; he examined the patient skillfully;

7. *appropriate:* appropriately; inappropriate; inappropriate reaction; inappropriate answer; inappropriate behaviour; inappropriate appearance.

IV. 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.

V. Match to the definitions

1. mental	a. what one can do
2. belief	b. the act of speaking
3. power	c. false belief
4. skill	d. the feeling that something is true or that something really exists
5. speech	e. concerning illness of the mind
6. delusion	f. practical knowledge

VI. Match the synonyms

1. appropriate	a. look
2. appearance	b. abilities
3. powers	c. to think
4. to consider	d. the same
5. similar	e. to change
6. to switch	f. suitable

VII. Match the antonyms

1. true	a. inappropriate
2. different	b. logical
3. suitable	c. false
4. illogical	d. fast
5. slow	e. similar

VIII. 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?

IX. 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.

X. 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.

XI. 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 ... .

XII. 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; поражать (о болезни)
13. insight	[´ɪnsaɪt]	13. понимание; проницательность
14. ability	[ə´bɪlɪtɪ]	14. способность; умение
15. to lack	[læk]	15. испытывать недостаток; не хватать
16. list	[lɪst]	16. список; перечень
17. to fit	[fɪt]	17. соответствовать; годиться
18. pattern	[´pætən]	18. образец; модель

II. Practise the pronunciation

hearing	[´hɪərɪŋ]
seeing vision	[´sɪ:ɪŋ] [´vɪʒn]
stimulus	[´stɪmjuləs]
auditory hallucination	[´ɔ:dɪtərɪ] [hə,lu:sɪ´neɪʃn]

depressed	[dɪ´prest]
process	[´prousəs]
concentration	[,kɔnsen´treɪʃn]
abnormality	[,æbnɔ:´mælɪtɪ]

III. Read and translate the following words and word combinations

1. *hallucination:* auditory hallucination; seeing hallucination; it's known as hallucinations;

2. *mood:* depressed mood; anxious mood; good mood; he is in no mood;

3. *to affect:* to affect the brain; to affect the spinal cord; to affect smb`s interests;

4. *sense:* the five senses (органы чувств); a sense of duty; a sense of humour; to make no sense;

5. *to lack:* to lack insight; to lack practice; to lack words;

6. *to fit:* to fit the symptoms in a pattern; this dress fits you; Does it fit him?

IV. 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.

V. Match to the definitions

1. disease	a. the experience of feeling unwell
2. perception	b. the ability to see the situation for what it is
3. hallucination	c. a perception in the absence of any form of stimulus
4. mood	d. a state of the feelings at a particular time
5. cognitive state	e. mental processes, such as memory and concentration
6. insight	f. what they are told by their senses
7. illness	g. a disturbance of the structure or function of part of the body

VI. Match the synonyms

1. disease	a. state
2. unique	b. anxious
3. smell	c. absence
4. sick	d. to indicate
5. worried	e. odour
6. lack	f. ill
7. to show; to point out	g. the only
8. condition	h. illness

VII. Match the antonyms

1. difficult	a. ill
2. healthy	b. normal

3. elated	c. absence
4. to forget	d. easy
5. presence	e. to remember
6. abnormal	f. depressed

VIII. 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?

IX. 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).

X. 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.

XI. 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 ... .

XII. 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

Variant I
Mania

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 because 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.

Variant II
Schizophrenia

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.

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

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 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.

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 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.

	Mania	***Schizophrenia***
Speech		
Thought		
Perceptions		
Mood		

Cognitive state		
Insight		

STRIDOR

PART I

I. Practise the pronunciation

1. stridor	[ˊstraɪdə]
2. acute	[əˊkju:t]
3. sign	[saɪn]
4. respiratory	[resˊpɪ:rətərɪ]
5. larynx	[`lærɪŋks]
6. trachea	[trəˊkɪə]
7. inspiratory	[ɪnsˊpɪ:rətərɪ]
8. wheeze	[wɪ:z]
9. expiration	[ˌekspaɪəˊreɪʃn]
10. benign	[bɪˊnəɪn]
11. threatening	[ˊθretənɪŋ]
12. croup	[kru:p]
13. epiglottitis	[əpɪgləˊtaɪtɪs]
14. obscure	[əbˊskjuə]
15. agioneurotic	[ˌəndʒɪənjuˊrɔtɪk]
16. oedema	[əˊdɪ:mə]
17. allergic	[ə`lə:dʒɪk]
18. viral	[`vaɪrəl]
19. typically	[ˊtɪpɪkəlɪ]
20. exhausted	[ɪgˊzɔ:stɪd]
21. deterioration	[dɪˊtɪərɪəˊreɪʃn]
22. intubation	[ɪntjuˊbeɪʃn]
23. insertion	[ɪn`sə:ʃn]

II. Learn the words

1. stridor	[ˊstraɪdə]	1. стридор
2. sign	[saɪn]	2. признак
3. harsh	[ha:ʃ]	3. жесткий
4. obstruction	[əbˊstrʌkʃn]	4. обструкция, блокада
5. noise	[nɔɪz]	5. шум
6. to differ (from)	[dɪfə]	6. отличаться (от)

7. wheeze	[wɪ:z]	7. стерторозное дыхание (свистящее)
8. to originate (from)	[ə´rɪʤɪneɪt]	8. происходить от
9. benign	[bɪ´naɪn]	9. доброкачественный
10. croup	[kru:p]	10. круп
11. epiglottitis	[əpɪglə´taɪtɪs]	11. эпиглоттит
12. obscure	[əb´skjuə]	12. неясный, непонятный
13. oedema	[ə´dɪ:mə]	13. отек
14. infancy	[´ɪnfənsɪ]	14. детство
15. viral	[´vaɪrəl]	15. вирусный
16. due to	[dju]	16. из-за
17. to cry	[kraɪ]	17. плакать
18. mild	[maɪld]	18. легкий
19. severity	[sɪ´verɪtɪ]	19. тяжесть
20. increase (in)	[ɪnk´rɪ:z]	20. увеличение
21. recession	[rɪ´seʃn]	21. смещение (рецессия)
22. to overcome	[ˌouvə`kʌm]	22. преодолеть
23. to exhaust	[ɪg`zɔ:st]	23. изнурять
24. deterioration	[dɪˌtɪərɪə´reɪʃn]	24. ухудшение
25. insertion	[ɪn`sə:ʃn]	25. введение
26. intercostatal	[ˌɪntə´kɔstəl]	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; to 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. oedema	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

V. Give the Antonyms

1. benign	a) expiration
2. deterioration	b) lower
3. mild	c) dicrease
4. increase	d) quietness
5. to exhaust	e) malignant
6. acute	f) to relax
7. upper	g) improvement
8. inspiration	h) chronic
9. noise	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 laringo-tracheo-bronchitis;
4) harsh inspiratory noise occuring 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 sudden beginning.
2. Stridor is one of the most important features of respiratory disease in children.
3. It is a 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 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 быть госпитализирован. 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´sɔuʃıetıd]
2. drooling	[`dru:lıŋ]
3. to swallow	[´swɔlɔu]
4. extremely	[ıks´trı:mlı]
5. mandatory	[´mændətərı]
6. pediatrician	[ˌpi:dıə´trıʃ(ə)n]
7. intubate	[`ıntju:beıt]
8. intravenous	[ıntrə´vı:nəs]
9. curious	[´kjuərıəs]
10. peanut	[´pı:nʌt]
11. culprit	[´kʌlprıt]
12. radiolucent	[´reıdıɔ´lu:snt]
13. proceed	[prə´sı:d]
14. laryngoscopy	[lə´rıŋgə´skəʊpı]
15. fibre-optic	[`faıbə`ɔptık]
16. visualize	[´vıʒjuəlaız]

II. Memorize the words

1. pattern	[pætn]	1. картина (здесь)
2. to associate with	[ə´souʃıeıt]	2. связывать с
3. to drool	[dru:l]	3. стекать (о слюне)
4. to swallow	[´swɔlou]	4. глотать
5. extremely	[ıks´tr:mlı]	5. крайне
6. dangerous	[´dendʒərəs]	6. опасный
7. to suspect	[səs´pekt]	7. подозревать
8. mandatory	[´mændətərı]	8. обязательный
9. to intubate	[`ıntjubeıt]	9. интубировать
10. completely	[kəm´plı:tlı]	10. полностью
11. toddler	[´tɔdlə]	11.
12. curious	[´kjurıəs]	12. любопытный
13. safety pin	[`seıftı`pın]	13. английская булавка
14. button	[bʌtn]	14. пуговица

15. fit	[fɪt]	15. приступ
16. peanut	[ˊpɪ:nʌt]	16. арахис
17. culprit	[ˊkʌlprɪt]	17.
18. radiolucent	[ˊreɪdɪɔˊlu:snt]	18. рентгенопрозрачный
19. to proceed	[prəˊsɪ:d]	19. продолжать
20. to visualize	[ˊvɪʒjuəlaɪz]	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; suspection; 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 case; curiosity;

10. *fit:* a short fit; a long fit; a bad fit; some severe fits; a fit of coughing; *to proceed:* to proceed to laryngoscopy; to proceed to X-ray examination;

11. *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 temperature.
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 temperature.
3. The child is sitting forwards drooling/drooled.
4. The condition is called acute/acutely epiglottitis.
5. It's an extreme/extremely dangerous condition.
6. Some pediatricians/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 Haemophilius influentae.
4. Многие дети интубируются из-за опасности полного закрытия отекшим надгортанником воздухоносного пути.
5. Лечение острого эпиглоттита — введение антибиотиков внутривенно.
6. Одна из частых причин стридора — вдыхание инородных тел.
7. Диагноз ставится после тщательного сбора 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 I

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, вздуваться;
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, раздуваться; 2) набухать, опухать;
17. *tender* — 1) нежный, мягкий; 2) чувствительный;
18. *to drop* — падать, снижаться

II. Practise the pronunciation

through	[`θru:]
although	[`ɔlðəu]
jugular vein	[`ʤʌgjulə]
an angle of 30^{o}	[`æŋgl]
oedema	[əu`di:mə]
appetite	[`æpitait]

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. Read and translate the following words and word combinations

1. *to fail*: to fail an attempt; to fail a plan; to fail in an examination; he failed in Anatomy; 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; please, release me; 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, 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. 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, высвобождать, происходить, вызывать, освобождаться от крови, раздуваться от крови, выдавливать, падать, сильный, сильнее, быть удаленным от, хотя.

VI. Match the synonyms

1. to be unable to do smth.	a. to decrease
2. ability to do smth.	b. occur
3. capable of smth.	c. prop up
4. to enlarge,extend	d. congestion
5. to reduce, lessen	e. to fail
6. stagnation	f. efficiency
7. intestine	g. squeeze
8. stretch apart	h. output
9. to free	i. tender
10. indication	j. to increase
11. to enlarge	k. sign
12. delicate, sensitive	l. gut
13. production	m. release
14. underlay,support	n. efficient
15. happen	o. drop
16. fall	p. distend

VII. Match the antonyms

1. to be a success	a. congestion
2. to capture	b. increase
3. reduce	c. release
4. passing	d. to fail

VIII. Listen to the first part of the lecture "Heart Failure". Try to get as much as possible

IX. Listen to the lecture and follow the text

X. Read and translate the text

XI. 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?
6. Why does weight loss often occur?
7. Why does urine output drop?

XII. 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.

XIII. 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 … .

XIV. Explain

1. what back pressure from the heart in right heart failure causes;
2. why the symptoms and signs of heart failure are generally distant from the heart itself.

XV. 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

XVI. 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

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	[`ɔ:dibl]
2. phenomenon	[fə`nmınən]
3. orthopnoea	[ɔ:`Θɔpnıə]
4. mechanism	[`mekənızm]
5. strength	[`streŋΘ]
6. ischaemic	[ıs`kı:mık]
7. coronary arteries	[`kɔ:rənərı `a:terız]
8. chronic anaemia	[`krɔnık ə`nı:mıə]
9. thyrotoxicosis	[ˌΘaırɔtoksı`kɔusıs]
10. exit	[`egzıt]
11. excess	[ık`ses]
12. excess	[`eksəs]

III. 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 to100 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.

IV. Match the synonyms

1. be out	a. eject
2. provide	b. supply
3. go out	c. leak
4. surplus	d. excess
5. scare	e. frighten
6. total quantity	f. amount
7. way out	g. exit

V. Match the antonyms

wide	a. excess
pull in	b. narrow
carry out	c. leak
shortage of	d. eject
be glad about	e. supply
flow	f. frighten
entrance	g. hypertension
hypotension	h. exit

VI. Listen to the second part of the lecture

VII. Listen to the lecture and follow the text

VIII. Read and translate the text

IX. 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.

X. 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. What are the symptomps of the left heart failure?
4. What can be found out with a stethoscope while examining a patient?
5. What kind of breathlessness comes on left heart failure?

6. What effect does left heart failure produce on right heart failure?

7. What is an increase in after-load?

8. What else decreases strength and efficiency of the heart? What happens when the heart muscle aches?

9. What is excessive pre-load? What does it cause?

XI. 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 … .

XII. Agree or disagree

1. Breathlessnes is worse when lying propped up in bed at an angle of 30 degrees.
2. An increase in after-load occurs only in hypertension.
3. In ischaemic heart disease there is increased pressure in the veins returning blood to the heart.
4. When coronary arteries become narrowed, the strength and efficiency of the heart decreases.
5. An excessive pre-load is caused by back pressure from the heart which is not clearing blood quickly enough.
6. This can occur when the heart valves become incompetent and blood which has already been pumped leaks back into the heart.
7. An excessive pre-load occurs in beri-beri, chronic anaemia and thyrotoxicosis.

XIII. Speak on the topics

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

THE TREATMENT OF CANCER

I. Memorize the vocabulary of the lecture.

1. cancer	[`kænsə]	1. рак
2. heading	[`hediŋ]	2. направление
3. site	[sait]	3. участок
4. tumour	[`tjumə]	4. опухоль
5. shed	[ʃed]	5. распространять
6. to resect	[ri`sekt]	6. производить резекцию
7. beam	[bi:m]	7. луч, пучок лучей
8. expansion	[iks`pænʃn]	8. распространение
9. resistance	[rizistəns]	9. сопротивление
10. postpone	[pɔust`pɔun]	10. откладывать
11. defence	[di`fens]	11. защита
12. divide	[di`vaid]	12. делить
13. misery	[`mizəri]	13. страдания, невзгоды
14. nausea	[`nɔsjə]	14. тошнота

II. Practise the pronunciation

cancer	[`kænsə]
cancerous	[`kænsərəs]
tumour	[`tju:mə]
laser	[`leizə]
genetic	[ʤə`netik]
engineering	[enʤi`niəriŋ]
biological	[baiə`lɔʤikl]
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. 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 воздействию радиации, волосы выпадают, иммунная система, генная инженерия, защита организма, надежда на будущее.

V. Find in the text the sentences with

a) Passive Voice

b) Modal Verbs

VI. 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 entirely?
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 cytoxic 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?

VII. 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.

VIII. 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 ….

IX. 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.

X. Speak on the topic

The problem of the treatment of cancer.

LANGUAGE OF SURGERY

Teacher: Dear friends, working at our texts about operations you have learned some interesting facts about the work of surgeons. You can use a lot of words and expressions about an operation.

Of course you remember these sentences: «The surgeon painted the operative field with iodine, covered the patient with sterile sheets leaving bare only the operative field. The surgeon made a midline abdominal incision with a scalpel».

Today we have a wonderful chance to listen to a part of the lecture delivered to English medical students. You will learn how surgeons name different parts of the abdomen and that besides a midline abdominal incision there are other kinds of incisions. You will also get acquainted with some word-building suffixes and endings that help to form a lot of other professional words.

We shall divide the lecture into two parts.

Part I

I. Memorize the vocabulary of the lecture

1. common	[`kɔmən]	1. обычный, общеизвестный
2. to represent	[repri`zent]	2. представлять, изображать
3. similar	[`similə]	3. похожий, сходный
4. contents	[`kɔntents]	4. содержание, содержимое
5. border	[`bɔ:də]	5. край, предельная линия на поверхности
6. margin	[`ma:dʒin]	6. край, полоса, граница
7. edge	[`ə:dʒ]	7. край, конечная линия, максимально удалённая от центра
8. inguinal	[`iŋgwinəl]	8. паховый
9. bottom	[`bɔtəm]	9. днище, подножие, внизу
10. above	[ə`bʌv]	10. наверху, выше, над
11. below	[bi`lɔu]	11. ниже, под
12. between	[bi`twi:n]	12. между

II. Practise the pronunciation

1. diagram	[´daıəgræm]
2. vertical	[´və:tıkl]
3. central	[´sentrəl]
4. lateral	[´lætərəl]

5. umbilical	[ˌʌmbɪˊlaɪəkl]
6. epigastrium	[əpɪˊgæstrɪəm]
7. suprapubic	[ˌsju:prəˊpju:bɪk]
8. cholecystitis	[kɔlɪsɪsˊtaɪtɪs]
9. area	[ˊɛərɪə]
10. quadrant	[ˊkwɔ:drənt]
11. iliac fossa	[ˊɪlɪək ˊfɔsə]

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. Read and translate. Learn the new words

1. *line*: lines, to draw a line from A to B; lines on the hand; air line; white/ starting line; a broken, contour, crooked, curved, dotted thin, thick, horizontal, parallel, perpendicular, straight, vertical line.

2. *side*: the left side, the right side; the sides of the abdomen; I sleep on my side; he tossed from side to side; we sat side by side; come and sit by my side; at the side of the road; write on both sides of the paper; on one side of the room; the sunny side of the street;to take somebody`s side.

3. *border*: the border of the forest, the border of the field, the border of the lake (граница леса, поля, озера); to draw a border, to establish a border, to cross a border; a closed, common, open, recognized, unguarded border; a border between.

4. *margin*: the margin of a forest (опушка леса), the margin of a lake (берег озера), the margin of a page, a wide or narrow margin; to make notes in the margins.

5. *edge*: at the edge of a field, at the edge of a forest (на краю поля, леса); cutting edge of knife; to be on edge = to be tense.

6. *top*: to reach the top of the mountain, we climbed to the top of the mountain, from top to bottom

7. *bottom*: the bottom of sea/ river/ box;there is a lake at the bottom of the hill; the bottom shelf; to get to the bottom of an affair = to clear up a matter.

8. *above* the room above, as stated above, above the sea level.

9. *below*: below the sea level, below the average, below zero, below the bridge.

10. *between*: she stood between them, it happened between 1 and 3 o'clock, between ourselves, between you and me.

11. *common*: common facts, common terms, a common error, this word is in common use, it is common knowledge that…

12. *represent*: represent interests, represent groups of people, represent a country

13. *contents*: the contents of the book, the contents of the story, the contents of the abdomen

V. 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, надчревье, лобковая область, содержимое.

VI. Match the synonyms

1. usual	1. edge
2. margin	2. the lower border of the ribs
3. the top	3. common
4. side	4. below
5. the bottom	5. line
6. area	6. the lower part
7. costal margins	7 .region
8. inferior	8. the highest point

VII. Match the antonyms

1. upper	1. below
2. above	2. superior
3. inferior	3. at the bottom
4. at the top	4. lower
5. rare	5. common

VIII. Listen to the first part of the lecture

IX. Read and translate the text of the lecture

X. 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?

XI. 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).

XII. Complete the sentences

1. Diagram (a) shows … . The six sides of the diagram represents … .The upper sides are … The vertical lines are … .The two lines at the bottom are … .

2. The abdomen is divided into 9 areas: … .The right side of the diagram represents … .Each area has its … .

XIII. 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

I. Memorize the vocabulary

1. to encounter	[ɪn`kauntə]	1. встречать, наталкиваться
2. communication	[kəmjunɪ`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	[`toutl]	8. полный, абсолютный
9. particular	[pa:`tɪkjulə]	9. особый, особенный
10. oblique	[ɔb`li:k]	10. косой
11. loin	[`lɔɪn]	11. поясница
12. grid-iron	[`grɪd`aɪən]	12. разрез по сетке

II. Practice the pronunciation

1. jejunum	[dʒə`dʒu:nəm]
2. pyloroplasty	[`paɪlɔrə`plæstɪ]
3. though	[`ðru:]
4. although	[`ɔ:lðɔu]
5. Kocher	[`kɔhə]
6. Pfannenstiel	[`fænənʃtɪəl

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. Give English equivalents

Встречать общеизвестные термины, это слово означает, переделка, чтобы оно заработало, изменение размера хирургическим путем, буквально оз-

начает, удаление, даже если; назван в честь, как предполагает само название, особый разрез, особая операция, косой разрез, огибать, поясничный.

V. 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	вскрытие свища
7. to be called after	быть названным в честь
8. by-pass	обходить, огибать
9. lie across	лежать вдоль (поперек)
10. to the left of	налево от

VI. Match the synonyms

1. a midline incision	1. alter
2. remake	2. for instance
3. cut out	3. refashion
4. the end	4. similarly
5. special	5. remove
6. renal	6. encounter
7. meet	7. mention
8. for example	8. outlet
9. in analogy	9. particular
10. near	10. a laparotomy incision
11. change	11. kidney
12. say	12. para-

VII. Match the antonyms

1. obstruction	1. ending
2. straight	2. communication
3. on the contrary	3. common
4. beginning	4. oblique
5. rare	5. similarly

VIII. Listen to the second part of the lecture

IX. Read and translate the text of the lecture

X. 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?

XI. 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 … .

XII. 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.

XIII. 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

XIV. 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.

XV. In what operations these incisions are used

Kocher`s incision appendicectomy

Right paramedian	major abdominal operations
Grid-iron	cholecyctectomy
Laparotomy (midline)	renal surgery
Loin	
Pfannenstiel	

XVI. 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.

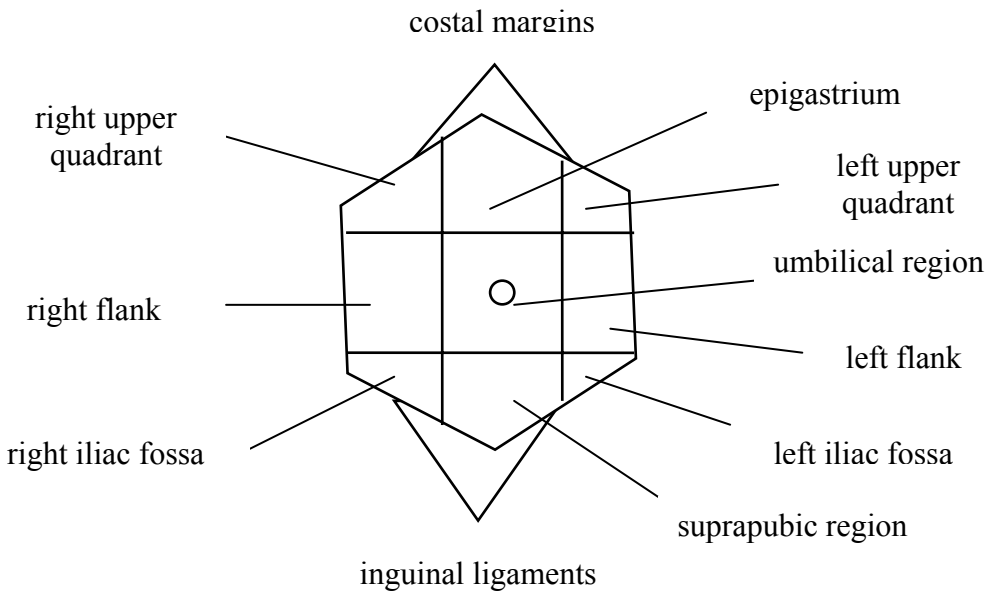
Additional exercise

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

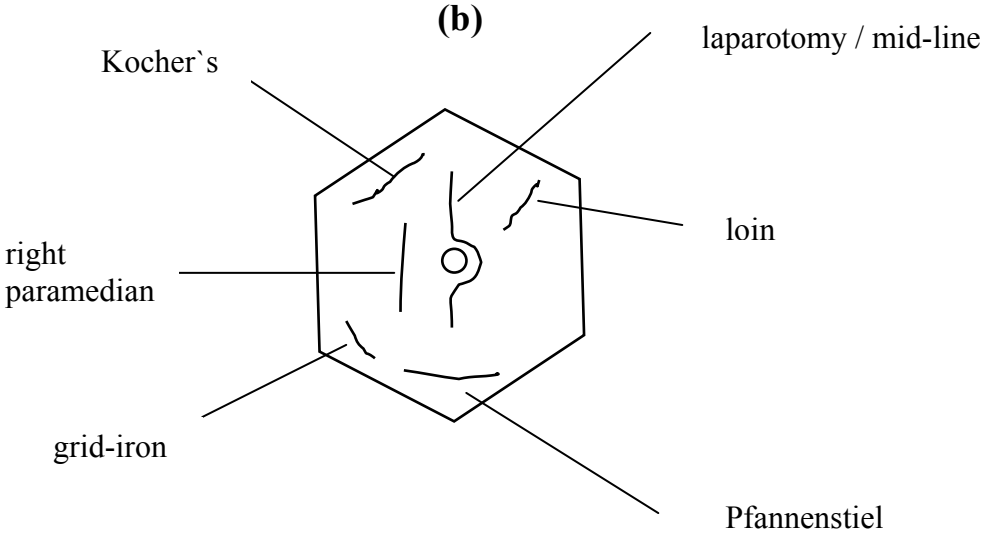
Laparotomy, thorocotomy, cerebellotomy, ureterotomy, pyelotomy, iridotomy, cerebrotomy, osteotomy, enterotomy, vagotomy, cervicotomy, thalamotomy, arthrotomy, gastrotomy, glossotomy, herniotomy, neurotomy, phlebotomy, valvotomy, tracheotomy, rectotomy, craniotomy, cleidotomy, vasectomy, colectomy, gastrectomy, pneumonectomy, cystectomy, urethrectomy, esophagectomy, nephrectomy, prostatectomy, costectomy, arthrectomy, ureterectomy, tonsillectomy, appendectomy, ilectomy, hysterectomy, orchidectomy, aneurismectomy, adenotomy, pneumonectomy, lobectomy, laminectomy, adrenalectomy, thymectomy, pancreatectomy.

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

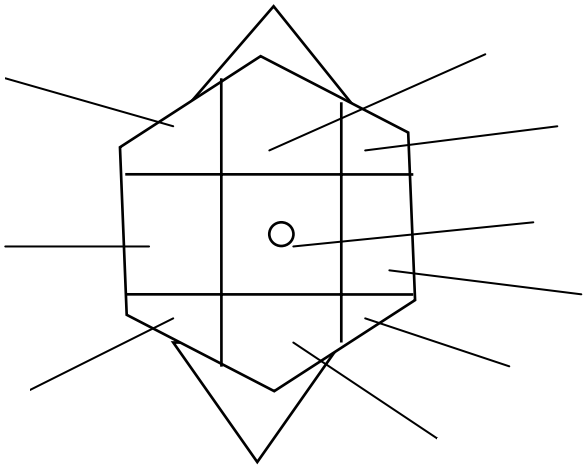
(a)



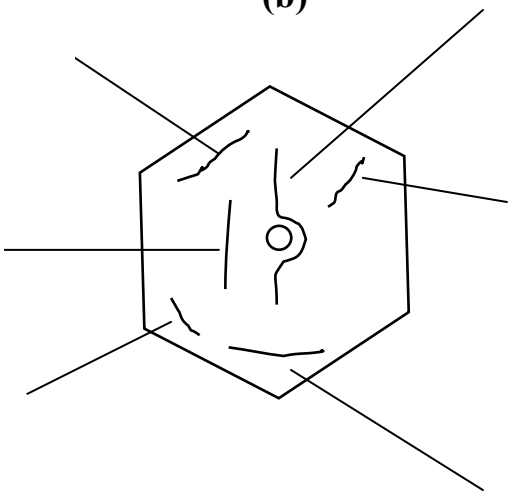
(b)


Kocher`s
laparotomy / mid-line
loin
right
paramedian
grid-iron
Pfannenstiel

(a)



(b)



THE MEDICAL RESEARCH

I. Memorize the vocabulary of the lecture

1. to set up		1. учреждать, устанавливать
2. hypothesis	[hai'pɔΘəsis]	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:ʧ]	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

III. 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.

IV. 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
4. A careful study or investigation, esp. in order to discover new facts or information.	search
5. To look carefully in order to find smth.	assume

V. 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 ...

VI. Find in the text sentences with

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

VII. Answer the questions

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 research?

VIII. 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.

IX. Translate into English

1. Где вы работаете/учитесь?
2. Вы лечите больных?
3. Над какой проблемой вы работаете?
4. Разрабатываете ли вы какой-либо новый научный проект?
5. Проводите ли вы обзор научной литературы?
6. Мы должны рассмотреть эти данные в свете новых научных открытий.
7. Тема моей научно-исследовательской работы очень актуальна.

X. Discuss with your group mates

1. 1.Have you got an idea that you would like to test?
2. It needn't be very complicated.
3. How would you set about testing it?
4. Give as much details as possible.
5. If you can't think of an idea, ask your scientific adviser to produce one for you.

THE FUTURE OF MEDICINE

I. Memorize the vocabulary of lecture

1. health care	[ˊhelθ kɛə]	1. здравоохранение
2. to affect	[əˊfekt]	2. воздействовать, затрагивать
3. to confront	[kənˊfrʌnt]	3. противостоять
4. average	[ˊævərɪdʒ]	4. средний
5. average life expectancy	[ɪksˊpektənsɪ]	5. средняя продолжительность жизни
6. a shift	[ʃɪft]	6. смена
7. to contribute (v)	[kənˊtrɪbju:t]	7. способствовать, делать вывод
8. welfare	[ˊwelfɛə]	8. благополучие, благо
9. provision	[prəˊvɪʒən]	9. обеспечение, снабжение, условие
10. reconsideration	[ˊrɪ:kənˊsɪdəˊreɪʃn]	10. перерассмотрение
11. to encourage	[ɪnˊkʌrɪdʒ]	11. одобрять, поддерживать
12. solution	[səˊlu:ʃən]	12. решение (задачи) разрешение (вопроса)
13. spent	[ˊspent]	13. затрата
14. gross	[ˊgrəus]	14. валовой
15. gross national product		15. валовой продукт страны

16. efficient	[ɪ´fɪʃiənt]	16. действенный, эффективный умелый, квалифицированный (о человеке)
17. prevention	[prɪ´venʃən]	17. предупреждение, предотвращение
18. initiation	[ɪ˛nɪʃɪ´eɪʃn]	18. введение, учреждение к-л проекта
19. gain	[´geɪn]	19. выгода, прибыль добывать, извлекать пользу (выгоду)
20. profit	[prɔfɪt]	20. польза, выгода
21. to make a profit		21. извлечь выгоду

II. Read and translate the following words and word combinations

1. gain:	One man's loss is another man's gain; we hope for some gain from our investment; gain in weight of 2 kg.
2. confront:	confronted by an angry crowd; the problems, confronting us; to confront danger; she had to confront her parents.
3. to encourage:	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.
4. to contribute:	Does smoking contribute to lung cancer; the chairman encouraged every one to contribute to the discussian; he contributes regularly to science; contribute to a charity; contribute aid for refugees; we contributed 10$.
5. efficient:	efficient heating equipment; more efficient use of energy; we offer a last efficient and friendly service; an efficient secretary.
6. initiation:	the initiation of the investigation; an initiation ceremony; her initiation into the project; the initiation of the scientific work; to initiate social reforms;
7. prevention:	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.

III. Give English equivalents

1. Противостоять, ободрять кого-либо, способствовать развитию науки; валовой продукт страны; извлечь выгоду.

2. Смотреть в лицо опасности; учредить план; выгода; предупреждение лучше лечения.

3. Квалифицированный врач; обеспечение; затрата.

4. Стоять лицом к лицу; врач поддерживает (поощряет) своих пациентов.

5. 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. 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

V. 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 ... .

VI. Find in the text sentences with

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

VII. 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?

VIII. 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.

IX. Translate into English

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

IX. Discuss with your group mates

1. Medical care must be free of change.
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 disease. You might think that illness and disease are synonymous, that is, 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 the 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 microorganisms. 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 a 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. Sign. 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 sings. 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 if 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, -CH_2OH. 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, molecules 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

are 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 regylarly, 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 to 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 that related to abuse? Well, drugs can only 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 before 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.

Section IV

Which other drugs are addictive? And is the addictive potential of a drug related to its ability to do harm to the body? In other words, are the most addictive drugs the most physically harmful? Probably the most addictive drug of all is heroin. But, it fact, heroin does not harm the body directly. The physical dangers of its use are related to the way in which it is used. Because supplies are illegal, exact doses cannot be ensured, and overdoses kill. The heroin is often adulterated with substances which are poisonous, and people sharing needles risk catching hepatitis B or AIDS. The main damage from heroin is social. People's whole way of life may be changed by the drug. The desire to obtain more is so strong that people will cheat or steal to get money to buy it with. Curiously, heroin withdrawal is not particularly dangerous. By contrast, untreated alcohol withdrawal has a mortality of fifteen per cent. Apart from opiates, the only illegal drugs in Britain which are physically addictive are barbiturates, which started as commonly prescribed sleeping pills. The other main illegal drugs of abuse are amphetamines, cocaine, hallucinogens such as LSD, and marihuana. While each of these has its dangers, physical addiction is not one of them.

Section V

You'll have gathered by now that the relation between drug abuse and legality in Britain is profoundly illogical. Why is this so? Well, it's obviously a product of historical circumstance. But the main factors perpetuating the situation are financial. The government receives huge amounts of money from the taxation of alcohol and cigarettes which it does not with to lose. And the producers of alcohol and tobacco are powerful companies wish political influence. The government thus has a strong financial interest in perpetuating the poisoning of its citizens. Of course, the only rational approach to drugs in society would be to limit access to all of them. Some people would argue that most drugs can be used sensibly without abuse, and that abuse simply reflects a defect in the individual's personality. Some would argue that each person should have the freedom to harm himself in any way that he pleases.

The obvious reply is that individual freedom must be limited when it interferes with the general good or the fabric of society. But here we enter the realm of political philosophy. That's a topic for another day.

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 congenital infection.

Section IV

The course of the disease involves 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 healthy; 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 feel very unwell. After a period lasting months or even a year or two, the patient dies.

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 examinations 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 fibreoptic 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 rodshaped 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 cell 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. Thus, chance dictates that an average 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 Huntingdons 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 obviosly 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 at 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 on 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. Percertions 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 by 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 sings 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 sings of deterioration. Of those children admitted to hospital, one per cent need incubation — 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 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 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 heart 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 sings 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 30^0. 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 breathlessness 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 by 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 killing off the tumour by other methods. Sometimes specialised surgical techniques are used such as laser surgery 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 ressected 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 rib 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 the 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 colonostomy 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, appendicectomy 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 incision 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 midline, as its name suggests, although the cut by-passes the umbilicus. The Pfannenstiel incision is a horizontal line lying across the suprapubic region. The grid-iron 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 specialises in the subject. You can look in all the specialist journals to see what others have written, and these days there are special computer programmes 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 finding funding. If the project involves forms of treatment, 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 the 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 resources. 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.

Section IV

There is, however, another more forward-looking approach to health care. This is the idea of prevention. If sickness and disease are expensive, then 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.

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