

Занятие 12

Sources, forms, keeping and storage of drugs

Passive Voice Simple

Activity 1. Read the words, pay attention to the pronunciation. Memorize them.

source	источник
drug	медикамент, лекарство
opium	опиум
cannabis	каннабис
alcohol	спирт
for medicinal purposes	в медицинских целях
digitalis (foxglove)	наперстянка
belladonna	белладонна (красавка)
crude leaves	свежие листья
to relieve pain	для облегчения боли
laxative	слабительный
infusion	настой
tincture	настойка
decoction	отвар
anti-emetic	противорвотный
to obtain	получать
compound	компонент
toothache	зубная боль

bleeding	кровотечение
administration	назначение
weakness	слабость
anemia	анемия
to manufacture	производить
synthetically	синтетическим путем
to extract	экстрагировать
vaccine	вакцина
to inject	делать инъекцию
to normalize	нормализовать

Activity 2. A. What are possible collocations?

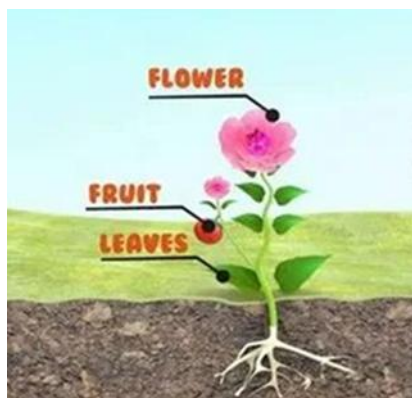
1) chemical	a) use
2) natural	b) water
3) medical	c) substances
4) internal	d) from sunlight and fire
5) mineral	e) for the administration
6) tissues and organs	f) at room temperature
7) to be protected	g) substances
8) to confuse	h) drugs
9) directions	i) of animals
10) to store	j) treatment

B. Make 5 sentences in English, using the collocations. Ask your partner to translate them into Russian.

C. Change your partner and practice back translation of these sentences.

Activity 3. A. Look at the pictures and answer the questions.

1. Which sources can medical substances be obtained from?
2. What drugs can be produced from these sources?
3. What some other sources to produce drugs do you know?



B. Text A is about the sources of drugs. Predict answers to the questions below. Read text A and find the answers to the questions.

Questions	My answers	Answers from reading
What are the sources of drugs?		
Which sources of drugs were used in ancient times?		
Which sources of drugs are the most popular nowadays?		

Text Sources of drugs.

People have been using drugs for thousands of years. The ancient Egyptians and Greeks used opium, cannabis and alcohol for medicinal purposes. The physicians in the Middle East and China also used an opium extract to relieve pain as well as laxatives, anti-emetics and Ephedrine for the treatment of respiratory tract disorders.

Until the beginning of twentieth century, the substances used for the treatment of diseases were obtained from natural sources. Natural sources include plants, animals, and minerals. There used to be a time when the leaves that had the shape of the liver were used for the treatment of liver diseases. Various parts of the plant such as root, bark, stem, leaf, seed, and flower were used. Today, with some exception (digitalis, belladonna), plants themselves are rarely considered for medical treatment. Rather their pharmacologically active constituents (e.g. atropine from the roots) are extracted and used.

In ancient China, people used the dried toad skin to treat toothache and bleeding in the gums. Later, it was discovered that toad skin contains adrenaline. Animals are rarely used as a source to make medicines in our days. For example, insulin is extracted from the pancreas of cows or pigs.

Minerals also have been used to treat various diseases since ancient times. The early Greek physicians used an iron therapy against weakness and anemia. Nowadays we use gold for the treatment of arthritis, sulfur is used externally in skin diseases and aluminum hydroxide is widely used as an antacid.

Today, most drugs are manufactured synthetically in the laboratory by combining two or more compounds or elements. In most cases, drugs produced in laboratories are high quality, less expensive, safer, and more effective than drugs extracted from plants or animals. For example, 1 mg of digoxin produced in the laboratory has the same pharmacological effect as the digoxin produced from 1000 mg of crude leaves of purple foxglove.

Different kinds of Microorganisms can also be sources of drugs. Such well-known antibiotics as streptomycin and erythromycin are made from microorganisms. Some microorganisms are useful in the production of vaccines where weak or dead viruses are injected to alert the immune system to fight back when such virus enters the body. Probiotic microorganisms, such as Bifidobacteria and Lactobacteria normalize the activity of the gastrointestinal tract and prevent the growth of harmful bacteria in the stomach and intestines.

Activity 4. Answer the following questions using key vocabulary from the text. Make sure your partner knows the answers.

1. What are the three main types of natural sources of medicines mentioned in the text? Provide one specific example of a medicine or substance for each type.
2. Why are synthetic drugs often preferred over medicines obtained from natural sources? Name four advantages mentioned.
3. What role do microorganisms play in modern pharmacology? Name three examples of products/applications involving them.

4. How did the approach to using plants as medicines differ in ancient times compared to modern medicine? Use the phrases "whole plants" and "pharmacologically active constituents" in your answer.

5. What examples of using minerals for therapeutic purposes are given in the text?

Activity 5. Match the term with its correct definition or description.

Terms	Definitions
1) Opium	A) A substance manufactured in a laboratory through chemical synthesis.
2) Ephedrine	B) A substance that suppresses nausea and vomiting.
3) Laxative	C) A substance used to treat infections, often derived from microorganisms (e.g., streptomycin).
4) Anti-emetic	D) A substance obtained from a natural inorganic source (e.g., iron, sulfur, gold).
5) Pharmacologically active constituent	E) A hormone extracted from the pancreas of animals, regulating blood sugar levels.
6) Adrenaline (Epinephrine)	F) A substance that stimulates bowel movements.
7) Insulin	G) A psychoactive substance obtained from poppies, historically used as a painkiller.
8) Antibiotic	H) A preparation containing weakened or killed viruses/bacteria to stimulate immunity.
9) Vaccine	I) Live microorganisms that confer a health benefit when consumed (e.g., normalize GI

	tract function).
10) Probiotic	J) A hormone found in toad skin, having a stimulating effect.
11) Synthetic drug	K) A plant-derived substance historically used to treat respiratory tract disorders.
12) Mineral	L) The specific component within a plant or other natural source directly responsible for the therapeutic effect (e.g., atropin).

Grammar

Activity 6. Образуйте общие и специальные вопросы, составьте отрицательные предложения:

- 1) English is spoken in many different countries.
- 2) The scientific journals were delivered to our office yesterday.
- 3) This report will be represented next week.
- 4) The patients are seen by the doctor.
- 5) Green tea-leaves are used as anti-inflammatory remedy.
- 6) The work will be done in time.
- 7) My question was answered last Monday.
- 8) We were invited to take part in the conference last week.
- 9) The patient will be prescribed new medicines by the doctor.
- 10) The information is sent to the main computer.
- 11) The prescription was given to me by our home doctor.
- 12) The famous lecturer will be greeted warmly.
- 13) His articles are published in our medical journal.

Activity 7. Раскройте скобки, поставьте глагол в правильную форму:

- 1) They (*to teach*) to carry out experiments carefully.
- 2) A chemistry laboratory (*to ventilate*) regularly.
- 3) This work (*to do*) very carefully by the investigators 2 days ago.
- 4) This article (*to translate*) from Russian into English next week.
- 5) Yesterday he (*to tell*) to prepare a speech.
- 6) Classical and modern methods of chemical analysis (*to use*) in the examination of drugs.
- 7) The scientific reports (*to make*) tomorrow.
- 8) Many books (*not to translate*) from ancient English into Russian.
- 9) The famous scientists (*to introduce*) to our students a couple of hours ago?
- 10) Many interesting facts (*to find out*) about the action of this drug in future.
- 11) These pharmacists (*not to train*) at the British college last month.
- 12) The dictionary (*to use*) while translating the last text in origin.
- 13) The article (*not to publish*) last week, if I am not mistaken.
- 14) This subject (*not to study*) by the students next year.