

ODESA NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF PHYLOSOPHY, BIOETICS AND FOREIGN LANGUAGES

PROFESSIONAL MEDICAL ENGLISH

for second-year dentistry students
(elective course)

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PULMONARY TUBERCULOSIS

Exercise 1. Topic vocabulary:

BCG vaccine, <i>n phr</i>	[... bə'siləs]	BCG stands for Bacille Calmette Guerin, a vaccine used to prevent tuberculosis (TB)
discharge, <i>n</i>	[dis'tʃɑ:dʒ]	a fluid that comes out of the body. Discharge can be normal or a sign of disease.
immunocompromised, <i>adj</i>	[i,mjʊ:nə'kɒmprəmaɪzd]	having a weakened immune system
lesion, <i>n</i>	['li:ʒn]	a region in an organ or tissue which has suffered damage through injury or disease
nodular, <i>adj</i>	['nɒdjʊlə]	relating to, characterized by, or occurring in the form of nodules - small knot-like masses of tissue or aggregation of cells
rales, <i>n pl.</i>	['ra:lz]	abnormal rattling sounds heard when examining unhealthy lungs with a stethoscope.
resurgence, <i>n</i>	[ri'sɜ:dʒəns]	the act or fact of rising again or returning
sputum, <i>n</i>	['spju:təm]	a mixture of saliva and mucus coughed up from the respiratory tract, typically as a result of infection or other disease
tubercle, <i>n</i>	['tju:bəkl]	a small, rounded nodule produced by the bacillus of tuberculosis
vulnerable, <i>adj</i>	['vʌlnərəbl]	easily injured, wounded. or affected by a disease

Exercise 2. a) Memorize the plural forms of nouns of the Latin and Greek origin:

Latin	
singular	plural
-us [əs] bacillus	-i [ai] bacilli
-a [ə] vertebra	-ae [i:] vertebrae
-um [əm] bacterium	-a [ə] bacteria
Greek	
-sis [sis] synthesis	-ses [siz] syntheses

b) Write the correct plural forms of the following nouns:

Diagnosis -
Stimulus -
Datum -
Formula -
Nucleus -
Analysis -
Spirillum -

Exercise 3. Form nouns with the help of the suffix -(a)(t)ion. Use them in phrases or in sentences:

Model: to infect – infection

інфікувати – інфекція

to characterize, to form, to inhale, to fluctuate, to detect, to combine, to populate, to vaccinate, to examine, to auscultate, to palpate, to complete, to migrate.

Exercise 4. Explain the following word combinations/phrases:

the causative agent of the disease, nodular lesions, a primary tubercle, natural immune defenses, to fluctuate with the patient's resistance, blood streaked sputum discharge, tuberculous rales in the lungs, a resurgence of pulmonary tuberculosis, immunocompromised patients

Exercise 5. Read the text and answer the questions below:

PULMONARY TUBERCULOSIS

Pulmonary tuberculosis (PT) is an infectious bacterial disease. The causative agent of the disease is *Mycobacterium tuberculosis* that was first identified by R. Koch in 1882. The lungs are primarily involved, then the infection can spread to other organs. The disease is characterized by the formation of nodular lesions (tubercles) in the mediastinum. These lesions are small rounded masses of cells, produced by bacteria. They are firm and spheroid. As a rule, PT is spread with tiny droplets that float in the air after sneezing or coughing by the infected person.

In pulmonary tuberculosis the bacillus is inhaled into the lungs where it sets up a primary tubercle and spreads to the nearest lymph nodes. Natural immune defenses may heal it at this stage. Alternatively, the disease may smoulder for months or years and fluctuate with the patient's resistance. Many people become infected but show no symptoms. Others develop a chronic infection and can transmit the bacillus by coughing and sneezing.

In the early stages of pulmonary tuberculosis the patient usually complains of general malaise, fatigue, loss of appetite and as a result loss of body weight, caused by tuberculous intoxication. The subfebrile fever persists for a long time. Then cough superadds.

Symptoms of the active form of pulmonary tuberculosis include high fever that ranges from 38° to 39°C, profuse night sweats, breathing difficulty, and cough with blood streaked sputum discharge.

Pulmonary tuberculosis is treated by various combinations of antibiotics. The treatment may last up to 6-8 months. Preventive measures must include the detection of cases by X-ray screening of vulnerable populations and vaccination with BCG vaccine of those with no immunity to the disease. Regular physical examinations are necessary as well: auscultation reveals characteristic tuberculous rales in the lungs; palpation identifies the swollen lymph nodes in the neck or other areas. Another method of detecting pulmonary tuberculosis is a yearly Mantoux test.

Recently, there has been a resurgence of pulmonary tuberculosis in immunocompromised patients (i.e. who have HIV or AIDS). The number of patients with the disease has also increased due to patients not completing drug courses.

In some cases the bacilli spread from the lungs to the blood-stream, setting up millions of tiny tubercles throughout the body (miliary tuberculosis), or migrate to the meninges to cause tuberculous meningitis. Entering by mouth bacilli may spread to abdominal lymph nodes, leading to peritonitis, and sometimes spread to other organs, joints, and bones.

Though pulmonary tuberculosis is curable, it is a terminal disease if not treated in time. So, if a person develops any signs slightly resembling pulmonary tuberculosis, he should immediately seek help from phthisiatrician.

Exercise 6. Answer the questions:

1. What kind of disease is pulmonary tuberculosis?
2. What is pulmonary tuberculosis caused by?
3. What kind of formations is the disease characterized by?
4. How can a person become infected with pulmonary tuberculosis?
5. What are the symptoms of pulmonary tuberculosis at the early stage?

6. What are the symptoms of pulmonary tuberculosis in the active form?
7. What does the treatment of pulmonary tuberculosis consist of?
8. How can pulmonary tuberculosis be prevented?
9. What complications may pulmonary tuberculosis lead to?

Exercise 7. Match the kinds of diagnostic testing procedures to their explanations:

<ol style="list-style-type: none"> 1. X-ray screening 2. Vaccination 3. Mantoux test 4. physical examination 5. Auscultation 6. Palpation 7. blood analysis 8. sputum analysis 	<ol style="list-style-type: none"> a) a method of skin testing aimed at detecting tuberculosis, named after the French physician b) examination by touch for the purpose of diagnosing disease c) the procedure during which a patient is thoroughly examined from head to toes d) the laboratory analysis of specimen taken from the patient for culturing the <i>Mycobacterium tuberculosis</i> organisms e) laboratory examination of physical / chemical properties and the number of erythrocytes, leukocytes, etc. f) process of giving injections of a killed microbe in order to stimulate the immune system against it, thus, preventing disease g) the act of listening, either directly or through a stethoscope or other instrument, to sounds within the body as a method of diagnosis h) a radiographic image of the body internal organs and structures, usually used for diagnostic purposes
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Exercise 8. Find the synonyms in the text to the words and word-combinations given below:

therapy –	respiration –
inoculation –	excessive perspiration –
check-up –	productive cough –
nodular lesion –	cause of disease –

Exercise 9. Insert the necessary preposition:

at; by; due to; in (2); to (2); of

1. In pulmonary tuberculosis there are a lot of nodular lesions ... the mediastinum.
2. Yesterday the patient complained ... general malaise, slight fatigue and headaches.
3. Profuse sweats ... might serve the grave sign of pulmonary tuberculosis.
4. Swollen lymph nodes ... the neck indicated the presence of infection in the body.
5. People having no immunity ... diseases often suffer from various infections.
6. TB spreads throughout the world ... patients not completing drug courses.
7. People with pulmonary TB can transmit it ... coughing and sneezing.
8. The bacilli of pulmonary TB can migrate ... the meninges and cause tuberculous meningitis.

Exercise 10. Insert the appropriate modal verb can / could, may / might, must, should and explain your choice:

1. She ... not go to the library because she has no time. (logical conclusion)
2. "You ... go for a walk every day," the doctor said. (obligation)
3. He ... go to the movies in the evening. (hypothetic possibility)
4. You ... work more at your pronunciation. (advice)
5. He ... invite you to the theatre. (hypothetic possibility)
6. The child ... not walk though he is 2 years old. (capability)
7. ... I take your pencil? (permission)
8. You ... follow his instructions. (certainty without fail)

Exercise 11. Put questions to the underlined words:

1. Mycobacterium tuberculosis causes pulmonary tuberculosis.
2. This disease may affect bones, joints, lymphatic glands, kidneys.
3. Coughing can become worse at night and in the morning.
4. A considerable elevation of temperature is observed in pneumonic forms.
5. Loss of body weight may be the typical sign of pulmonary tuberculosis.
6. Natural immune defenses can sometimes heal the disease in the early stages.
7. There is a resurgence of pulmonary TB among immunocompromised patients.
8. Millions of tiny tubercles are carried throughout the body by the blood stream.

Exercise 12. Put the verb in brackets into the correct tense form. Translate them into Ukrainian:

1. The causative agent of tuberculosis (to discover) by Koch in 1882.
2. The microscopic examination (to reveal) pus cells in sputum yesterday.
3. The patient states that the fever (to persist) at a level of 38°C for several months.
4. Profuse night sweats (to serve) the evidence of a severe form of tuberculosis.
5. Loss of body weight (can, to cause) by tuberculous intoxication.
6. Cough (to superadd) after the disease has been in progress for some time.
7. Mycobacterium tuberculosis (to produce) characteristic tuberculous changes in the mediastinum.
8. In the early stage of pulmonary TB the patient (may, to complain) of a general malaise, fatigue, loss of appetite and bodyweight.

Exercise 13. Fill in the table and describe pulmonary tuberculosis:

1.	Type of disease	
2.	Set of symptoms	
3.	Data of examinations	
4.	Treatment	
5.	Complications	

*** Exercise 14. Read the case presentation and fill in the table below with appropriate information. Explain the terms in bold (you may need a dictionary):**

A 69-year-old male patient had come to the hospital twice with a diagnosis of **community-acquired bacterial pneumonia**. The patient was a smoker without family history of interest. Three weeks before admission to the hospital, he developed a fever accompanied by night sweats, a dry irritating cough, **asthenia, anorexia** and weight loss (10 kg in 2 months). In the three days prior to admission he noticed pain in his tongue radiating to the right ear. The pain was accentuated by chewing and made eating difficult.

Physical examination: The patient's **vital signs** were as follows: **respiratory rate** - 28/min, central heart rate - 100 beats/ minute, blood pressure - 110/70 mmHg. His general alterations in his skin nor palpable **lymphadenopathy** in any lymph node chain. Cardiopulmonary examination revealed a globally decreased vesicular **wheeze** with scattered **crackles** in both lungs especially in the upper 2/3 of the left lung...

Patient	Symptoms/ complaints	Physical examination findings	Presumptive diagnosis
			pulmonary and lingual tuberculosis

Answer the questions:

1. What kind of disease is pulmonary tuberculosis?
2. What is pulmonary tuberculosis caused by?
3. What kind of formations is pulmonary tuberculosis characterized by?
4. How can a person become infected with pulmonary tuberculosis?
5. What are the symptoms of pulmonary tuberculosis at the early stage and in the active form?
6. What does the treatment of pulmonary tuberculosis consist of?
7. How can pulmonary tuberculosis be prevented?
8. What complications may pulmonary tuberculosis lead to?

Explain the medical term: pulmonary tuberculosis

HYPERTENSION

Exercise 1. Topic vocabulary:

asymptomatic, <i>adj</i>	[æ, sɪmptə'mætɪk]	without symptoms
confusion, <i>n</i>	[kən'fju:ʒ(ə)n]	change in mental status in which a person is not able to think with his or her usual level of clarity; feeling disoriented
drowsiness, <i>n</i>	['draʊzɪnəs]	a feeling of being sleepy and lethargic; sleepiness
failure, <i>n</i>	['feɪljə]	the state of insufficiency or nonperformance; dysfunction of body systems or organs
life expectancy, <i>n</i>	[ɪk'spekt(ə)nsɪ]	the number of years a person can expect to live
moderate, <i>adj</i>	['mɒdərɪt]	average in amount, intensity, quality, or degree
persistent, <i>adj</i>	[pə'sɪstənt]	continuing to exist or occur over a prolonged period
potassium, <i>n</i>	[pə'tæsiəm]	a chemical element with the symbol K (from Neo-Latin kalium) and atomic number 19
sedentary, <i>adj</i>	['sedntəri]	characterized by much sitting and little physical exercise
stroke, <i>n</i>	[strəʊk]	when a blockage or bleed of the blood vessels either interrupts or reduces the supply of blood to the brain

Exercise 2. Pronounce correctly:

Hydrargyrum [haɪ 'dra:dʒɪrəm], [thiazide-diuretics](#) ['θaɪəzɪ:(aɪ)d ,daɪju'retɪks], [calcium channel blockers](#) ['kælsiəm 'tʃænl 'blɒkəs], beta blockers ['bi:tə 'blɒkəs], vasodilators [veɪzəʊ daɪ 'lertəs], angiotensin-converting enzyme (ACE) inhibitors [ændʒiəʊ'tensɪn kən'vɔ:tɪŋ 'enzaim ɪn 'hɪbɪtəs], [angiotensin receptor blockers](#) [ændʒiəʊ'tensɪn rɪ 'septə 'blɒkəs].

Exercise 3. Form new words adding the prefixes *hyper-*(above) and *hypo-*(under). Explain them:

Model: tension – hypertension

Activity, function, genesis, metabolism, secretion, sensitivity, thyroidism

Model: tension – hypotension

Hydration, mobility, nutrition, toxicity, vitaminosis, uresis, salivation, glycemia

Exercise 4. Read and explain the following word-combinations:

systemic arterial blood pressure; obvious medical cause; persistent hypertension; chronic kidney failure; shortened life expectancy; accelerated hypertension; sedentary lifestyle; potassium deficiency; inherited genetic mutations; family history of hypertension, managing stress

Exercise 5. Read the text and answer the questions below:**HYPERTENSION**

Hypertension or high blood pressure is a [long term medical condition](#) in which the systemic arterial blood pressure is elevated. It happens when [blood](#) flows through the [blood vessels](#) with a force greater than normal, when the force of the blood pumping through the [arteries](#) is too strong. The more pressure the blood exerts on the artery walls, the higher the blood pressure will be.

Blood pressure involves two measurements, systolic and diastolic. Normal blood pressure is 120 over 80 mm of Hg (Hydrargyrum, mercury). The first figure is the systolic blood pressure, the pressure there is in the arteries when your heart is contracting. The second, or lower figure, is the diastolic blood pressure, which is the pressure in your arteries between heart beats. High blood pressure is anything above 140/90 mm/Hg. Hypertension is the opposite of hypotension. Hypertension is classified as either primary hypertension or secondary hypertension. About 90–95% of cases are categorized as "primary hypertension," which means high blood pressure with no obvious medical cause. The remaining 5–10% of cases (secondary hypertension) is caused by other conditions that affect the kidneys, arteries, heart or endocrine system.

Persistent hypertension is one of the risk factors for stroke, myocardial infarction and heart failure, and is a leading cause of chronic kidney failure. Moderate elevation of arterial blood pressure leads to shortened life expectancy. Dietary and lifestyle changes can improve blood pressure control and decrease the risk of associated health complications, although drug treatment may prove necessary in patients for whom lifestyle changes are ineffective or insufficient.

Mild to moderate essential hypertension is usually asymptomatic. Accelerated hypertension is associated with headache, drowsiness, confusion, vision disorders, nausea, and vomiting.

Although no direct cause for hypertension has been identified, there are many factors such as sedentary lifestyle, smoking, stress, obesity, potassium deficiency, salt sensitivity, alcohol intake, and vitamin D deficiency that increase the risk of developing hypertension. Risk also increases with aging, some inherited genetic mutations, and having a family history of hypertension.

Lifestyle changes and medications can lower blood pressure and decrease the risk of health complications. Lifestyle changes include:

- salt intake reduction
- fat intake reduction
- weight loss
- getting regular exercise
- quitting smoking
- reducing alcohol consumption
- managing stress

If lifestyle changes are not sufficient [blood pressure medications](#) are used. First line medications for hypertension include [thiazide-diuretics](#), [calcium channel blockers](#), beta blockers, vasodilators, angiotensin-converting enzyme (ACE) inhibitors and [angiotensin receptor blockers](#).

Diuretics. Diuretics, sometimes called water pills, are medications that help your kidneys eliminate sodium and water from the body. These drugs are often the first medications tried to treat high blood pressure.

Angiotensin-converting enzyme (ACE) inhibitors. These medications (e.g. benazepril) help relax blood vessels by blocking the formation of a natural chemical that narrows blood vessels.

Calcium channel blockers. These medications (e.g. amlodipine) help relax the muscles of your blood vessels. Some slow your heart rate.

Beta-blockers (e.g. bisoprolol) reduce blood pressure by blocking the effects of certain stress hormones, such as epinephrine.

These drugs may be used alone or in combination. The majority of people require more than one medication to control their hypertension.

Exercise 6. Answer the questions to the text:

1. What is hypertension?
2. What is systolic blood pressure?
3. What is diastolic blood pressure?
4. What blood pressure is considered to be normal?
5. What may persistent hypertension lead to?
6. What is accelerated hypertension associated with?
7. What increases the risk of developing hypertension?
8. What medicines do the first line medications for hypertension include?

Exercise 7. Find the opposites to the following words:

1. effective	a) shortened
2. prolonged	b) secondary
3. decreased	c) hypotension
4. hypertension	d) ineffective
5. deteriorate	e) elevated
6. sufficient	f) insufficient
7. primary	g) congenital
8. inherited	h) improve

Exercise 8. Match the words to their definitions:

1. diuretic	a) drug, agent, or nerve that can cause dilatation of the walls of blood vessels
2. calcium	b) any of a group of complex proteins or conjugated proteins that are produced by living cells and act as catalysts in specific biochemical reactions
3. vasodilator	c) a peptide of physiological importance that is capable of causing constriction of blood vessels, which raises blood pressure
4. angiotensin	d) a substance that inhibits a metabolic or physiological process
5. enzyme	e) a sensory nerve ending that changes specific stimuli into nerve impulses
6. receptor	f) a malleable silvery-white metallic element of the alkaline earth group
7. inhibitor	g) an agent that blocks a physiological function
8. blocker	h) acting to increase the flow of urine

Exercise 9. True or false?

1. Systolic blood pressure is pressure between heart beats.
2. Primary hypertension means hypertension without any predisposing reasons.

3. Persistent hypertension may lead to heart failure.
4. There are many symptoms accompanying hypertension.
5. Losing weight helps to treat hypertension.
6. Moderate elevation of blood pressure doesn't influence life expectancy.
7. Primary hypertension is more spread than secondary one.
8. Drugs are prescribed when hypertension is very high.

Exercise 10. Put questions to the underlined words:

1. The heart has to work harder to pump the blood around the body on physical exertion.
2. Blood pressure involves two measurements.
3. Normal blood pressure is 120/80 mm/Hg.
4. Hypertension is classified as either primary hypertension or secondary hypertension.
5. Moderate elevation of arterial blood pressure leads to shortened life expectancy.
6. Dietary and lifestyle changes can improve blood pressure control.
7. Accelerated hypertension is associated with headache, drowsiness, confusion, vision disorders, nausea, and vomiting.
8. The first line of treatment for hypertension includes some lifestyle changes.

Exercise 11. Open the brackets put the verbs into the appropriate tense (Active or Passive):

1. Occupation (not to play) an important role in the etiology of hypertension.
2. Hypertension in the older age group (to associate) with loss of elasticity of the aorta and its main branches.
3. Hypertension (to be) more common in the female than in the male.
4. Hypertension (to tolerate) better during the child-bearing years in the female than hypertension in male.
5. Lifestyle changes (to recommend) together with medications.
6. Accelerated hypertension (to associate) with headache, drowsiness, confusion, vision disorders, nausea, and vomiting.
7. Dietary and lifestyle changes (to decrease) the risk of associated health complications.
8. No direct cause for hypertension (to identify) yet.

Exercise 12. Complete the following sentences choosing suitable words or words combinations from the box:

At home; decisions ; at least; measurement; drug stores; readings; in the past 30 minutes; health care provider; at night

Blood pressure measurement

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

You can measure your blood pressure... . You can also have it checked at your health care provider's office, a fire station, or with blood pressure machines in ... and other places.

How to Prepare for the Test

Before you measure your blood pressure:

- Rest for ...5 minutes before blood pressure is taken.
- Do not take your blood pressure when you are under stress, have had caffeine or used a tobacco... , or have exercised recently.
- Take two or three ... at a sitting. Take the readings 1 minute apart. Remain seated. When checking your blood pressure outside the doctor's office, note the time of the readings. Your ... may suggest that you do your readings at certain times.
- You may want to take your blood pressure in the morning and ... for a week.
- This will give you at least 12 readings and will help your health care provider make ... about your blood pressure treatment.

Exercise 13. Put the sentences into the correct order to measure your blood pressure:**How the Blood pressure measurement is performed**

1. As the air continues to be let out, the sounds will disappear. The point at which the sound stops is recorded. This is the diastolic pressure.
2. You or your health care provider will wrap the blood pressure cuff snugly around your upper arm. The lower edge of the cuff should be 1 inch above the bend of your elbow.
3. The cuff will be inflated quickly. This is done either by pumping the squeeze bulb or pushing a button. You will feel tightness around your arm.
4. Next, the valve of the cuff is opened slightly, allowing the pressure to slowly fall.
5. Your arm should be supported so that your upper arm is at heart level.
6. Sit in a chair with your back supported. Your legs should be uncrossed, and your feet on the floor.
7. As the pressure falls, the reading when the sound of blood pulsing is first heard is recorded. This is the systolic pressure.
8. Roll up your sleeve so that your arm is bare.

Exercise 14. a) fill in in the table; b) describe the term *hypertension* using the information of the table:

1.	General characteristics	
2.	Symptoms	
3.	Analyses	
4.	Treatment	
5.	Complications	

***Exercise 15. Read the case presentation and fill in the table below with appropriate information. Explain the clinical terms in bold:**

A 50 year-old-female teacher visited Services Hospital Lahore with the complaints of **headache**, nausea, **drowsiness**, **blurred vision**, and **fatigue**. She was experiencing those symptoms last 2 months. She was also suffering from diabetes mellitus type 2 since 2. She had recently diagnosed with hypertension.

Medication Therapy

Bisoprolol Fumarate 5mg OD (*daily*)

Amlodipine 5 mg OD

Sitamet Sitagliptin + Metformin HCl 50mg +1000mg BD (*twice a day*) to lower blood sugar

Care Plan

Lifestyle modifications:

Exercise and walk to reduce body weight

Proper diet rich in fruits, vegetables, whole grains, low fat poultry and fish

Low dietary salt and sugar intake

Avoid red meat, fats and alcohol

Patient	Symptoms/ complaints	Past medical history	Diagnosis	Recommended lifestyle changes

TASKS FOR SELF-CONTROL

Answer the questions

1. What is hypertension?
2. What is systolic blood pressure?
3. What is diastolic blood pressure?
4. What blood pressure is considered to be normal?
5. What may persistent hypertension lead to?
6. What are the symptoms of accelerated hypertension?
7. What increases the risk of developing hypertension?
8. What medicines do the first line medications for hypertension include?

Explain the terms

hypertension

primary hypertension

secondary hypertension

systolic blood pressure

diastolic blood pressure

DISEASES OF THE STOMACH

Exercise 1. Topic vocabulary:

antacid <i>n</i>	[,ænt'æsɪd]	any substance used to counteract or neutralize gastric acids and relieve the discomfort caused by gastric acidity
belching <i>n</i>	[belfɪŋ]	voluntary or involuntary, sometimes noisy, release of air from the stomach or esophagus through the mouth.
bloating <i>n</i>	[bloʊtɪŋ]	retention of gas in the stomach or GI tract
cytoprotective, <i>adj</i>	['sɑɪtə(u)prə'tektɪv]	descriptive of a drug or agent protecting cells from damage expected to occur
gastroscopy <i>n</i>	[gæ'strɒskəpi]	examination of the inside of the stomach using a gastroscope passed through the mouth and esophagus
heartburn <i>n</i>	['hɑ:tbɜ:n]	a burning sensation behind the sternum due to spasmodic reflux of acid from the stomach into the esophagus
pernicious anaemia <i>n</i>	[pə'niʃəs ə'ni:mɪə]	a decrease in red blood cells that occurs when the intestines cannot properly absorb vitamin B12
reflux <i>n</i>	['ri:flʌks]	a backward or return flow

Exercise 2. Using adjective ending – *ic* or –*al* write a word for each of the following definitions:

E.g. Pertaining to the caecum - caecal

1. Pertaining to the intestines –
2. Pertaining to the duodenum –
3. Pertaining to the epigastrium –
4. Pertaining to the rectum –
5. Pertaining to the anus –
6. Pertaining to the pancreas -
7. Pertaining to the esophagus -

Exercise 3. Explain the following word-combinations:

chronic bile reflux; blood-streaked vomiting; complete blood count test; over-the-counter antacids, life-threatening consequences of the disease; ulcer recurrence; to aggravate the pain

Exercise 4. Read and translate the text:

The diseases of the Stomach

The stomach is an important organ in the body that plays a vital role in digestion of foods, releases various enzymes and also protects the lower intestine from harmful organisms.

Most common disorders affecting the stomach are gastritis and gastric ulcer.

Gastritis is an inflammation of the lining of the stomach. Gastric (peptic) ulcer is a sore (lesion) in the stomach lining, which contains special cells producing acids and enzymes, that help break down food, and mucus protecting the stomach lining from acid. When the stomach lining is inflamed, it produces less acid, enzymes, and mucus.

The causes of these two diseases are very much alike.

The main acute causes are extensive alcohol consumption or prolonged use of non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin, traumatic injury or severe infections. Chronic causes are chronic bile reflux. But the primary cause is the infection caused by bacteria, *Helicobacter pylori*. The bacteria produce substances that weaken the stomach's protective mucosa and make it more susceptible to the damaging effects of acid and pepsin.

Gastritis and gastric ulcers are often linked to heavy alcohol consumption. Caffeine stimulates acid secretion in the stomach aggravating the pain and contributes to recurrence.

People with gastritis and peptic ulcers experience dull, burning, sharp or gnawing abdominal pain between the breastbone and the navel. The patient may suffer from nausea, belching, bloating and heartburn.

Patients with gastritis suffer from vomiting that may be clear, green or blood-streaked, depending on the severity of the inflammation. Other symptoms typical for gastritis are indigestion and pernicious anemia.

A diagnosis of gastric disease is made on the basis of the symptoms, complete blood count test, presence of *H. pylori*, urinalyses, stool samples, endoscopy, stomach biopsy, etc.

Once the cause of the disease is identified, exposure should be avoided. If some food is triggering the inflammation, you should exclude it. Over-the-counter antacids in liquid or tablet forms treat mild gastritis and peptic ulcer. Antacids neutralize stomach acid and can provide fast pain relief. Proton pump inhibitor appears to inhibit *H.pylori* activity. Cytoprotective agents protect the tissues lining the stomach. Consumption of hot or spicy food is contraindicated. Patients with pernicious anemia are given B₁₂ injections. Most patients use a combination of antibiotics and a proton pump inhibitor to treat *H.pylori* infection.

If left untreated, gastritis may lead to stomach ulcers and stomach bleeding. Life-threatening consequences of the disease can be stomach cancer.

Exercise 5. Answer the following questions:

1. What are the functions of the stomach?
2. What is the function of stomach lining?
3. What are the diseases of the stomach?
4. What similar symptoms do gastritis and peptic ulcer have?
5. What are the causes of gastritis and peptic ulcer?
6. How are gastric diseases treated?
7. What is the diagnosis of gastric diseases based on?
8. What are the complications of gastritis?

Exercise 6. Match the following terms to their definition:

1. Gastritis	a. Expelling the wind from the stomach noisily through the mouth
2. Belching	b. An adjunct to diagnosis that involves removing a small sample of living tissue from the body for examining under the microscope

3. Peptic ulcer	c. is a <u>Gram-negative, microaerophilic bacterium</u> found in the <u>stomach</u> , and may be present in other parts of the body, such as the <u>eye</u>
4. Gastrectomy	d. A flexible instrument, comprising fiber optics or a miniature video camera, that permits internal visual examination of the stomach
5. Biopsy	e. <u>painful sore in the lining of the stomach</u>
6. Gastroscope	f. Non-steroidal anti-inflammatory drugs
7. NSAIDs	g. An inflammation of the stomach lining (mucosa)
8. Helicobacter pylori	h. The surgical removal of a part of the stomach

Exercise 7. Complete the following sentences choosing suitable words from the box:

Alcohol, spicy foods, infection, perforate, H.pylori, pernicious anaemia, bile reflux, NSAIDs

- or smoking can make gastritis worse.
- Consumption of and alcohol should be strictly prohibited in patient with gastritis.
- You're more likely to develop gastritis if you're at risk of
- You may need surgery if your ulcers, bleed or obstruct the stomach.
- weakens the lining so acid can reach the stomach and duodenal wall.
- are a class of drugs that provides analgesic (pain-killing) and antipyretic (fever-reducing) effects, and, in higher doses, anti-inflammatory effects.
- Chronic cause of gastritis may be that is a backflow of bile into the stomach.
- occurs when the stomach lacks red blood cells or hemoglobin needed to properly absorb and digest vitamin B12.

Exercise 8. Look through the text and find out expressions synonymous to the given ones:

The major cause, to make pain worse, acid production, alcohol intake, hemorrhage, dangerous results, drugs sold without prescription, the return of the disease.

Exercise 9. Choose the correct word that completes each of the following sentences:

- Ulcer and cirrhosis are not (rare, rear) diseases among those who are prone to alcohol.
- The animal insulin can (course, cause, coarse) allergic reactions.
- At later stages gastric cancer can be treated but rarely can be (diagnosed, cured).
- When gastric cancer is found at an early stage, there is better chance of (convalescence, premature death).
- Smokers, who have stopped smoking, (lower, increase) their risk of getting gastritis.
- Stomach cancer is a disease in which (malignant, benign) cells appear in the stomach.
- Chemotherapy is a treatment that uses (chemical drugs, rays) to stop the growth of cancer cells.
- After the stomach surgery the patient should take vitamin (supplements, addition) and injections of vitamin B₁₂.

Exercise 10. Learn the following Greek and Latin term elements used in medicine. Give your examples of medical terms with these term elements:

- _____ algia – pain in an organ
 _____ scope – denotes a viewing instrument, used for examining smth
 _____ itis - denotes inflammation of an organ
 _____ logy – denotes a branch of science
 _____ tomy - combining form meaning “cutting, incision” of an organ
 _____ ectomy - meaning “excision” of the part specified by the initial element
 _____ rrhagia – means “profuse discharge,” “abnormal profuse flow”

_____malacia – means softening, or loss of consistency, of an organ or tissue

Exercise 11. Add the missing part of the clinical terms pertaining to the pathology of the stomach:

1. Gastro _____ (an instrument inserted through the mouth to inspect the inside of the stomach)
2. Gastr _____ (the surgical removal of a part of the stomach)
3. Gastr _____ (inflammation of the stomach lining)
4. Gastro _____ (softening of stomach lining due to poor blood supply or an inflammation)
5. Gastroentero _____ (the branch of medicine that is concerned with the disorders of the gastrointestinal tract)
6. Gastros _____ (surgical incision into the stomach)
7. Gastro _____ (a bleeding from the blood vessels and the stomach lining)
8. Gastr _____ (pain in the stomach or abdominal region)

Exercise 12. Put questions to the underlined words:

1. Stomach acids contribute to ulcer formation.
2. Slight elevation of temperature is observed in acute gastritis.
3. A diagnosis can be based on the history changes of the chest X-ray.
4. The patient has noticed that her gastric pains appear after eating.
5. The pain often occurs between meals and early in the morning.
6. The bacteria have produced substances that weaken the stomach's mucosa.
7. The patient felt much relief after having taken this drug.
8. You should talk to your doctor before stopping any medicine or starting any gastritis treatment on your own.

Exercise 13. Open the brackets using the verbs correctly:

1. Next Monday the patient suffering from severe liver damage (to make) a dialysis.
2. Preventive measures already (to carry) out to prevent early signs of gastric cancer.
3. The patient (to feel) relief after he (to take) this medicine 2 hours before.
4. While the doctor (to examine) the patient, he (to notice) the enlargement of lymphatic glands.
5. If gastritis (not to treat) properly, it will lead to even cancer of the stomach.
6. The patient (to suffer) from chronic gastritis for over 3 years.
7. This patient (to become) ambulatory 2 weeks ago.

Exercise 14. Fill in the table “Gastritis&Gastric Ulcer”:

1	Definition	1) Gastritis 2) Gastric ulcer
2	Causes	
3	Symptoms	
4	Risk factors	
5	Examination	
6	Treatment	
7	Complications	

***Exercise 11. Read the case presentation and fill in the table below with the appropriate information. Explain the terms in bold:**

A 47-year-old man presented with four days of subjective fevers, abdominal pain, and **vomiting**. Past medical history was remarkable for **hypertension** and uncontrolled type 2 diabetes mellitus. There was no history of nonsteroidal anti-inflammatory drugs or alcohol use. No prior endoscopies were available for review. On admission, the patient was **tachycardic** to

122 beats/min. Physical examination was remarkable for **epigastric tenderness**. Admission laboratory studies revealed a **leukocytosis** of 30.3 K/mcL (normal: 3.4-10.4 K/mcL). Blood cultures were obtained, and the patient was started on piperacillin/tazobactam within five hours of presentation to the emergency department. Contrast-enhanced abdominal computed tomography (CT) revealed diffuse gastric wall thickening up to 1.6 cm with mucosal enhancement extending to the proximal duodenum.

Esophagogastroduodenoscopy (EGD) redemonstrated gastric thickening with diffuse **erythema** and a 6-mm nonbleeding ulcer.

Blood cultures returned positive for group A beta-hemolytic streptococcus and antibiotics were de-escalated to ampicillin/sulbactam.

Patient	Symptoms	Past history	Examinations	Treatment
			- physical exam - laboratory studies - instrumental studies	

TASKS FOR SELF-CONTROL

Answer the questions:

1. What are the diseases of the stomach?
2. What symptoms do gastritis and peptic ulcer have?
3. What are the causes of gastritis and peptic ulcer?
4. How are gastric diseases treated?
5. What is the diagnosis of gastric diseases based on?
6. What are the complications of gastritis?

Explain the terms: gastritis, gastric ulcer

RENAL DISEASES

Exercise 1. Topic vocabulary:

albuminuria, <i>n</i>	[æ'l'bjʊ:mi'nju:riə]	more than the normal amount of albumin in the urine
ascending, <i>adj</i>	[ə'sendiŋ]	rising upward
bacteriuria, <i>n</i>	[,bæktiri'ju:əriə]	the presence of bacteria in the urine
calculus, -i (pl.), <i>n</i>	['kælkjʊləs, -lai]	a stone
concomitant, <i>adj</i>	[kən'kɒmitənt]	occurring during the same time period
haematuria, <i>n</i>	[,hemə'tjuəriə]	any condition in which urine contains blood or red blood cells
penetrate, <i>v</i>	['penitreit]	to enter by force; to infiltrate
persistent, <i>adj</i>	[pə'sistənt]	existing or remaining in the same state for an indefinitely long time

Exercise 2. Form the plural of the following nouns. Pronounce the pairs of words correctly:

E.g. calculus – calculi [...ai]

glomerulus, alveolus, bronchus, nucleus, bacillus, stimulus, terminus, ramus, fungus, coccus, focus.

Exercise 3. a) Match the term element with its meaning:

1. pyel(o)	a. heart
2. hepato	b. lung
3. cardio	c. nerve
4. angio	d. liver

5. pulm(o)	e. chest
6. neuro	f. brain
7. pector	g. kidney pelvis
8. cerebr(o)	h. vessel

Exercise 4. Explain the following word-combinations:

Renal failure, the non-functional tissue, an ascending infection of the kidney, concomitant diseases, resultant stasis, frequency of urination, urgency of urination.

Exercise 5. Read the text and answer the questions below:

RENAL DISEASES

Kidneys are the organs of the urinary system. They serve as the body's filters that remove waste products from the body and regulate the water balance. If the kidneys' function is seriously damaged, this causes the development of various renal diseases such as nephritis, pyelonephritis, nephrolithiasis, pyonephrosis (purulent inflammation of the kidney), hydronephrosis ("water inside the kidney"), renal failure, kidney cancer.

Nephritis (*nepbro* – combining form denoting *kidney*) is a group of inflammatory renal diseases. The most common type of nephritis is **glomerulonephritis**. It is the inflammation of the glomeruli, small round filters located in the kidney. Glomerulonephritis usually develops a few weeks after a streptococcal infection of the throat or skin. The symptoms of glomerulonephritis are fatigue, high blood pressure, swelling of the face, hands, ankles and feet. With proper medical treatment, symptoms usually subside within a month.

Pyelonephritis (*pyel(o)* – combining form denoting *the pelvis of the kidney*) is an ascending infection of the kidney, caused by bacteria that penetrates into the urinary tract from outside through the urethra. It may also ensue in the course of such concomitant diseases as cystitis in women, glomerulonephritis, or urinary stone disease (urolithiasis). Pyelonephritis can be acute or chronic.

Acute pyelonephritis often begins suddenly with chills. The patient has the general set of symptoms: malaise, headache, profuse sweating, nausea and vomiting. Then, the fever raises rapidly up to 39-40 °C. It is usually accompanied with the dull pain in the loins on the side of the affected kidney. The urine is cloudy and bloody due to the presence of bacteria, protein, and erythrocytes in it. **Chronic pyelonephritis** results from the undertreated acute form of the disease. It is often asymptomatic and can be detected only by means of urinalysis or if the patient has persistent hypertension. In chronic pyelonephritis, the normal renal tissue is replaced by the connective non-functional one. The kidney becomes small and scarred that leads to renal failure. Among other complications are pyonephrosis and urosepsis (presence of urine waste products throughout the body).

Nephrolithiasis (*nepbro* – meaning *kidney*, *lithi* – meaning *stone*), or renal calculi, is another renal disease. Its manifestations are extremely variable. In many cases, stones are carried in the kidneys for years without producing any symptoms. Sometimes, a mild infection develops in the pelvis around a tiny stone. If the stone is large, or several are present, the infection may result in the destruction and ultimate loss of the kidney. The size of a calculus varies from very small gravel to a large stag-horn stone which can fill the renal pelvis. The biggest risk factor for kidney stones is not drinking enough fluids. Kidney stones are more likely to occur when less than 1 liter of urine is produced during a day.

Migration of a stone can cause obstruction with resultant stasis and infection. Persistent or repeated obstruction leads to pyonephrosis or hydronephrosis. When a stone enters and obstructs the ureter, renal colic occurs. There may also appear nausea, vomiting, perspiration, frequency or urgency of urination, etc. Depending on the situation, a patient may need nothing more than to take pain medication and drink a lot of water to pass a kidney stone. In other instances — for example, if stones become lodged in the urinary tract, are associated with a urinary infection, or cause complications — surgery may be needed.

To reveal any renal disease, a full urological investigation must be carried out. It includes urinalysis that detects such signs of urinary tract infection as haematuria, albuminuria, bacteriuria, etc.; a urine test strip that reveals the presence of leukocytosis; blood tests; microbiological culture of the urine and antibiotic sensitivity testing.

If timely revealed and treated, renal diseases can be successfully cured with the return of the normal kidney function.

Exercise 6. Answer the questions:

1. What is the main function of the kidneys?
2. What does the renal damage cause?
3. How is a group of inflammatory renal diseases called?
4. What is glomerulonephritis? What are its manifestations?
5. What are the causes of pyelonephritis?
6. How are the acute and chronic forms of pyelonephritis manifested?
7. What are the complications of pyelonephritis?
8. What is nephrolithiasis? What is the risk factor of the disease?
9. What does the migration of a renal calculus lead to?
10. How can renal diseases be revealed?

Exercise 7. Complete the sentences with the appropriate words / word-combinations:

urgency of urination, perspiration, hematuria, bacteriuria, cloudy,
renal colic, swelling, albuminuria,

1. When a renal calculus enters the ureter and obstructs it, _____ appears.
2. Presence of bacteria in urine is called _____.
3. Abnormal enlargement of face, hands or feet due to excess water in the body is known as _____.
4. The excretion of fluid through the sweat glands of the skin is called _____.
5. When urine is not transparent or clear, it is _____.
6. When the urine contains a large amount of proteins, it is called _____.
7. The constant need to pass urine is also known as _____.
8. Presence of blood cells in urine is a sign of _____.

Exercise 8. Guess the renal / urinary disease:

1. malignant tumour of a kidney that leads to death;
2. purulent inflammation of a kidney;
3. presence of stones in the kidney;
4. inflammation of small round filters, located in the kidneys;
5. accumulation of fluid in the renal pelvis due to outflow obstruction;
6. ascending renal infection caused by bacteria that penetrate through the urethra;
7. inability of the kidneys to perform their functions;
8. penetration of urine waste products into the blood.

Exercise 9. Insert the preposition where necessary:

1. Following ... a strict diet means to avoid spicy and fatty food.
2. The patient experienced dull pain ... the side of the affected kidney.
3. The presence of urine waste products ... the body leads ... urosepsis.
4. Some of genitourinary diseases are accompanied ... painful urination.
5. The urinalysis was carried ... yesterday, so you'll find out your results soon.
6. The treatment of pyelonephritis consists ... removing the underlying cause.
7. He bent forward to pick up the pill and suddenly felt burning pain ... the loins.
8. To prevent the disease ... recurrence, it is necessary to complete the course of treatment.

Exercise 10. Put questions to the underlined words:

1. Chronic pyelonephritis leads to kidney failure.
2. Two forms of pyelonephritis are distinguished.
3. Pyelonephritis implies an ascending urinary tract infection.
4. Bacteria causing the UTI penetrate into the body through urethra.
5. Cystitis, glomerular nephritis, urorolithiasis may result in pyelonephritis.
6. The signs of urinary tract infections are haematuria, albuminuria, bacteriuria.
7. Appropriate antibiotics relieve the inflammatory process in the kidney.
8. The urine is cloudy and bloody as there are bacteria, protein, and erythrocytes in it.

Exercise 11. Re-write sentences using the appropriate tense form. Translate them:

1. Purulent inflammation of kidney (to know) as pyonephrosis.
2. Persistent hypertension (to indicate) the problems with kidneys.
3. He (to suffer) from obtuse pain in the loins since last month.
4. People with renal pathology (should, to avoid) spicy and fatty food.
5. The detection of pyelonephritis (to be) always possible due to urinalyses.
6. During the previous examination the patient (to complain) of painful urination.
7. The patient (to recover) quickly from pyelonephritis, if he (to complete) his treatment.
8. The onset of pyelonephritis (to accompany) with malaise, profuse sweating, nausea and vomiting.

Exercise 12. Role-play the dialogue. What are the patient's complaints? What is the possible diagnosis?

- Doctor: Are you having any trouble with your waterworks?
 Mr. Jones: Well, I do seem to have to go to the toilet more often than I used to.
 Doctor: How often is that?
 Mr. Jones: It depends, but sometimes it's every hour or even more often.
 Doctor: What about at night? Do you have to get up at night?
 Mr. Jones: Yes. Nearly always two or three times.
 Doctor: Do you get any burning or pain when you pass water?
 Mr. Jones: No, not usually.
 Doctor: Do you have any trouble getting started?
 Mr. Jones: No.
 Doctor: Is the stream normal? I mean is there still a good strong flow?
 Mr. Jones: Perhaps not quite so good as it used to be.
 Doctor: Do you ever lose control of your bladder? Any leaking or dribbling?
 Mr. Jones: Well, perhaps a little dribbling from time to time.
 Doctor: Have you ever passed blood in the urine?
 Mr. Jones: No, never.

Exercise 13. a) Describe the terms *glomerulonephritis, pyelonephritis, nephrolithiasis* using the plan below:

1.	General characteristics	
2.	Symptoms	
3.	Investigations / Analyses	
4.	Treatment	
5.	Complications	

b) Describe the terms *bacteriuria, haematuria, albuminuria* completing the sentences below.

- 1) ... is a sign of urinary tract infection.

- 2) It can be observed in such renal diseases as ... and....
- 3) ... is presence of ... in the urine.
- 4) ... is detected by urinalysis.

***Exercise 14. Read the case description and fill in the table below with the appropriate information. Explain the terms in bold:**

A 69-year-old woman with 25-year history of renal insufficiency with hypertension was hospitalized for worsening renal function, back pain and fever on September 21, 2017. Her past history included extracorporeal shock wave lithotripsy for left renal stone and percutaneous nephrolithotomy for right ureteral stone. In addition, 5 years earlier she had been admitted to our department for anemia, high level of serum creatinine. At that time, serum creatinine was 160 $\mu\text{mol/l}$, hemoglobin was 80 g/l, 24-h proteinuria 0.65 g, Urine leukocytes were 2-3 per high power field and urine culture was negative. Kidney ultrasonic showed right kidney was smaller than the left. The patient was discharged with the diagnosis of chronic renal insufficiency and hypertensive nephropathy. At the time of this admission, the blood pressure 129/77 mmHg, temperature 38.5°C, physical examination was unremarkable. Laboratory data revealed ESR 98 mm/h, CRP 51 mg/l, urine osmotic pressure 388 mosm/kg, Hb 74 g/l, serum creatinine 410 $\mu\text{mol/l}$, Urine leukocytes 2-3/ HP and urine culture was negative. Kidney MRI showed enlargement of renal pelvis and distortion of calyces and scarring of the overlying of two kidneys. On the basis of clinical history and kidney MRI, we diagnosed primary chronic pyelonephritis with active episode. Antibiotics and support treatment were administered. The temperature went back to normal and serum creatinine decreased to 314 $\mu\text{mol/L}$.

Patient	Past history	This admission
	<i>Laboratory data:</i>	<i>Vital signs:</i>
	<i>Instrumental studies:</i>	<i>Laboratory data:</i>
	<i>Surgical interventions:</i>	<i>Instrumental studies:</i>
	<i>Diagnosis:</i>	<i>Diagnosis:</i>

TASKS FOR SELF-CONTROL

Answer the questions:

1. What is a group of inflammatory renal diseases called?
2. What are the manifestations of glomerulonephritis?
5. What are the causes of pyelonephritis?
6. How are the manifestations of acute and chronic forms of pyelonephritis?
7. What are the complications of pyelonephritis?
8. What are the risk factors of nephrolithiasis?
9. What does the migration of a renal calculus lead to?
10. How is nephrolithiasis treated?

Explain the terms: glomerulonephritis, pyelonephritis, nephrolithiasis, hydronephrosis, pyonephrosis, bacteriuria, haematuria, albuminuria

GOITRE

Exercise 1. Topic vocabulary:

cretinism, <i>n</i>	['kretɪnɪzəm]	arrested physical and mental development with dystrophy of bones and soft tissues, due to congenital lack of thyroid gland secretion from hypofunction or absence of the gland
dwarfism, <i>n</i>	[dwɔːfɪzəm]	underdevelopment of the body; the state of being a dwarf
iodism, <i>n</i>	['aɪədɪz(ə)m]	an abnormal local and systemic condition resulting from overdosage with, prolonged use of, or sensitivity to iodine or iodine compounds
mental retardation	['ment(ə)l ,ri:tɑː 'deɪʃən]	mild to severe impairment in intellectual ability equivalent to an IQ of 70 to 75 or below
miscarriage, <i>n</i>	['mɪs ,kær.ɪdʒ]	the spontaneous loss of a pregnancy before the 20th week
stillbirth, <i>n</i>	['stɪl.bɜːθ]	the death of a baby in the womb after week 20 of the mother's pregnancy

Exercise 2. Form nouns using the suffixes and words given below:

-MENT: enlarge, impair, develop, achieve, treat, require, equip, move, establish, appoint, measure, excite, argue, state.

-ISM: cretin, giant, hyperthyroid, iodine, human, alcohol, fatal, hero, Darwin, modern, criticize;

-NESS: weak, deaf, dull, cold, ill, fresh, red, tired, restless, calm, kind, polite, cool, dry, dark.

Exercise 3. Explain word combinations:

noncancerous enlargement, iodine deficiency, the most common preventable cause, table salt fortified with iodine, autoimmune disease, unintended weight loss, replacement therapy

Exercise 4. Read the text and answer the questions below:**GOITRE**

Goitre is a noncancerous enlargement of the thyroid gland in the front of the neck. The enlargement may be diffuse – involving most of the gland, or localized – limited to a particular area, as in a solitary (single) nodule. Many conditions can cause goiter, but the most common is a lack of sufficient iodine in the diet, which is usually a result of the soil in which food is grown being iodine-poor—a condition that occurs in many mountainous regions away from the sea. Iodine is required for the production of thyroid hormones, which regulate the body's metabolism.

Iodine deficiency is the most common preventable cause of brain damage and mental retardation, affecting about 50 million people worldwide. However, these disorders have been reduced simply by using table salt fortified with iodine.

Adults require at least 20 micrograms of iodine daily, but 150 micrograms is recommended. Seafood is excellent source, while the iodine content of other foods varies depending on animal feed and soil. Iodism (iodine poisoning) is a rare condition that results in weakness, swollen salivary glands, a metallic taste in the mouth, and a runny nose.

Surveying communities for goiter is one of the best ways of detecting iodine deficiency, which, if not treated, can cause stillbirths, miscarriages, cretinism, mental impairments, deafness, and dwarfism.

Some other common risk factors for goiters include:

- female sex, because women are more prone to thyroid disorders;
- age: goiters are more common after age 40;
- medical history: a personal or family history of autoimmune disease increases risk;

- pregnancy and menopause;
- certain medications, e.g. some heart and psychiatric drugs;
- radiation exposure.

Not all goiters cause signs and symptoms. When signs and symptoms do occur they may include:

- a swelling at the base of your neck;
- a tight feeling in the throat;
- coughing;
- hoarseness;
- difficulty swallowing;
- difficulty breathing;
- dizziness when the arms are raised above the head

Goiters that result from other conditions, such as hypothyroidism or hyperthyroidism, may be associated with a number of symptoms, ranging from fatigue and weight gain to unintended weight loss, irritability and trouble sleeping.

An excess, or a deficiency of circulating hormones causes a wide range of medical conditions, for example *hyperthyroidism* and *hypothyroidism*. Where there is an excess of hormone, one form of treatment consists of giving the patient something which inhibits the production of hormone, as in the use of carbimazole to treat hyperthyroidism. When a hormone is deficient, treatment may be performed by replacement therapy, for example injections of insulin in the treatment of Type I diabetes.

Several tests can be used to diagnose and evaluate goiter, including the following: physical exam, hormone test, ultrasound of the thyroid, thyroid scan, CT scan or MRI (magnetic resonance imaging) of the thyroid.

Exercise 5. Answer the questions:

1. What is goitre?
2. What is required for the production of thyroid hormones?
3. What is the most common cause of goitre?
4. What can goitre cause?
5. What does iodism result in?
6. How much iodine do adults require daily?
7. What is an excellent source of iodine?
8. What are common risk factors for goiter?
9. What are the symptoms of goiter?
10. What is hyperthyroidism?
11. What is hypothyroidism?
12. What is the diagnosis of goiter based on?

Exercise 6. Choose the correct definitions to the following terms:

1) metabolism	a) poisoning induced by ingestion of iodine or its compounds.
2) iodism	b) a condition in which an overactive thyroid gland is producing an excessive amount of thyroid hormones that circulate in the blood.
3) hyperthyrodism	c) the condition of being a dwarf.
4) dwarfism	d) the swelling of the thyroid gland.
5) cretinism	e) a condition arising from a deficiency of thyroid hormone, present from birth, characterized by dwarfism and mental retardation.
6) goiter	f) the sum total of the chemical processes that occur in living organism, resulting in growth, production of energy, elimination of waste material, etc.

Exercise 7. Fill in the gaps with the words from the box.

front	hormones	older	energy	contribute
heart	slow	underactive	life-threatening	develop

Hypothyroidism, also called (1) _____ thyroid, is when the thyroid gland doesn't make enough thyroid (2) _____ to meet your body's needs. The thyroid is a small, butterfly-shaped gland in the (3) _____ of your neck. Thyroid hormones control the way your body uses (4) _____, so they affect nearly every organ in your body, even the way your (5) _____ beats. Without enough thyroid hormones, many of your body's functions (6) _____ down.

Women are much more likely than men to (7) _____ hypothyroidism. The disease is also more common among people (8) _____ than age 60.

Hypothyroidism can (9) _____ to high cholesterol. If you have high cholesterol, you should get tested for hypothyroidism. Rarely, severe untreated hypothyroidism may lead to myxedema coma, an extreme form of hypothyroidism in which the body's functions slow to a (10) _____ point.

Exercise 8. Open the brackets and use verbs in the correct tense and voice:

Hyperthyroidism is one of the most common endocrine conditions affecting older domesticated housecats. In the United States, up to 10% of cats over ten years old (to have) hyperthyroidism. The disease (to become) significantly more common since the first reports of feline hyperthyroidism in the 1970s. The most common cause of hyperthyroidism in cats (to be) the presence of benign tumors called adenomas. 98% of cases (to cause) by the presence of an adenoma, but the reason these cats (to develop) such tumors (to continue) to be studied.

Exercise 9. Put questions to the underlined words:

- Adults require 20 micrograms of iodine daily.
- Goitre can sometimes occur when your thyroid gland produces too much thyroid hormone (hyperthyroidism).
- Iodism results in weakness, swollen salivary glands and a runny nose.
- Iodine is required for the production of thyroid hormones.
- A lack of sufficient iodine in the diet occurs in many mountainous regions.
- She has noticed that her hands have a tendency to shake.
- Goitre had been prevalent in the alpine countries for a long time.
- Switzerland reduced the condition by introducing iodised salt in 1922.

Exercise 10. Match Mrs Davis's symptoms (1-7) with the questions her doctor asked (a-g).

- | | |
|---------------------|---|
| 1. diarrhea | a) Do you prefer hot weather or cold? |
| 2. eating more | b) Is your weight steady? |
| 3. heat intolerance | c) What is your appetite like? |
| 4. overactivity | d) Are your bowels normal? |
| 5. palpitations | e) Are you able to sit and relax? |
| 6. weight loss | f) Do your hands shake? |
| 7. tremor | g) Have you ever felt your heart beating rapidly? |

Exercise 11. Fill in the table "Goitre":

1	Definition	
2	Causes	
3	Symptoms	
4	Risk factors	
5	Examination	
6	Treatment	

***Exercise 12. Read the case presentation and fill in the table below with the appropriate information. Explain the terms in bold (you may need a dictionary):**

A 64-year-old hypertensive woman of African descent presented to the emergency room with a two-day history of worsening **shortness of breath** and **stridor**. She had been aware of a **recurrent goiter** for over 15 years, having had a **partial thyroidectomy** 35 years ago for **benign** multi-nodular disease. Over the past year, she had been experiencing shortness of breath on exertion, generally relieved by rest. She did not have any hyperthyroid or hypothyroid symptoms and there was no history of fever, **dysphagia**, pain or **hoarseness**.

On presentation to the emergency department she had marked stridor, **tachypnea** (32 breaths/minute), **tachycardia** (120 beats/minute) and blood pressure of 160/95 mmHg. Her pulse oximeter **oxygen saturation** (spO₂) was 78% on room air. A large multi-nodular goiter was obvious. All other examinations were normal. She was rushed to the operating theatre for intubation under general anesthesia.

After intubation, she stabilized and was able to breathe comfortably. She was admitted to the intensive care unit and given propranolol 20 mg orally, three times daily. Her laboratory test results were within normal ranges. A computed tomography (CT) scan of the neck and thorax showed gross enlargement of both lobes of the thyroid with multiple nodules of varying sizes. The results of an electrocardiogram (ECG) were normal, while the results of an echocardiogram were consistent with **hypertensive heart disease**.

A **total thyroidectomy** was performed on the fourth day after admission. She returned to the intensive care unit and recovered with no complications. Histology tests confirmed a benign multi-nodular goiter.

Patient	Present complaints	Past history	Examination data	Diagnosis	Treatment

TASKS FOR SELF-CONTROL

Answer the questions:

1. What is the most common cause of goitre?
2. What can iodine deficiency cause?
3. What is an excellent source of iodine?
4. What is iodism result in?
5. What are common risk factors for goiter?
6. What are the symptoms of goitre?
7. What is hyperthyroidism?
8. What is hypothyroidism?
9. What is the diagnosis of goitre based on?

Explain the terms: goiter, iodine deficiency

TETANUS

Exercise 1. Topic vocabulary:

delirium, <i>n</i>	[dɪˈlɪrɪəm]	a serious disturbance in mental abilities that results in confused thinking and reduced awareness of the environment
lockjaw, <i>n</i>	[ˈlɒk.dʒɔː]	an early symptom of tetanus characterized by spasm

		of the jaw muscles and inability to open the jaws
opisthotonus, <i>n</i>	[ou 'pɪsθətonəs]	a great rigid spasm of the body, with the back fully arched and the heels and the head bent back
protruded (lips), <i>n</i>	[prə 'tru:did]	
risus sardonicus	['ri:səs sɑ:'dɒnikəs]	a spasm of the facial muscles resulting in a permanent contorted grin
seizure, <i>n</i>	['si:ʒər]	uncontrolled electrical activity in the brain, which may produce a physical convulsion
stiffness, <i>n</i>	['stɪfnəs]	difficulty in moving a joint or stretching a muscle
trismus, <i>n</i>	[trɪzməs]	lockjaw

Exercise 2. Form the words with the help of negative prefixes:

- dis: like, function, connect, agree, locate, place, continue, section, solvent.
- ir: regular, responsible, relevant, resistible, radiation, reversible, reducible.
- im: possible, practical, mobile, moral, balance, maturity, potency, purity.
- un: necessary, reliable, fortunately, consciousness, dress, infected, mixed.
- mal: formation, nutrition, occlusion, position, treatment, presentation, rotation.

Exercise 3. Explain the word combinations:

noncontagious disease; incubation period; a terminal disease; a contaminated object; advanced cases; life-threatening breathing difficulty; a clinical diagnosis; abnormal heart rhythms; permanent disability; immunocompromised individuals

Exercise 4. Read the text and answer the questions below:

TETANUS

Tetanus is an acute infectious noncontagious disease caused by the *Bacillus tetani* (*Clostridium tetani*) which enters the bloodstream through a wound or break in the skin and is commonly found in soil, dust and rusted objects such as nails. When they enter a deep wound, spores of the bacilli may produce a powerful toxin, tetanospasmin, which impairs motor neurons, nerves that control muscles. The tetanus toxin acts on four areas of the nervous system: a) the motor end plates in the skeletal system; b) the spinal cord; c) the brain; and d) the sympathetic system.

The incubation period varies from 5 to 15 days. The shorter is the incubation period, the more serious is the disease. The earliest symptoms are restlessness, irritability, nightmare and delirium. Following a short period, a tonic spasm of the masticating muscles occurs so that the patient is unable to open his mouth, producing the characteristic picture known as lockjaw (trismus). Gradually all muscles of the body become affected except those of the forearm and of the hand. At the height of the disease there occurs the typical facial expression known as risus sardonicus, where the patient appears to be laughing, due to the drawing up of the angles of the mouth. The brows are contracted, the eyes are partly closed, the teeth are clenched tightly and the lips are slightly protruded. The body is arched in the position known as opisthotonus. Upon a slightest stimulus the entire body may go into a convulsive seizure, accompanied by severe pain.

Tetanus is a clinical diagnosis and there are no definitive laboratory tests. The diagnosis of tetanus is based on a complete history, physical examination, and the signs and symptoms of muscle spasms, stiffness and pain.

Complications include broken bones (the severity of spasms may cause the spine and other bones to break), breathing problems, high blood pressure or abnormal heart rhythms, disability (prolonged immobility due to the use of drugs can lead to permanent disability) and death. Death may ensue within the first 48 hours or at any time up to one week after onset. If the patient survives the first week, his chances of recovery are greatly improved, the spasms gradually lessening in frequency and severity.

Tetanus is a terminal disease. Once a patient was injured by a contaminated object, he

should immediately ask for medical help. The first step in treatment is wound cleaning that is removing dirt, foreign objects and dead tissue from the wound, and immunization with the tetanus vaccine. Immunization usually protects against tetanus infection for 10 years. In advanced cases the patient should be hospitalized usually in an intensive care unit and treatment is directed toward stopping toxin production, neutralizing its effects. Patients are also administered antibiotics to kill the bacteria. Sedatives are given for muscle spasm, which can lead to life-threatening breathing difficulty.

Immunization is the only effective prevention of tetanus. Tetanus toxoid is an effective, safe, stable and inexpensive vaccine that can be given to all ages, to pregnant women and to immunocompromised individuals.

Exercise 5. Answer the questions:

1. What is tetanus caused by?
2. How does *Bacillus tetani* enter the body?
3. Where can the *Bacillus tetani* be found in nature?
4. What is the incubation period of tetanus?
5. What are the earliest symptoms of tetanus?
6. What are the characteristic manifestations of tetanus?
7. How can you describe such typical facial expression known *Risus Sardonicus*?
8. What should be done first after the injury?
9. What is the treatment of the advanced cases of tetanus?

Exercise 6. Complete the following sentences using the text:

1. The characteristic features of tetanus are
2. Severe headache, difficulty in urination, and sweating are
3. The patient is unable to open his mouth, producing the
4. Gradually all muscles of the body become ... of the forearm and of the hand.
5. *Risus sardonius* is a characteristic facial expression that looks like.....
6. The condition *opisthotonus* is described as
7. The *Bacillus tetani* flourishes in
8. The first step to prevent tetanus is

Exercise 7. Match the terms to their definitions:

1. tetanus	a) Spasm of the jaw muscles, keeping the jaw tightly closed.
2. toxin	b) An acute infectious disease, affecting the nervous system, caused by the bacterium <i>Clostridium tetani</i> .
3. <i>opisthotonus</i>	c) The process whereby a person is made immune or resistant to an infectious disease.
4. spasm	d) A spasm in which the spine and extremities are bent forward, the body resting on the head and the heels.
5. trismus	e) A poison produced by a living organism, especially by a bacterium.
6. vaccination	f) A sustained involuntary muscular contraction, which may occur either as part of a generalized disorder, such as a spastic paralysis, or as a local response to an otherwise unconnected painful condition.
7. immunization	g) The process of administering weakened or dead pathogens to a sick person or animal.

Exercise 8. Read the sentences and say whether they are true:

1. Tetanus is an inherited disease characterized by painful spasms of the muscles.
2. Tetanus is caused by the *Bacillus tetani* which gains entrance into the body with contaminated food.
3. Tetanus infection has been associated with burns, animal bites and even chronic sores and

infections.

4. Tetanus is a highly contagious disease.
5. Gradually all muscles of the body become affected including those of the forearm and of the hand.
6. The typical facial expression known as risus sardonicus, where the patient appears to be crying, due to the drawing up of the angles of the mouth.
7. The body is arched in the position known as opisthotonus.
8. The treatment of tetanus consists of tetanus immune globulin to neutralize the toxins that the bacteria have created in your body.

Exercise 9. Complete the sentences using the words from the box:

Bacillus tetani, lockjaw, wound, convulsions, risus sardonicus, trismus, neurotoxin, bites

1. Tetanus is associated with rusty nails and other dirty objects, but any can be a source.
2. Less common ways of getting tetanus are animal scratches and
3. The first characteristic symptom of tetanus is often a stiffness of a jaw that is called
4. prevents the patient from opening his mouth or swallowing.
5. is a grinning expression produced by spasm of the facial muscles; seen in tetanus and certain types of poisoning.
6. grows only in the absence of oxygen, so wounds must be adequately cleaned of dead tissue and foreign substances.
7. can be sometimes severe enough to cause broken bones.
8. Tetanus spores grow in the body, producing a highly poisonous in the blood, spreading to the nervous system.

Exercise 10. Match two parts of the sentences:

1. Risus sardonicus is a characteristic, spasm of the facial muscles	a) proper immunization and by post-exposure prophylaxis.
2. When symptoms occur early,	b) the Greek meaning to "stretch".
3. Tetanus was well known to ancient people, so the word "tetanus" is derived from	c) protect their newborns by passing the antibody through the placenta.
4. Infection can be prevented by	d) the chance of death is increased.
5. The infection is usually transmitted through	e) the wound itself may be minor or healed.
6. Sometimes, the point of Clostridium tetani entry cannot be found because	f) of increased muscle activity.
7. The spasms in tetanus may be of utmost severity to cause	g) deep puncture wounds or cuts or scratches that are not cleaned well.
8. A patient with tetanus requires a high daily caloric intake because	h) bone fractures.
9. Mothers who have been adequately immunized against tetanus	i) with the appearance of raised eyebrows and an open "grin".

Exercise 11. Use the verbs in brackets in the appropriate tense:

1. Universal childhood immunization in the 1930s (to lead) to the decline in tetanus cases.
2. The patient (to suffer) from nightmares for about 10 days.
3. In this patient tetanus (to cause) by as a wound after stepping on a nail.
4. The brows (to contract), the teeth (to clench) tightly and the lips (to protrude) slightly.

5. Now the patient's body (to arch) in the position known as opisthotonus.
6. The entire body of the patient just (to go) into a convulsive seizure, accompanied by severe pain.
7. The patient (to run) a fever as high as 40°C during the attacks for a week.
8. Death (to ensue) within the first 48 hours or at any time up to one week after onset.

Exercise 12. Put questions to the underlined words:

1. Tetanus is characterized by painful spasms of the muscles.
2. The Bacillus tetani gains entrance into the body through a wound or break in the skin.
3. From 1947, the number of tetanus cases began to decline rapidly.
4. The patient may become restless, irritable and even delirious.
5. Gradually all muscles of the body become affected except those of the forearm and of the hand.
6. At the height of the disease there occurs the typical facial expression known as risus sardonicus.
7. The patient appears to be laughing, due to the drawing up of the angles of the mouth.
8. A child who plays outside can get infected with tetanus even from a small injury.

Exercise 13. Describe the term "tetanus" :

1.	General characteristics	
2.	Causative agent	
3.	Symptoms	
4.	Diagnosis	
5.	Treatment	
6.	Complications	
7.	Prevention	

***Exercise 14. Read the case presentation and fill in the table below with the appropriate information. Explain the terms in bold (you may need a dictionary):**

A 4-year-old Caucasian boy presented with a one-week history of **general malaise**, **mild fever**, **indolence** and **anorexia**. He subsequently developed **dysphagia**, **hypersalivation**, difficulties opening the mouth and eventually **dehydration**. Due to parental concerns about the boy's refusal of fluids, a pediatrician was consulted. At that time of presentation he showed signs of **trismus** and **muscle rigidity**. Together with the lack of immunization and a toe nail infection, this led to the suspicion of a generalized tetanus infection. After sedation, endotracheal **intubation** and **ventilation**, passive immunization and initiation of antimicrobial treatment, he was immediately transferred to a pediatric intensive care unit (PICU) for further treatment. The frequency and severity of paroxysmal muscle spasms increased progressively during his **PICU** stay, despite high doses of sedatives. Not before two weeks after admission, **extubation** and careful weaning off sedatives was achieved.

Patient	History (symptoms)	Patient's condition on presentation	Diagnosis	Treatment

TASKS FOR SELF-CONTROL

Answer the questions:

1. What type of disease is tetanus?
2. What is tetanus caused by?
3. How does Bacillus tetani enter the body?
4. What is the incubation period of tetanus?
5. What are the earliest symptoms of tetanus?

6. What are the characteristic manifestations of tetanus?
7. How can you describe risus sardonicus?
8. What should be done first after the injury in tetanus?
9. What is the treatment of the advanced cases of tetanus?

Explain the terms: tetanus, trismus, opisthotonus

CHILDHOOD INFECTIOUS DISEASES

Exercise 1. Topic vocabulary:

contagious, <i>adj</i>	[kən'teɪdʒəs]	transmissible by direct or indirect contact with an infected person
Blister	['blɪstə]	a small pocket of body fluid (lymph, serum) within the upper layers of the skin
exposure, <i>n</i>	[ɪk'spəʊʒə]	the condition of being unprotected
germ, <i>n</i>	[dʒə:m]	a microorganism causing disease
miscarriage, <i>n</i>	[mɪs'kæərɪdʒ]	the loss of a pregnancy during the first 23 weeks
scab, <i>n</i>	[skæb]	a hard coating on the skin formed during the wound healing reconstruction phase
swollen, <i>adj</i>	['swɒlən]	becoming larger in size, typically as a result of an accumulation of fluid
tender, <i>adj</i>	['tendə]	painful when an affected area is touched

Exercise 2. Read the word combinations with the new words:

1. Health: poor health, in good health, mental health, public health, health service, a health worker, health insurance, to affect health, [harmless](#) to one's health, [bad](#) / [broken](#) / [failing](#) / [feeble](#) / [fragile](#) / [frail](#) / [ill](#) / [poor](#) health.

2. Treatment: free medical treatment, supportive treatment, antibiotic treatment, emergency treatment, [hydropathic](#) treatment, treatment by [suggestion](#), to [answer](#) to the [medical](#) treatment.

Exercise 3. Put the names of diseases in the appropriate column:

AIDS (acquired immune deficiency syndrome), chicken pox, diphtheria, dysentery, enteric fever, flu (influenza, grippe), German measles (rubella), hepatitis, meningitis, mumps, measles, polio, scabies, tetanus, tuberculosis, whooping cough, scarlet fever.

<i>Children's Diseases</i>	<i>Infectious Diseases</i>
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Exercise 4. Read the text:

CHILDHOOD INFECTIOUS DISEASES

Chickenpox is a highly contagious disease caused by the varicella-zoster virus (VZV). It can cause an itchy, blister-like rash. The rash first appears on the chest, back, and face, and then spreads over the entire body, causing between 250 and 500 itchy blisters. Chickenpox can be serious, especially in babies, adolescents, adults, pregnant women, and people with bodies that have a lowered ability to fight germs and sickness (weakened immune system). The best way to prevent chickenpox is to get the chickenpox vaccine. Anyone who has not had chickenpox or gotten the chickenpox vaccine can get the disease. Chickenpox illness usually lasts about 4 to 7 days. The classic symptom of chickenpox is a rash that turns into itchy, fluid-filled blisters that eventually turn into scabs. The rash may first show up on the chest, back, and face, and then spread over the entire body, including inside the mouth, eyelids, or genital area. It usually takes about one week for all of the blisters to become scabs.

Measles is a very contagious disease caused by a virus. It spreads through the air when an infected person coughs or sneezes. Measles starts with a cough, runny nose, red eyes, and fever. Then a rash of tiny, red spots breaks out. It starts at the head and spreads to the rest of the body. Measles can be prevented with [MMR vaccine](#). The vaccine protects against three diseases: measles, mumps, and rubella. Children get two doses of MMR vaccine, starting with the first dose at 12 through 15 months of age, and the second dose at 4 through 6 years of age. Teens and adults should also be up to date on their MMR vaccination. The MMR vaccine is very safe and effective.

Mumps is a contagious disease that is caused by a virus. Mumps typically starts with fever, headache, muscle aches, tiredness, and loss of appetite. Then, most people will have swelling of their salivary glands (often referred to as parotitis when the parotid gland, in front and below the ear, swells). This is what causes the puffy cheeks and a tender, swollen jaw.

Pertussis (whooping cough) can cause serious illness in babies, children, teens, and adults. Symptoms of pertussis usually develop within 5 to 10 days after you are exposed. Pertussis in its early stages appears to be nothing more than the common cold. Therefore, healthcare professionals often do not suspect or diagnose it until the more severe symptoms appear. Pertussis can cause violent and rapid coughing, over and over, until the air is gone from your lungs. When there is no more air in the lungs, you are forced to inhale with a loud “whooping” sound. This extreme coughing can cause you to throw up and be very tired. Recovery from pertussis can happen slowly. Coughing fits generally become more common and bad as the illness continues, and can occur more often at night. The cough becomes milder and less common. However, coughing fits can return with other respiratory infections for many months after the pertussis infection started.

Rubella is a contagious disease caused by a virus. It is also called German measles, but it is caused by a different virus than measles. Most people who get rubella usually have mild illness, with symptoms that can include a low-grade fever, sore throat, and a rash that starts on the face and spreads to the rest of the body. Some people may also have a headache, [pink eye](#), and general discomfort before the rash appears. Rubella can cause a miscarriage or serious birth defects in an unborn baby if a woman is infected while she is pregnant. Rubella can be prevented with MMR vaccine. This protects against three diseases: measles, mumps, and rubella.

Exercise 5. Answer the questions:

1. What are the most known diseases of childhood?
2. What are the signs and symptoms of measles?
3. What are the mumps symptoms?
4. What is pertussis characterized by?
5. What can you tell about chickenpox?
6. Who can suffer from chickenpox more seriously?
7. What is rubella manifested by?
8. Who is rubella dangerous for? Why?
9. What are the preventive measures against childhood diseases?

Exercise 6. Match the first name of the disease with the second one:

morbilli/rubeola	Mumps
Rubella	Polio
Varicella	Measles
infectious parotitis	Croup
Pertussis	Chickenpox
acute laryngotracheitis	Lockjaw
Scarlatina	scarlet fever
Poliomyelitis	whooping cough
Tetanus	german measles

Exercise 7. Read the following statements. Agree or contradict them:

1. Most of childhood diseases are highly infectious and can be passed easily from person to person.
2. Measles, also known as three-day measles that caused by the streptococcal bacteria.
3. Rubella infection during the first trimester of pregnancy can cause fetal death.
4. Mumps is a childhood disease, but it can't occur in adults.
5. Children become immunized firstly by MMR vaccine between the ages of four and five.
6. Whooping cough starts on the face and spreads to the rest of the body.
7. Chickenpox was once a common, serious childhood illness but now is quite rare.
8. Fever, weakness, and red, itchy rash are the signs of mumps.

Exercise 8. Read the definitions and define the name of disease below:

(*poliomyelitis, varicella, infectious parotitis, rubella, rubeola, pertussis, flu*)

1. A common infectious viral disease of children, with mild fever, swollen lymph nodes and a rash. It can cause stillbirth or malformation of the unborn baby if it is caught by a mother while she is pregnant.
2. An infection disease of children caused by a herpes virus, and characterised by fever and red spots which turn to itchy blisters.
3. An infectious disease of children, with fever and swellings in the salivary glands, caused by a paramyxovirus.
4. The infectious disease the symptoms of which include inflammation of the nasal passages, sneezing, coughing and fever.
5. An infectious disease affecting the bronchial tubes. The patient suffers from a severe cough and makes a loud noise when inhaling after a coughing fit.
6. An infectious disease that can affect nerves and can lead to partial or full paralysis.
7. An infectious disease of children where the body is covered with a red rash. It can weaken the body's resistance to other diseases, for example bronchitis or ear infections. If caught by an adult it can be very serious.

Exercise 9. Insert the missing prepositions:

1. Whooping cough occurs ___ infants younger than 2 years.
2. It is contracted ___ inhaling infected airborne droplets.
3. The symptoms ___ this disease are sneezing and nasal congestion, tearing, loss appetite, and cough.
4. Chickenpox occurs primarily ___ children.
5. It is spread ___ breathing in infected respiratory droplets or ___ unprotected direct contact with the rash.
6. Mumps is a childhood disease, but it can occur ___ adults.
7. Mumps is caused ___ a virus and spread ___ inhalation of infected droplets.
8. In persons who have had chickenpox, the virus can cause shingles later ___ life.

Exercise 10. Complete the sentences using words from the text:

1. The most common diseases of childhood are highly infectious _____.
2. The virus of measles is transmitted by _____ of infected droplets.
3. Whooping cough is contracted by inhaling infected _____.
4. Chickenpox is spread by unprotected direct contact with _____.
5. The clinical name of _____ is epidemic parotitis.
6. _____ during the first trimester of pregnancy can cause fetal death.
7. Children are immunized against _____ by [MMR vaccine](#).
8. Scarlet fever was once a common, serious _____ illness but now is quite rare.

Exercise 11. Complete the conversations between the doctor and patients by writing in the name of childhood disease.

1. -What's the problem?

It's my son. He is got a rash and swelling in his armpits.

Does he have a fever?

Yes.

Hmm. He may have.....

2. - How are you feeling?

I've got this terrible cough.

Hmm.

And after I cough I make a noise when I try to breathe.

It sounds like.....

3. -What's the problem?

It's my daughter. She's got a fever and this swelling.

Where is the swelling?

In her throat.

It could be....

4. - So, what can I do for you?

It's the twins. They are covered in this dreadful red spots.

Are they experiencing any itching?

Yes, they are.

It may be....

Exercise 12. Put questions to the underlined words:

1. Whooping cough, scarlet fever and poliomyelitis are highly infectious diseases.
2. The virus is transmitted by inhalation of infecting droplets.
3. Measles is most contagious before the rash appears.

4. Rubella infection can cause fetal death during the first trimester of pregnancy.
5. Mumps is caused by a virus and spread by inhalation of infected droplets.
6. A second dose of the vaccine is usually given to children between the ages of four and five.
7. The bacteria produce a specific type of toxin that causes a rash.
8. Children are immunized against measles, rubella and mumps by MMR vaccine at 12 months.

Exercise 13. Put the verbs in brackets into the correct form:

1. All children (to vaccinate) against measles next week.
2. The illness (to diagnose) as mumps.
3. He (to develop) a rash after the insect (to bite) him.
4. Child with chicken pox (to isolate) immediately last night.
5. Before AIDS, many health care experts (to believe) that large-scale infectious diseases were a thing of the past.
6. A boy (to admit) to the hospital with a severe form of scarlet fever yesterday.
7. MMR vaccine (to develop) adverse events following immunization rarely.
8. Whooping cough (to occur) mainly in young children.

Exercise 14. Put the sentences into the correct order to explain the term “childhood infectious disease”:

___ Most children with uncomplicated forms of infectious diseases recover with rest and [supportive treatment](#).

___ All infectious diseases can be passed easily from person to person.

___ Infectious diseases are a group of diseases which are caused by organisms such as bacteria, viruses, and parasites.

___ The best known diseases of childhood are chickenpox, measles, rubella and mumps, whooping cough, scarlet fever and poliomyelitis.

___ A sore throat, a running nose, cough, high temperature, rash are the most characteristic local symptoms of childhood infectious disease.

TASKS FOR SELF-CONTROL

Answer the questions:

1. What are the most known diseases of childhood?
2. What are the signs and symptoms of measles?
3. What are the mumps symptoms?
4. What is pertussis characterized by?
5. What can you tell about chickenpox?
6. Who can suffer from chickenpox more seriously?
7. What is rubella manifested by?
8. Who is rubella dangerous for? Why?
9. What are the preventive measures against childhood diseases?

Explain the medical terms: measles, chicken pox, mumps, whooping cough, rubella.

APPENDICITIS

Exercise 1. Topic vocabulary:

laparoscope, <i>n</i>	[læpə'ɹɒskəp]	a fiberoptic instrument inserted through an incision in the abdominal wall and used to
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		examine visually the interior of the peritoneal cavity
appendectomy, <i>n</i>	[,ap(ə)n'dektəmi]	surgical removal of the appendix
bloating, <i>n</i>	[bləʊtɪŋ]	a swollen state caused by retention of fluid or gas
burst, <i>v</i>	[bɜ:st]	break open or apart suddenly and violently
constipation, <i>n</i>	[kɒnstɪ'peɪʃ(ə)n]	difficulty to pass stools
feces, <i>n</i>	['fi:səz]	body waste discharged from the intestine
laparotomy, <i>n</i>	[,lapə'rɒtəmi]	a surgical incision (cut) into the abdominal cavity
obstructed, <i>adj.</i>	[əb'strektɪd]	Blocked
retention, <i>n</i>	[rɪ'tenʃn]	the action of absorbing and continuing to hold a substance
rupture, <i>n</i>	['rʌptʃə]	an instance of breaking or bursting suddenly and completely

Exercise 2. Form the following new words and translate them into your native language:

Model: translate – translation, establish - establishment

-MENT: enlarge, impair, develop, achieve, treat, require, involve, measure.

-TION: complicate, obstruct, constipate, inflame, operate, examine, observe, prevent.

-NESS: weak, deaf, ill, red, tired, restless, tender.

Exercise 3. Form the new nouns with the meaning “inflammation”.

Model: appendix – appendicitis

Retina, sinus, esophagus, parodont, meninges, pulp, bronchus, myocardium, gingiva, thyroid, conjunctiva.

Exercise 4. Read the text:

APPENDICITIS

Appendicitis is an inflammation of the appendix, the short thin blind-ended tube, 7-10 cm long that is attached to the end of the caecum, the first part of the large intestine on the right side of the abdomen.

Appendicitis may be acute or chronic.

Acute appendicitis is a sudden inflammation of the appendix. If it is not treated promptly, the inflamed appendix may burst, spilling fecal material into the abdominal cavity. The usual result is a life-threatening infection of the abdominal cavity's lining (the peritoneum) that is peritonitis - a serious inflammation with rather high rate of mortality unless it is treated quickly with strong antibiotics.

Appendicitis is caused by the obstruction of the appendix. The appendix may become obstructed by a lump of feces and fecal debris or tumors, leading to inflammation and infection.

Acute appendicitis begins with tenderness near the navel or suddenly with a sharp pain in epigastrium. The pain does not radiate but it is accompanied by constipation, nausea, vomiting, bloating and retention of gases. The pain becomes worse on movement, deep breathing in and coughing. The temperature is subfebrile. A high fever may indicate an abscessed appendix.

Diagnosis of an acute appendicitis is based on symptoms and physical examination. Blood and urine samples should be taken for analysis. An ultrasound or an abdominal X-ray may be necessary.

The treatment of an acute appendicitis is surgical. The surgical procedure for the removal of the appendix is called an appendectomy.

A laparotomy is the traditional type of surgery used for treating appendicitis. This procedure consists of the removal of the appendix through a single incision in the lower right area of the abdomen.

An appendectomy is performed under general anesthesia. This procedure shouldn't last longer than an hour if complications do not occur.

A laparoscopy consists of making three incisions in the abdomen. A laparoscope is inserted into one incision but the other two are used for the removal of the appendix.

Chronic appendicitis is a rare condition that involves long-term inflammation of the appendix. The symptoms of chronic appendicitis last longer than those of acute appendicitis.

Diagnosing chronic appendicitis can be difficult because the symptoms are similar to those occurring with other conditions, including gastrointestinal disorders such as constipation or diarrhea. So, often, patients with chronic appendicitis are undiagnosed until an acute appendicitis occurs.

Full recovery after surgery takes about six weeks, but can be prolonged in case of complications, such as the rupture of the appendix.

Exercise 5. Answer the following questions:

1. What is appendix?
2. What is the cause of appendicitis?
3. What types of appendicitis are there?
4. What are the manifestations of acute appendicitis?
5. What is the difference of acute and chronic appendicitis?
6. Why is it difficult to make a diagnosis of chronic appendicitis?
7. What complications can occur in case of untreated acute appendicitis?
8. How can acute appendicitis be treated?
9. How can acute appendicitis be diagnosed?
10. What is the difference in laparotomy and laparoscopy?

Exercise 6. Say whether the sentences are true or false:

1. Appendicitis can be of acute and chronic form.
2. Laparoscopy consists of the removal of the appendix through one incision in the lower left part of the abdominal cavity.
3. Acute appendicitis begins with pains in substernal area.
4. The pain is accompanied by fever, perspiration and discharge of sputum.
5. An acute appendicitis is treated with antibiotics.
6. The rupture of appendix can lead to the infection of the peritoneum.
7. It is difficult to diagnose chronic appendicitis because symptoms are vague.
8. A high fever in acute appendicitis may indicate inflammation of the abdominal cavity's lining.

Exercise 7. Match the following terms with their definition:

1. Gastritis	a condition in which there is difficulty in emptying the bowels, usually associated with hardened faeces
2. Constipation	a tube-shaped sac attached to an opening in the lower end of the large intestine
3. Diarrhea	a feeling of sickness with an inclination to vomit
4. Appendix	the serous membrane lining the cavity of the abdomen and covering the abdominal organs
5. Peritoneum	a condition in which feces are discharged from the bowels frequently and in a liquid form

6. Nausea	is an inflammation of thin tissue that lines the inner wall of the abdomen and covers most of the abdominal organs.
7. Peritonitis	an inflammation of the stomach lining (mucosa)

Exercise 8. Put the words from the box instead of synonyms in the sentences:

Tenderness, obstruction, rupture, mortality, constipation, vomiting, nausea, recovery

- The *blockage* of the appendix lumen caused unbearable pains and fever.
- Cardiovascular diseases are one of the leading factors of *deaths* in the world nowadays.
- The disease is accompanied by severe *soreness* in the abdominal cavity.
- One of the most frequent complications of an acute appendicitis can be the *burst* of appendix that can lead to peritonitis.
- Retention of feces* is one of the symptoms of acute appendicitis.
- The patient with indigestion complained of *retching* and diarrhea.
- Sickness* can be a side effect of many medications including cancer chemotherapy, or morning sickness in early pregnancy.
- Full *convalescence* of acute appendicitis can occur after four - six weeks of treatment.

Exercise 9. Put questions to the underlined members of sentences:

- Acute appendicitis is due to the obstruction of the appendix with fecal debris.
- The rupture of appendicitis may cause peritonitis.
- Treatment of acute appendicitis consists of surgical intervention.
- Anorexia is commonly noted early in the morning.
- The patient with ruptured appendix will be operated immediately.
- On admission to the hospital the patient complained of a severe pain in epigastrium.
- Cases of appendicitis have been noted even in infants.

Exercise 10. Open the brackets and put the verbs in a correct tense:

- The surgeon (to perform) this operation from 10 till 11 o'clock.
- Two hours ago, a patient with acute pains (to bring) to the reception ward.
- Eye drops may (to use) for the prevention of ocular infection.
- The patients (to examine) by a doctor in charge now.
- If the patient has TB bacilli in the sputum, he (to stay) in the hospital for six or eight months.
- The patient cannot be discharged from the hospital because he not (to recover) yet.
- When we came, the solution (to boil) in the water-heater system.
- After the injection, given an hour ago, the patient (to feel) much better.

Exercise 11. Make the sentences interrogative starting with the question word in brackets.

- More males than females develop appendicitis between **puberty** and age 25. (When?)
- The infected contents of the appendix spill into the abdomen, potentially causing a serious infection of the abdomen. (What?)
- Under certain conditions, bacteria may multiply within the appendix. (Where?)
- A careful examination is the best way to diagnose appendicitis. (What?)
- Urinalysis may help to rule out a urinary tract infection that can mimic appendicitis (What?).
- Signs of rupture include the presence of symptoms for more than 24 hours. (How long?)
- Elderly patients may feel less pain and tenderness than most patients. (Who?)

8. The abdomen often becomes rigid and tender to the touch. (What?)

Exercise 12. Speak about Appendicitis according to the plan:

1. The type of the condition.
2. The causes of its occurrence.
3. The symptoms and manifestations of appendicitis.
4. The treatment of the emergency.

TASKS FOR SELF-CONTROL

Answer the following questions:

1. What is appendix?
2. What is the cause of appendicitis?
3. What types of appendicitis are there?
4. What are the manifestations of acute appendicitis?
5. What is the difference of acute and chronic appendicitis?
6. Why is it difficult to make a diagnosis of chronic appendicitis?
7. What complications can occur in case of untreated acute appendicitis?
8. How can acute appendicitis be treated?
9. How can acute appendicitis be diagnosed?
10. What is the difference in laparotomy and laparoscopy?

Explain the medical terms: appendicitis, peritonitis, appendectomy.

SHOCK

Exercise 1. Topic vocabulary:

agitation, <i>n</i>	[,ædʒi'teɪʃn]	a state of anxiety or nervous excitement
anxiety, <i>n</i>	[əŋ'zaiəti]	a feeling of worry, nervousness, or unease
clammy, <i>adj</i>	['klæmi]	unpleasantly damp and sticky or slimy to touch
confusion, <i>n</i>	[kən'fju:ʒn]	inability to think clearly or quickly as usual
dehydration, <i>n</i>	[,di:hai'dreiʃən]	losing more fluids than you take in
hypoxia, <i>n</i>	[hai'pɒksɪə]	low oxygen in your tissues
irreversible, <i>adj</i>	[,iri'vɜ:səbəl]	not able to be undone or altered
insufficient, <i>adj</i>	[,ɪnsə'fɪʃnt]	not enough; inadequate
seizure, <i>n</i>	['si:ʒə]	uncontrolled electrical activity in the brain, which may produce a physical convulsion
shallow, <i>adj</i>	['ʃæləu]	of little depth

Exercise 2. Form the words with the help of the prefix *hyper-*.

Model: *sensitivity* – *hypersensitivity*

activity, function, tension, ventilation, vitaminosis, secretion, keratosis, glycaemia, thyroidism, thermia (-thermia).

Exercise 3. Before you read the text, discuss the questions below:

1. What is shock?
2. What are the signs and symptoms of shock?

3. What causes shock to occur?

Exercise 4. Read the text:**SHOCK**

Shock is a life-threatening medical condition as a result of insufficient blood flow throughout the body. Shock often accompanies severe injury or illness. Medical shock is a medical emergency, and it can lead to other conditions such as lack of oxygen in the body's tissues (hypoxia), heart attack (cardiac arrest) or organ damage. It requires immediate treatment as symptoms can worsen rapidly.

Medical shock is different from emotional or psychological one as it can occur following a traumatic or frightening emotional event.

The main symptom of shock is low blood pressure. Among other symptoms we may observe rapid, shallow breathing and rapid weak pulse; cold, clammy skin; dizziness and confusion; glassy eyes; anxiety or agitation; seizures; low or no urine output; bluish lips and fingernails; sweating; chest pain.

There are five types of shock: septic, anaphylactic, cardiogenic, hypovolemic, neurogenic.

Septic shock results from bacteria multiplying in the blood and releasing toxins. It can be caused by intra-abdominal infections (such as a rupture of appendix), pneumonia, or meningitis. Its treatment includes antibiotics and fluids.

Anaphylactic shock occurs as a result of severe hypersensitivity or allergic reaction to insect stings, medicines or foods (nuts, berries, seafood). At the early stage, it can be treated with IV injection of adrenaline (epinephrine).

Cardiogenic shock happens when the heart is damaged and unable to supply sufficient blood to the body any more. It can be the end result of a heart attack or congestive heart failure. Cardiogenic shock has a poor prognosis: only one third of patients survive, as it is often difficult to treat and overcome.

Hypovolemic shock is caused by severe blood and fluid loss because of traumatic injury. It is treated with fluids (saline) in minor cases, and blood transfusions in severe cases. Hypovolemic shock responds well to medical treatment if initiated early.

Neurogenic shock is caused by spinal cord injury as a result of a traumatic accident or injury. This type of shock is the most difficult to treat as spinal cord damage is often irreversible. That's why it has a very poor prognosis. Nevertheless, its treatment includes surgery, absolute immobilization and anti-inflammatory drugs.

As far as we can see, treatment for each type of shock depends on the cause. Tests will help to determine it. Commonly IV fluids and medications that raise blood pressure are administered.

Shock is a medical emergency. If you suspect shock, especially after an injury, even if a person seems stable, get him to an emergency department immediately. Prompt treatment can save his life because the sooner shock is treated, the less is the damage to vital organs.

Exercise 5. Answer the questions:

1. What kind of medical condition is shock?
2. What conditions can shock lead to?
3. What are the symptoms of shock?
4. How many types of shock are there?
5. What is the cause of septic shock?
6. How is hypovolemic shock treated?
7. What types of shock do not respond to treatment? Why?
8. What is a common treatment for shock?

Exercise 6. Match nouns with corresponding adjectives to make word-combinations:

- | | |
|---------------------|---------------|
| 1. life-threatening | a) blood flow |
| 2. clammy | b) eyes |

- | | |
|-----------------|--------------|
| 3. insufficient | c) arrest |
| 4. shallow | d) condition |
| 5. glassy | e) emergency |
| 6. cardiac | f) breathing |
| 7. medical | g) damage |
| 8. irreversible | h) skin |

Exercise 7. Match symptoms with their definitions:

1. hypoxia	a) lack of clearness of mind
2. seizure	b) excretion of salty liquid through the skin pores
3. dizziness	c) condition when a patient cannot control his movements
4. confusion	d) worry and tension caused by apprehension
5. sweating	e) not blinking enough gives the eyes a shiny appearance like glass
6. glassy eyes	f) not deep respiration
7. anxiety	g) lack of oxygen in body's tissues
8. shallow breathing	h) feeling when the head goes round

1	2	3	4	5	6	7	8

Exercise 8. How do we call it? Choose the appropriate adjective / adverb from the box:

deficiency, traumatic, anti-inflammatory, life-threatening, severe, immediately, prompt, irreversible
--

- Medicines that prevent inflammation are called
- When something is done without delay, it's done
- A disease or injury that can cause a person to die is called
- When there isn't enough of something in the body, we observe
- An injury that affects some part of the body or any organ is called
- Medical aid delivered very quickly without any delay is called
- A very serious disease or reaction of the body to something is also known as
- Process that continues to develop and can't be stopped or changed to how it was before is

Exercise 9. Distribute the possible causes between the types of shock. Some causes can be the same for some types of shock:

spinal cord trauma, heart failure, rupture of appendix, hypersensitivity, fluid loss, intra-abdominal infections, bites of insects, meningitis, traumatic event, heart attack, pneumonia, allergy to medicines / food

Cardiogenic shock	Neurogenic shock	Hypovolemic shock	Septic Shock	Anaphylactic shock

Exercise 10. What would you do in case of shock? Say whether the following statements true or false.

1. Move a person who is suspected to have neurogenic shock.
2. Wait for the symptoms of shock worsen, and only then call in an ambulance.
3. Immediately call in an ambulance.
4. Leave a person alone with his trouble.
5. Have a person lie down on the back with the feet elevated above the head to increase blood flow to vital organs.
6. Raise a person's feet above the head to increase blood flow to vital organs even if raising legs causes pain.
7. Check a person's breathing every two minutes.
8. Don't give a person anything to drink so as to avoid loss of consciousness.

Exercise 11. Insert preposition where necessary:

1. Any health troubles start with damages ... cells.
2. He got spinal cord injury ... a result of a car crash.
3. Shock is an emergency condition that threatens ... life.
4. Toxins, released ... the blood by bacteria, cause septic shock.
5. Only a small number of people survive ... cardiogenic shock.
6. In summer a lot of people suffer allergic reactions ... insect stings.
7. The injury after the accident was accompanied ... the state of shock.
8. Medical shock differs ... the emotional one which follows some frightening event.

Exercise 12. Put questions to the underlined words:

1. The initial state of shock is manifested by hypoxia.
2. Thready pulse can be due to the decrease of blood flow.
3. The classification system for shock was created in 1972.
4. If not timely treated, shock will proceed to the progressive stage.
5. That critically ill patient developed septic shock after surgical intervention.
6. The severity of shock is graded on a 1-4 scale depending on the physical signs.
7. Low blood perfusion results in cellular damage and inadequate tissue function.
8. Hypovolemic, anaphylactic and neurogenic shock respond well to medical therapy.

Exercise 13. Re-write sentences opening the brackets and using proper form of the verb.

1. Glassy eyes (to be) the sign of stupor and shock.
2. Adrenaline always (to use) to arrest anaphylactic shock.
3. He said that his neurosis (to worsen) after the emotional shock.
4. She (to suffer) from allergy to mosquitoes' bites since childhood.
5. Two months ago he had meningitis which (to lead) to septic shock.
6. His case was minor, so the doctor (to administer) him IV infusion of saline.
7. At the moment the students (to observe) how the surgeon (to operate) on the patient's heart.
8. Absolute immobilization (to recommend) if an injured person seems to have a spinal cord injury.

Exercise 14. Fill in the table and describe the notion "shock":

Medical shock	
Signs and symptoms	
Types of shock	
Treatment	
Complications	

TASKS FOR SELF-CONTROL

Answer the questions:

1. What kind of medical condition is shock?
2. What conditions can shock lead to?
3. What are the symptoms of shock?
4. What types of shock are there?
5. What is the cause of septic shock?
6. How is hypovolemic shock treated?
7. What types of shock do not respond to treatment? Why?
8. What is the common treatment for shock?

Explain the medical terms: shock, septic shock, anaphylactic shock, hypovolemic shock, cardiogenic shock, neurogenic shock.

NEUROSES

Exercise 1. Topic vocabulary:

apprehension, <i>n</i>	[,æprɪ'hɛnʃn]	fearful or uneasy anticipation of the future
distress, <i>n</i>	[dɪ'stres]	anxiety or mental suffering
hypochondria, <i>n</i>	[haɪpə'kɒndrɪə]	a condition in which a person often believes that he is ill without actually being ill
incapacitate, <i>v</i>	[,ɪnkə'pæsɪteɪt]	deprive of strength or ability; disable.
psychosis, <i>n</i>	[saɪ'kɒʊ sɪs]	an acute or chronic mental state marked by loss of contact with reality, disorganized speech and behavior, and often hallucinations or delusions
pyromania, <i>n</i>	[,paɪrəʊ'memɪə]	a persistent compulsion to start fires
somatoform disorder	[sə'matəfɔ:m dɪs'ɔ:dəz]	psychiatric disorders in which patients present with a myriad of clinically significant but unexplained physical symptoms

Exercise 2. Explain the following word combinations:

A mild mental illness; an umbrella term; to disrupt the brain activity; feelings of apprehension; strong unreasonable fear; to be focused on an imagined illness; to lose all self-control; consuming fear; loss of touch with reality; intrusive thoughts; substantial feeling

Exercise 3. Write the given words in Singular (remember the words of the Latin and Greek origin) and use them in sentences:

Neuroses, activities, bacteria, crises, children, atria, alveoli, lives, analyses, ganglia, fungi, diagnoses, laboratories, cocci, curricula, bacilli, mice, phenomena, vertebrae, criteria, metastases.

Exercise 4. Read the text and answer the questions below:

NEUROSES

Neuroses are relatively mild mental illnesses that are not caused by organic diseases. They involve symptoms of distress but not radical loss of touch with reality. Though the term neuroses is no longer used formally within the medical community, it is still a common umbrella term used for mental illnesses such as anxiety, pyromania, obsessive-compulsive disorder, hysteria, and phobias.

The work capacity of the nerve cells in the cerebral cortex is limited, so over-excitation, over-inhibition, or simultaneous overstimulation of both processes and their mobility may disrupt brain activity resulting in neurosis.

Neuroses include anxiety, depression, or other feelings of unhappiness or distress that are out of proportion to the circumstances of a person's life. They may impair a person's functioning

in any area of his life, relationships, or external affairs, but they are not severe enough to incapacitate the person. Neurotic patients generally do not suffer from the loss of the sense of reality compared to people with psychoses.

One of the common types of neuroses is anxiety. A person suffering from anxiety may experience feelings of apprehension, worry, and fear. Physical symptoms are also common with this form of neurosis, including nausea, palpitations, chest pains, and shortness of breath. The person may also experience elevated blood pressure and heart rate, sweating pale skin, dilated pupils, and trembling.

Phobia is a type of anxiety disorder, characterized by strong unreasonable fears of specific objects, people, situations, or activities. Some common objects of phobias are open or closed spaces, fire, high places, dirt, and bacteria.

Pyromania is another type of neuroses. A person suffering from pyromania is fixated on fire. A pyromaniac is not the same as an arsonist, as a person suffering from pyromania gains a sense of happiness from fires, whereas an arsonist may set fire for revenge or for personal gain. In general, there are no other symptoms associated with this type of neurosis.

Another neurosis is obsessive-compulsive disorder. Individuals with obsessive-compulsive disorder generally suffer from intrusive, repetitive, and disturbing thoughts. In an attempt to get rid themselves of these thoughts, they engage in certain rituals or tasks. Compulsive behaviour includes rituals such as repetitive hand washing or door locking. This leads to a cycle of thoughts and behaviors over which the person feels he or she has little or no control.

Somatoform disorders which include the so-called hysterical, or conversion neuroses, manifest themselves in physical symptoms such as blindness, paralysis, or deafness that are not caused by organic disease. Hysteria is one of the common forms of neuroses. A person suffering from hysteria experiences substantial feelings of fear or other emotions that he or she cannot seem to handle. Often the fear is focused on an imagined illness or other problem of a specific body part. The person may lose self-control as a result of the consuming fear.

Psychoneurotic disorders are formed in children more easily than in adults.

Treatment of neuroses can include psychotherapy, psychoactive drugs, and relaxation exercises, such as deep breathing. Other methods include cognitive behavioral therapy, which adjusts the faulty psychological mechanisms that respond to the environment to react as they should.

Exercise 5. Answer the questions to the text:

1. When may the brain activity be disrupted?
2. What are the most common symptoms of neuroses?
3. What is the principal difference between the neurotic patients and those with psychoses?
4. What physical symptoms are common in anxiety?
5. What are phobias characterized by?
6. What phobias do you know?
7. What do individuals with obsessive-compulsive disorder generally suffer from?
8. What group of neuroses does hysteria belong to?
9. What are the common kinds of treatment for neuroses?

Exercise 6. Find the wrong usage of words and change them by the proper ones:

1. Sweating, enlarged blood pressure, and trembling may not be caused by organic diseases.
2. The changes in the bones resulted from calcium insufficiency.
3. The normal palpitation of the adult is 72-80 beats per min.
4. Psychoneurotic disorders are relatively easy mental illnesses that are not caused by organic diseases.
5. He had to visit his dentist to extract an ill tooth.

6. Blindness, paralysis, and deafness are the often symptoms in hysteria.
7. Elevated heart rate, sweating, pale skin, increased pupils may be the manifestations of neuroses.
8. The neurotic people can't hand their emotions and feelings.

Exercise 7. Find a grammar mistake in each sentence and correct it:

1. Children may to form serious neurotic disorders.
2. Neurosis is characterized by feelings of unhappiness or distress.
3. What kinds of fear people with phobias experience?
4. A person's functioning in virtually any area of his life may be impair by psychoneurotic disorders.
5. Does elevated blood pressure may be symptom of anxiety?
6. People with psychoses suffers from the loss of the sense of reality.
7. The patients who suffers from conversion neuroses may be focused on an imagined illness.
8. What do a pyromaniac gains a sense of happiness from?

Exercise 8. Put questions to the underlined words:

1. A person suffering from pyromania is fixated on fire.
2. The term *neurosis* was coined by the Scottish doctor William Cullen.
3. A person with an inborn strong type of nervous activity may become unbalanced or in active due to faulty upbringing.
4. William Cullen coined the term *neurosis* in 1769.
5. Neuroses impair a person's functioning not enough to incapacitate the person.
6. The patient has been suffering from elevated blood pressure and heart rate, sweating, and trembling for three month.
7. Revealing the causes of neuroses will facilitate their rapid cure.
8. Over-excitation and over-inhibition of the cortex cells may influence the brain activity unfortunately.
9. Neurosis in children is most frequently observed at the age of 2 to 4, 7 to 8, and the period of puberty development.
10. When the causes of somatoform disorders are determined the neurotic symptoms will be controlled.

Exercise 9. Open the bracket, put the verbs in the proper tense form:

1. The non-biological basis of neurosis (to maintain) with Sigmund Freud at the beginning of the psychoanalytic movement.
2. Carl Jung (to see) collective neuroses in politics: "Our world is, so to speak, dissociated like a neurotic".
3. Neurotic tendencies (to manifest) themselves as depression, acute or chronic anxiety, obsessive-compulsive tendencies, specific phobias.
4. The origin of the term hysteria commonly (to attribute (приписывать) to Hippocrates.
5. Hippocrates (to think) that the cause of hysteria was irregular movement of blood from the internal genitalia to the brain.
6. During the mid-19th century the term neurosis (to use) as a key to characterize disorders that (to be) neurological in origin.
7. Neurotic people (to tend) to have more negative feelings such as depression, anxiety, insecurity.
8. The prescribed anti-depressants (to take) by the end of the next month.

Exercise 10. a) Read about fears and phobias in famous people and tell about other similar facts you've heard:

George Washington, the first president of the United States of America, had a very serious fear of premature burial. This was clearly expressed on his deathbed, in 1799, where he made his attendants promise that his body would be left out for two days, in case he was still alive.

Woody Allen has taken fear to an extreme. The 74-year-old actor and screenwriter is afraid of practically everything. Although he has normal phobias that cause him to fear heights, enclosed spaces and insects, he also has more abnormal fears. Among his weirder terrors are fears of bright colours, animals, elevators and peanut butter sticking to the roof of his mouth!

Alfred Hitchcock, a famous Hollywood director and producer, had an extreme fear of eggs. He said that they are revolting (вызывают отвращение) to him! He stated that he never tasted an egg in his whole life, and he refused to even be around them.

Madonna's always been a fearless femme fatale in our eyes. But even kickboxing, leather corset-wearing megastars are afraid of thunderstorms: Madonna is apparently a sufferer of brontophobia, the fear of thunder.

b) Make up sentences using the words in the right order:

- 1) Jennifer Aniston, all, a fear, Michael Jackson, and, Whoopi Goldberg, have, of flying.
- 2) The, excessive, 34th, of, had, an, president, fear of hospitals, the United States, Richard Nixon.
- 3) the, Orlando Bloom, a, phobia, strange, actor, has, British, pigs, fear, of, the.
- 4) feared, Sigmund Freud, who, the, neurologist, founded, the, school, psychoanalyst, ferns (папоротники), of, psychiatry.

Exercise 11. Define the type of phobia (social phobia, simple phobia, agoraphobia, panic disorders):

1. The fear of something with an unexplained reason comes under this category of phobias. Phobias for bees, odor, illness, and storms are some of the example of this phobia. Such phobias are more common in children but they can occur in all ages. Statistics says that between 5-12 percent of the population have phobic disorders in any 6 months. These phobias often do not interfere with the daily life of a phobic person. When these phobias get intense, they require proper treatment.
2. This is a bit serious kind of phobia. The person who has this phobia is afraid of being judged by others around him. Such person avoids gatherings and social get-togethers because of these kinds of apprehensions. In these phobias, a person becomes over conscious about his/her image in the society. He will feel very much embarrassed if he is not able to control the fear in front of anyone. He feels degraded and humiliated. These phobias begin between the ages of 15-20 years and if they are not treated they continue all through the lives.
3. People falling in this category have devastating episodes of fear attacks. The symptoms of the attacks are breathlessness, nausea, increased heart rate, dizziness, change in body temperature and blood pressure. A person who has such a disorder, fears of death, being insane, and of losing control.
4. This can be called an extension to panic disorders. People who suffer panic attacks can develop it. People suffering from this phobia will rarely leave their place if they do not have a company.

TASKS FOR SELF-CONTROL

Answer the questions:

1. What are the most common types of neuroses?
2. What are the common symptoms of neuroses?
3. What is the principal difference between the neurotic patients and those with psychoses?
4. What physical symptoms are common in anxiety?

5. What does “phobia” mean? Give examples.
6. What do patients with obsessive-compulsive disorder suffer from?
7. What group of neuroses does hysteria belong to?
8. What are the common kinds of treatment for neuroses?

Explain the medical terms: neurosis, psychosis, phobia, hysteria, anxiety, obsessive-compulsive disorder

STROKE

Exercise 1. Topic vocabulary:

altered, <i>adj</i>	['ɒltəd]	changed or modified
aphasia, <i>n</i>	[ə 'feɪzɪə]	a disorder of language affecting the generation and content of speech and its understanding
anti-platelet drugs, <i>n</i>	[æn 'tɪplətɪt drʌgz]	medicines intended to prevent and/or reverse platelet aggregation in arterial thrombosis, myocardial infarction and ischemic stroke
atrial fibrillation , <i>n</i>	['eɪtriəl fɪbrɪ 'leɪʃən]	a type of arrhythmia in which your heart beats irregularly and often fast
cerebrovascular accident, <i>n</i>	['æksɪdənt]	stroke or brain attack
consciousness, <i>n</i>	['kɒnʃənsɪs]	awareness
disturbance, <i>n</i>	[dɪ 'stɜ:bəns]	a divergence from that which is considered normal
clot busters	[,klɒt 'bʌstəz]	also called thrombolytics, dissolve the blood clot that is blocking the artery and help to restore blood flow
modifiable, <i>adj</i>	['mɔ:ɪdɪfəəbl]	changeable
transient ischemic attack , <i>n</i>	['trænzɪənt ɪ 'ski:mɪk ə 'tæk]	"mini stroke" caused by a temporary disruption in the blood supply to part of the brain

Exercise 2. Read the word combinations and sentences with the new words:

Accident: cerebrovascular accident; car accident. She died in an accident. Try to avoid having an accident.

Damage: [neurological](#) damage; cartilage damage from a sports injury. Taking regular doses of the drugs can have long-term side effects such as hearing loss and liver and kidney damage.

Factor: [risk factors](#); lifestyle factors; environmental factors; factor of time; factor of safety.

Hemorrhage: subarachnoid hemorrhage; hemorrhagic stroke; hemorrhagic shock; internal hemorrhage.

Consciousness: [loss of consciousness](#); nature of human consciousness.

Exercise 3. Complete the table with the missing words (you may use a dictionary):

VERB	NOUN	ADJECTIVE
	Loss	
to disturb		
		intended

to formulate		
		affected
	Speech	

Exercise 4. Read the text:**STROKE**

Stroke, or cerebrovascular accident (CVA), is rapid loss of brain function due to disturbance in the blood supply to the brain. This can be due to ischemia (lack of blood flow) caused by blockage of blood vessels (thrombosis, arterial embolism), or a hemorrhage. As a result, the affected area of the brain cannot function, which might result in an inability to move one or more limbs on one side of the body (paralysis), inability to understand or formulate speech (aphasia), an inability to see one side of the visual field, or altered taste, smell, hearing.

Stroke is a medical emergency and can cause permanent neurological damage and death. Risk factors for stroke include old age, high blood pressure, previous stroke or transient ischemic attack (TIA), diabetes, high cholesterol, tobacco smoking and atrial fibrillation. High blood pressure is the most important modifiable risk factor of stroke. It is the second leading cause of death worldwide.

An ischemic stroke is occasionally treated in a hospital with thrombolysis (also known as a "clot buster"), and some hemorrhagic strokes benefit from neurosurgery. Prevention of recurrence may involve the administration of anti-platelet drugs, control and reduction of high blood pressure, and the use of statins. Selected patients may benefit from carotid endarterectomy and the use of anticoagulants.

Strokes can be classified into two major categories: ischemic and hemorrhagic. Ischemic strokes are those that are caused by interruption of the blood supply, while hemorrhagic strokes are the ones which result from rupture of a blood vessel or an abnormal vascular structure. About 87% of strokes are caused by ischemia, and the remainder by hemorrhage. Some hemorrhages develop inside areas of ischemia ("hemorrhagic transformation"). It is unknown how many hemorrhages actually start as ischemic stroke.

Stroke symptoms typically start suddenly, over seconds to minutes, and in most cases do not progress further. The symptoms depend on the area of the brain affected. The more extensive the area of brain affected, the more functions that are likely to be lost.

Loss of consciousness, headache, and vomiting usually occurs more often in hemorrhagic stroke than in thrombosis because of the increased intracranial pressure from the leaking blood compressing the brain.

If symptoms are maximal at onset, the cause is more likely to be a subarachnoid hemorrhage or an embolic stroke.

Exercise 5. Answer the questions:

1. What is the cause of stroke?
2. What does the abbreviation CVA mean?
3. What is ischemia?
4. What are the manifestations of CVA?
5. How can the [blood supply](#) to the brain be disturbed?
6. What are the risk factors for stroke?
7. What medication can be administered in stroke?
8. What kind of surgery may some CVA patients undergo?
9. What is 'hemorrhagic transformation'?
10. How do stroke symptoms start?
11. How does hemorrhagic stroke differ from that of the ischemic one?

Exercise 6. Match the words with their definitions:

1. ischemic	a) an abnormal and very dangerous condition in which blood
-------------	--

stroke 2. thrombosis 3. hemorrhagic stroke 4. statins 5. subarachnoid hemorrhage 6. TIA (transient ischemic attack) 7. aspirin 8. paralysis	collects beneath the arachnoid mater, a membrane that covers the brain. The accumulation of blood in the subarachnoid space can lead to stroke , seizures, and other complications; b) it is caused by interruption of the blood supply; c) a stroke, producing similar symptoms, but usually lasting only a few minutes and causing no permanent damage; d) it results from rupture of a blood vessel or an abnormal vascular structure; e) a serious condition caused when a blood clot blocks the flow of blood in a blood vessel; f) any of a group of drugs (as lovastatin and simvastatin) that inhibit the synthesis of cholesterol and promote the production of LDL-binding receptors in the liver resulting in a usually marked decrease in the level of LDL and a modest increase in the level of HDL circulating in blood plasma; g) a loss or impairment of voluntary movement in a body part, caused by injury or disease of the nerves, brain, or spinal cord; h) a white, crystalline substance derivative of salicylic acid, used as an anti-inflammatory agent and to relieve the pain of headache, rheumatism, gout, neuralgia, etc.; acetylsalicylic acid.
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Exercise 7. Put symptoms into appropriate column:

Pain in chest, inability to smile, nausea and vomiting, a sensation of tightness, weakness or numbness on one side of your body, arm drift, sweating, aphasia and aphonia, numbness of the face, confusion, headache, episodes of angina, shortness of breath, jaw pain, heartburn, face drooping.

Myocardial infarction

Stroke

Exercise 8. Match the synonyms:

1. paralysis 2. exertion 3. rapidly 4. aphasia 5. reduction 6. stroke 7. interruption 8. hemorrhage	a) attack b) quickly c) stop d) inability to formulate speech e) shortening f) bleeding g) physical efforts h) numbness
--	--

Exercise 9. Choose the correct form of each verb:

WHAT IS WONDERFUL ABOUT THE BRAIN?

Inside your head there is a remarkable organ, the brain. You use it to understand and remember things that (1) around you. The brain is soft and spongy. It (2) of billions of tiny parts called cells. Three coats or membranes (3) the brain. The brain sometimes (4) the busiest communication center in the world. The brain (5) your body functions and keeps all parts of your body working together. Thousands of messages from all parts of the body (6) to and from the brain. Messages (7) to the brain by sensory nerves. Special places, or centers, on the brain receive sensory messages from all parts of the body. When messages (8) by centers, the brain (9) them. All day long your muscles and your brain (10). By the end of the day they (11). Then your brain and

your muscles (12) to relax. Before long, you go to sleep. As you sleep, the big muscles in your body relax.

(1) are happened; are happening.

(2) is made up; made up.

(3) is covered; cover.

(4) is called; calls.

(5) is controlled; controls.

(6) send; are being sent.

(7) are carried; was carried.

(8) are received; will receive.

(9) is interpreted; interprets.

(10) are worked; are working.

(11) have be tired; are tired.

(12) are started; start.

Exercise 10. Read and remember several different types of diagnostic tests that doctors can use in order to determine which type of stroke has occurred:

1. Physical examination: a doctor will ask about the patient's symptoms and medical history. They may check blood pressure, listen to the carotid arteries in the neck and examine the blood vessels at the back of the eyes, all to check for indications of clotting.

2. Blood tests: a doctor may perform blood tests in order to find out how quickly the patient's blood clots, the levels of particular substances (including clotting factors) in the blood, and whether or not the patient has an infection.

3. CT scan: a series of X-rays that can show hemorrhages, strokes, tumors and other conditions within the brain.

4. MRI scan: radio waves and magnets create an image of the brain to detect damaged brain tissue.

5. Carotid ultrasound: an ultrasound scan to check the blood flow of the carotid arteries and to see if there is any plaque present.

6. Cerebral angiogram: dyes are injected into the brain's blood vessels to make them visible under X-ray, in order to give a detailed view of the brain and neck arteries.

7. Echocardiogram: a detailed image of the heart is created to check for any sources of clots that could have traveled to the brain to cause a stroke.

Exercise 11. Fill in the table “Stroke”:

1	Definition	
2	Causes	
3	Symptoms	
4	Examinations	
5	Treatment	

Exercise 12. Put questions to the underlined words:

1. Symptoms of a small stroke may be confused with those of other conditions that cause similar symptoms.

2. The anterior circulation of the brain is supplied by the carotid arteries.

3. The patient's condition improved gradually within 2 weeks of treatment.

4. When blood flow stops, brain cells do not receive the oxygen and glucose they require to function.

5. Two weeks after antibiotic treatment was discontinued, the patient experienced a frontal headache.

6. He had developed hypertension over the last 10 years.

7. Because there was occasional low-grade fever, intravenous penicillin was given for 2 weeks.

8. During the attack of stroke you may have facial weakness and won't be able to smile.

Exercise 13. Open the brackets, using the proper verb forms:

1. She (to lose) consciousness and (to transfer) to our hospital on the same day.
2. Quick action by a doctor sometimes (to reduce) the damage or (to prevent) more damages.
3. In both patients, brain abscess (to develop) at the stroke lesion site after they (to have) an infectious complication.
4. Most strokes (to happen) suddenly and (to damage) the brain within minutes.
5. If the stroke already (to happen) blood clotting drugs are not effective.
6. After the patient (to develop) the left hemi paresis, he (to admit) to our hospital.
7. Because of the progressive multifocal cerebral manifestations in the patient, we (to decide) to perform a brain biopsy of the right parietal lobe ten days after admission.
8. As soon as a doctor (to gather) all information he (to make) a diagnosis of a suspected ischemic stroke.

TASKS FOR SELF-CONTROL

Answer the questions:

1. What is the cause of stroke?
2. What does the abbreviation CVA mean?
3. What is ischemia?
4. What are the manifestations of CVA?
5. How can the blood supply to the brain be disturbed?
6. What are the risk factors for stroke?
7. What medication can be administered in stroke?
8. What kind of surgery may some CVA patients undergo?
9. How do stroke symptoms start?
10. How does hemorrhagic stroke differ from that of the ischemic one?

Explain the medical terms: ischemic stroke, hemorrhagic stroke, thrombosis, paralysis.

EPILEPSY

Exercise 1. Topic vocabulary:

seizure, <i>n</i>	[si: ʒə]	a sudden attack often including convulsions
partial, <i>adj</i>	[pɑ: ʃ(ə)l]	incomplete
recurrent, <i>adj</i>	[rɪ'kʌr(ə)nt]	something that happens repeatedly
posture, <i>n</i>	[pɔ:stʃə]	the position in which you hold your body while standing, sitting or lying down
unconscious, <i>adj</i>	[ʌn kənʃəs]	lacking of the ability to notice or respond to stimuli in the environment
paroxysm, <i>n</i>	['pærəksɪzm]	a violent attack
hallucination, <i>n</i>	[həlu:si neiʃn]	a sensory experience that appears real but is created by your mind
incontinence, <i>n</i>	[ɪn'kɒntɪnəns]	inability to control excretions,
grand mal	['grænd 'mæl]	generalized convulsion accompanied by loss of consciousness
recollection, <i>n</i>	[,rekə'leɪʃ(ə)n]	the action of remembering something

Exercise 2. Match the words with their translation:

1. tonic-clonic	a) часткове затьмарення свідомості
2. unconscious	b) бісинхронічні імпульсні викиди
3. confusion	c) утворення рубця
4. bisynchronous spike discharges	d) фокусний
5. scarring	e) тонічно-клонічний
6. focal	f) непритомний

Exercise 3. Match the medical terms with their definitions:

Epilepsy	a perception in the absence of stimuli
Unconsciousness	a sudden involuntary contraction of a muscle or a hollow organ
Cyanosis	a transient symptom of abnormal excessive or synchronous activity in the brain
Seizure	complete lack of responsiveness to people or other environmental stimuli
Spasm	a common and diverse set of chronic neurological seizures
Hallucination	the appearance of blue or purple coloration of the skin due to the lack of oxygen

Exercise 4. Complete the words in the following sentences by adding a prefix. Choose from the following: un-, in-, im-, ir-, dis-.

- An epileptic seizure is ___controlled, chaotic electrical activity in the brain. It alters consciousness and may bring on ___ voluntary movements. Epilepsy may be the result of chemical ___ balance but more often the cause is ___ known.

2. In a grand mal epileptic seizure, the victim falls to the ground ___conscious and makes twitching movements which may last for several minutes. In a petit mal seizure, the victim may be __aware of things around him for up to thirty seconds but seldom loses consciousness.
3. In temporal lobe epilepsy, a seizure may result in the victim having ___rational feelings of anger or fear.
4. Following a stroke, many patients are left with some sort of ___ability.
5. Brain cells starved of blood are _____able to communicate with the parts of the body they are responsible for.

Exercise 5. Read the text:

Epilepsy

Epilepsy is a disorder of brain function characterized by recurrent seizures that give a sudden onset. Epilepsy may be the result of disturbed chemical balance but more often the cause is unknown. Seizure (epilepsy) is actually a whole group of brain disorders. The seizure can be either partial or complete, depending on the amount of brain involved and whether or not consciousness is impaired. Normally there is a balance between excitation and inhibition in the brain. When this balance is disrupted by increased excitation or decreased inhibition, a seizure may result.

There are some types of seizure. Seizures may be generalized or partial. Generalized epilepsy may take the form of tonic-clonic or absence seizures. The lack of any respiratory movement may result in cyanosis. A grand mal seizure starts with a loss of consciousness and falling down, followed by a 15- to 20-second period with muscle rigidity and then a 1- to 2-minute period of rhythmic convulsions. The seizure ends with a few minutes of deep, relaxed sleep before consciousness returns. Grand mal seizures are due to abnormal electric activity throughout the brain.

The tonic phase is replaced by convulsive movements when the tongue may be bitten and urinary incontinence may occur. Absence seizures consist of brief spells of unconsciousness lasting for a few seconds, during which posture and balance are maintained. The electroencephalogram characteristically shows bisynchronous spike and wave discharges during the seizures. Attacks are sometimes provoked by overbreathing or intermittent photic stimulation.

In partial seizures, the nature of the seizure depends upon the location of the damage in the brain. Symptoms may include hallucinations of smell, taste, sight, and hearing, and paroxysmal disorders of memory. Throughout an attack the patient is in a state of clouded awareness and afterwards may have no recollection of the event. A number of these symptoms are due to scarring and atrophy affecting the temporal lobe.

Research has shown that seizure can be produced in normal brain by various chemical and electrical stimulants. Sometimes seizures run in families. Other identified causes for seizures include scar tissue from brain disease or injury; brain infection, tumor, abscess, or hemorrhage; metabolic disturbances from kidney or liver disease. Nevertheless, the cause frequently is unknown when the disorder starts before age 25. Seizures that start after age 25 may be caused by slowly growing brain tumors.

Medication controls or greatly reduces seizures for more than 75 percent of affected persons. The different forms of epilepsy can be controlled by the use of antiepileptic drugs (anticonvulsants). Surgical resection of focal lesions in the brain is appropriate in a strictly limited number of cases. The person must avoid lack of sleep or excess alcohol. Regular and

adequate rest is important. The person has to wear a bracelet stating who should be contacted if a seizure occurs.

Exercise 6. Answer the following questions:

1. What is epilepsy characterized by?
2. What are the causes for epilepsy appearance?
3. What types of seizures are there?
4. What may be observed in the tonic phase?
5. What does the EEG usually show in epilepsy?
6. How can seizures be provoked?
7. What are the symptoms in partial seizures?
8. How can epilepsy be controlled?

Exercise 7. Say whether the following sentences are true or false:

1. Seizure is a predictable attack often including convulsions.
2. The seizure ends with a few minutes of deep, relaxed sleep.
3. The causes for seizures can include scar tissue from brain disease or injury; brain infection, tumor, abscess, or hemorrhage.
4. Medication hardly reduces seizures for more than 75 percent of affected persons. Regular and adequate rest is important.
5. Children, young people and adults with epilepsy should have an accessible point of contact with specialist services.
6. People affected with epilepsy shouldn't be given information about their seizure type(s) and epilepsy syndrome, and the likely prognosis.
7. Photic stimulation and hyperventilation should remain part of standard EEG assessment.
8. An EEG should be performed only to support a diagnosis of epilepsy in adults in whom the clinical history suggests that the seizure is unlikely to be epileptic in origin.

Exercise 8. Put the questions to the underlined words:

1. Attacks are sometimes provoked by overbreathing.
2. The patient may rouse in a state of confusion.
3. In tonic-clonic seizures the patient falls to the ground unconscious.
4. Absence seizures often subside spontaneously in adult life.
5. A simple partial seizure consists of convulsive movements that might spread to the thumb.
6. After the seizure the patient may have no recollection of the event.
7. Seizures are controllable with medication in about 70% of cases.
8. In those whose seizures do not respond to medication, surgery, neurostimulation or dietary changes may be considered.

Exercise 9. Use the verbs in brackets in the appropriate tense form.

1. The patient stated that the onset of epilepsy (to be preceded) by the brain damage during an accident.
2. This woman (to suffer from) encephalitis before epilepsy developed.
3. If epilepsy (to be treated) properly, it may (to subside) gradually.
4. The doctor (to prescribe) him some anticonvulsive drugs.
5. This patient (to experience) seizures since his childhood.
6. The EEG (to take) during the attack (to show) bisynchronous spike and wave discharges.
7. In future about 5–10% of all people (to have) an unprovoked seizure by the age of 80.
8. People with epilepsy either have restrictions placed on their ability to drive or not (to permit) to drive at all.

Exercise 10. Insert the prepositions (to; at; by; for; of; from, about):

1. Connections between autonomic and other brain functions occur _ the brainstem and hypothalamus. 2. The arterial blood supply, carrying oxygen and nutrients, is critical _ the functioning of the brain. 3. Despite its small size and weight, the brain uses 20 percent of the heart's output of blood and 20 percent of the oxygen consumed _ the body at rest. 4. The major function of nervous system is to collect information _ the external conditions in relation to the body's external state, and to analyze this information. 5. The peripheral nervous system is responsible _ the body functions, which are not under conscious control like the heartbeat or the digestive system. 6. The nervous system uses electrical impulses, which travel along the length _ the cells. 7. The cell processes information _ the sensory nerves and initiates an action within milliseconds.

Exercise 11. Give the definitions to the following terms: epilepsy, seizure.

Exercise 12. Speak about:

- types of epilepsy;
- an epileptic seizure.

TASKS FOR SELF-CONTROL

Answer the questions:

1. What is epilepsy characterized by?
2. What are the causes for epilepsy appearance?
3. What types of seizures are there?
4. What may be observed in the tonic phase?
5. What does the EEG usually show in epilepsy?
6. How can seizures be provoked?
7. What are the symptoms in partial seizures?
8. How can epilepsy be controlled?

Explain the medical terms: epilepsy, epileptic seizures.

SKIN DISEASES

Exercise 1. Active vocabulary:

acne, <i>n</i>	['æknɪ]	a skin condition that occurs when your hair follicles become plugged with oil and dead skin cells
blister, <i>n</i>	['blɪstə]	a painful skin condition where fluid fills a space between layers of skin
comedone, <i>n</i>	['kɒmɪdəʊn]	a small flesh-colored acne papule
crack, <i>n</i>	['kræk]	skin fissure that forms due to intense dryness and thickened skin
crust, <i>n</i>	['krʌst]	a dried exudate on the skin surface, either serum, blood or pus or a combination
herpes, <i>n</i>	['hɜ:pɪz]	the name of a family of viruses, which includes the cold sore virus, genital herpes, infectious mononucleosis, chicken pox and shingles
itch, <i>n</i>	['ɪtʃ]	a sensation that causes the desire or reflex to scratch
pustule, <i>n</i>	['pʌstju:l]	a small bump on the skin that contain fluid or pus

scale, <i>n</i>	['skeil]	an accumulation of loose cornified fragments of the epidermis
scratch, <i>n</i>	['skrætʃ]	a mark or superficial injury produced by scraping with the nails on a rough surface

Exercise 2. Read the following words, paying attention to the rules of reading:

[ə]: blister, silver, ulcer, cancer

[æ]: acne, scratch, crack, transparent

[aɪ]: hives, psoriasis, virus, environment

[ei]: scale, scabies, rosacea, irritation, formation, elevated

[ʌ]: pus, pustule, result, above, ulcer, flush

Exercise 3. Build adjectives from the following words using suffixes:

-ory, -ic, -y, -ous, -ive, -al:

Inflammation, irritation, allergy, cure, itch, blister, poison, environment, scar, pathogen, fat, water, bacteria, silver.

Exercise 4. Match the following terms with their definitions:

1. scabies	a) a benign tumour derived from epithelial tissue and forming a rounded or lobulated mass
2. eczema	b) a chronic skin disease common in adolescence, involving inflammation of the sebaceous glands and characterized by pustules on the face, neck, and upper trunk
3. herpes	c) a black-tipped plug of fatty matter clogging a pore of the skin, especially the duct of a sebaceous gland
4. acne	d) a skin inflammation with lesions that scale, crust, or ooze a serous fluid, often accompanied by intense itching or burning
5. comedones (blackheads)	e) any of several inflammatory diseases of the skin, especially herpes simplex, characterized by the formation of small watery blisters
6. papilloma	f) a contagious skin infection caused by the mite <i>Sarcoptes scabiei</i> , characterized by intense itching, inflammation, and the formation of vesicles and pustules
7. psoriasis	g) a skin disease characterized by the formation of reddish spots and patches covered with silvery scales: tends to run in families
8. rosacea	h) a chronic inflammatory disease causing the skin of the face to become abnormally flushed and sometimes pustular(adj.)

Exercise 5. Read the text:

SKIN DISEASES

Skin disease is a human disease of varying etiologies characterized by pathological changes in the skin, nails and hair and in the visible mucous membranes. They may be manifested by spots, vesicles filled with transparent fluid or pus (pustules), nodules elevated above the skin, scratches, ulcers, and cracks. Many skin diseases are accompanied by itching, burning, redness, swelling and pain. Skin problems such as acnes, can affect your appearance. Our skin may also develop several kinds of cancers.

Dermatology is the branch of medicine that studies skin diseases. They may include skin infections and skin neoplasms such as birthmarks, warts, and tumors. Skin diseases may be caused by allergies, irritants, metabolic disorders and immune system problems.

The term "dermatitis" is used to describe changes in the upper layer of the skin that include redness, itching, blistering, crusting, scaling and sometimes pigmentation. The cause of dermatitis is unclear. One possibility is a dysfunctional interplay between the immune system

and skin. Most cases of dermatitis develop in people with sensitive skin and can be prevented simply by avoiding the irritant.

One of the most common skin diseases is acne. It is characterized by comedones (blackheads and whiteheads) and pus-filled spots (pustules). It usually starts at puberty and varies in severity from a few spots on the face, back and chest to a more serious problem that may cause scarring. At present there is no cure for acne, although the available treatments can be very effective in prevention.

Herpes, or cold sores, is a viral disease caused by the herpes simplex virus. After the first infection, the virus goes to sleep (becomes dormant). Sometimes, it later reactivates, causing cold sores on or around the mouth, which typically heal within 2–3 weeks. Outbreaks may be influenced by stress, menstruation, sunburn, dehydration, or local skin trauma. More than 50 percent of the adult population in the United States has oral herpes.

Psoriasis is a long-term skin condition, characterized by dry, itchy, red patches of abnormal skin, covered with silvery scales. The patches usually appear on the knees, elbow and scalp, but they can appear anywhere on the body. Although the cause of psoriasis is unknown, it is considered to be a genetic disease which is triggered by environmental factors. There is no cure for psoriasis. However, various treatments, like steroid creams, ultraviolet light, and immune system suppressing medications can help control the symptoms. Psoriasis is associated with an increased risk of psoriatic arthritis, lymphomas, cardiovascular disease, and depression.

Exercise 6. Answer the following questions:

1. What is a skin disease?
2. How may skin diseases be manifested?
3. What are many skin diseases accompanied by?
4. What diseases may affect our appearance?
5. What science studies skin diseases?
6. What are the main manifestations of dermatitis?
7. What is acne characterized by?
8. How quickly is herpes usually healed?
9. What is the cause of psoriasis?

Exercise 7. Read and insert the necessary prepositions:

Acne consists ... spots and painful bumps on the skin. It's most noticeable ... the face, but can also appear ... the back, shoulders and buttocks. Severe acne can cause scarring. Acne usually starts ... puberty, but it affects adults too. Most teenagers get some form of acne.

Hives (also known as urticaria), is a skin rash that can be triggered ... a variety of things including allergic reactions, medicines and heat. The rash is caused when the body produces a substance called histamine, which is a protein used to fight ... viruses and bacteria. The common symptoms include a raised, rough red areas ... skin are known as wheals, which often fade after a few hours but can sometimes reappear elsewhere ... the body.

Scabies is a contagious skin infestation, characterized ... severe itchiness and a pimple-like rash. Scabies is most often spread during a relatively long period ... direct skin contact ... an infected person. The itch is often worse ... night. Scratching may cause an additional bacterial infection ... the skin. Scabies is one ... the three most common skin disorders ... children.

Nappy rash is a very common skin condition that happens to around one third ... nappy wearing babies. It's caused when the skin comes into contact urine and faeces (poo) in the nappy. Mild cases are usually painless but severe nappy rash can cause discomfort and distress to babies.

Exercise 8. Insert the missing words given below in bold type:

Cells that manufacture skin constitute about 95 percent of the . The remaining cells produce a black , called melanin. Melanin provides the coloring of the skin and helps it from

ultraviolet light. People of all races are born with the same _ of pigment cells. However, the rate at which melanin granules are formed in these cells and their degree of _ in the epidermis are inherited characteristics and major factors in skin color differences.

protect; pigment; epidermis; number; concentration

Exercise 9. Insert missing words from the table:

exposure, moisture, acid, scratching, oral, irritants, itching, relief
--

Self-care at home

1. Immediately after ... to a known allergen or irritant wash with soap and cool water to remove most of the substance.
2. Weak ... solutions (lemon juice, vinegar) can be used to counterpart the effects of dermatitis contracted by exposure to basic
3. If blistering develops, cold moist compresses applied for 30 minutes 3 times a day an offer
4. Chamomile lotion and cool colloidal oatmeal baths may relieve
5. ... antihistamines can also relieve itching.
6. Avoid ..., as this can cause secondary infections.
7. A barrier cream such as those containing zinc oxide may help to protect the skin and retain....

Exercise 10. Read about dermatitis and fill in the gaps with the words from the box:

Eczema, skin, allergic, rash, irritant, discoloration, symptoms, itchy
--

1. Every type of dermatitis has different
2. Atopic dermatitis is an ... disease believed to have a hereditary component.
3. In some languages, dermatitis and ... are synonyms.
4. Dermatitis is characterized by ... crusting patches.
5. Contact dermatitis is of two types: allergic and
6. Areas of temporary skin ... may appear.
7. Contact dermatitis typically causes the skin to develop a pink or red
8. Different types of dermatitis are based on the factor that triggers the ... reaction.

Exercise 11. Make up the sentences using the following words and word-combinations:

1. capillaries / blood vessels / dilate / or / constrict / and / according to / the body's temperature / in / the skin.
2. dead skin cells / the outermost surface / the epidermis / of / is made up / of .
3. beneath / makes up / the dermis / found / 90 percent / of / the epidermis / the bulk / of the skin.
4. to / gives / strength / elasticity / the dermis / and / the skin.
5. collagen / the / connective / is / tissue / fibers.
6. is not / as thick / as the dermis / the epidermis.
7. is divided / layer / and / the dermis / into / reticular / papillary / one.

Exercise 12. Open the brackets and put the verbs in the correct tense form:

1. The skin (to compose of) a layer of dense, irregular connective tissue called the dermis and (to cover) by a layer of epithelial tissue called the epidermis.
2. The dermis (to be) responsible for the most of the structural strength of the skin.
3. Nerve endings, hair follicles, smooth muscles, glands, and lymph channels (to extend) into the dermis.
4. The papillary layer (to derive) its name from projections called papillae that (to extend) toward the epidermis.
5. The papillary layer (to contain) a large number of blood vessels that (to supply) the overlying

avascular epidermis with nutrients, (to remove) waste products, and (to aid) in regulating body temperature.

6. The epidermis (to separate) from the dermis by a basement membrane.
7. The epidermis (to contain) no blood vessels and (to derive) nourishment by diffusion from capillaries of the papillary layer.
8. Cells (to produce) in the deepest layer of the epidermis.
9. During the movement from the deeper epidermal layers to the surface, the cells (to undergo) keratinization, a process that (to involve) change in shape, structure, and chemical composition.
10. Skin color (to determine) by pigments in the skin and by blood circulating through the skin.

Exercise 13. Make the sentences negative and interrogative:

1. Malignant melanoma is a cancer of the pigment cells of the skin.
2. Treatment of scabies depends on the cause of the infection and severity.
3. Bacterial infections are often treated with antibiotics.
4. The exposure to ultraviolet radiation increases the risk of skin cancer.
5. Dermatitis symptoms vary with all different forms of the condition.
6. The disease may begin at any age.
7. Treatment involves some combination of surgery and chemotherapy.
8. Genetics is thought to be the cause.

TASKS FOR SELF-CONTROL

Answer the questions:

1. What is skin disease?
2. How are skin diseases manifested?
3. What symptoms are many skin diseases accompanied by?
4. What skin diseases affect person's appearance?
5. What science studies skin diseases?
7. What are the main manifestations of dermatitis?
8. What is acne characterized by?
9. What is the cause of psoriasis?

Explain the medical terms: skin disease, dermatitis, psoriasis.

EYE DISEASES

Exercise 1. Active vocabulary:

accommodation, <i>n</i>	[ə'kɒmə'deɪʃən]	the ability of the eye to change its focus from distant to near objects and vice versa
adjustment, <i>n</i>	[ə'dʒʌstmənt]	adaptation
biconcave, <i>adj</i>	[baɪ'kɒnkeɪv]	concave on both sides
biconvex, <i>adj</i>	[baɪ'kɒnveks]	convex on both sides
blurry, <i>adj</i>	[blɜːrɪ]	not clearly or distinctly visible
converge, <i>v</i>	[kən'veɪ:dʒ]	tend to meet at a point
curvature, <i>n</i>	['kɜːvətʃə]	the degree to which a curve deviates from a straight line
elongation, <i>n</i>	[i:lŋ'geɪʃən]	the action or process of lengthening
refraction, <i>n</i>	[ri'frækʃən]	the bending of light that takes place within the human eye
sebaceous, <i>adj</i>	[si 'beɪʃəs]	pertaining to or secreting sebum

Exercise 2. Pronounce correctly:

Astigmatism - [æ'stigmətɪzəm]; cataract - ['kætərækt]; cylinder-shaped – ['sɪlɪndə'feɪpt]; glaucoma - [glə:'kɒmə]; spectrum - ['spektrəm]; exposure - [ɪks'pəʊʒə]; sty- ['stai]; retina- ['retɪnə]; lens- ['lenz]; iris- ['aɪrɪs]; lump - ['lʌmp]; blurry - ['blɛ:ri]; clouding - ['klaʊdɪŋ]; sebum [si:bəm]; daltonism – ['dɔ:ltənɪzəm]; farsightedness [fɑ: 'saɪtɪdnəs]

Exercise 3. Find explanation on the right to the word on the left:

astigmatism	1. abnormal alignment of one or both eyes						
hyperopia	2. the condition of nearsightedness						
myopia	3. abnormal condition in which vision for distant objects is better than for near objects						
glaucoma	4. red-green colorblindness						
sebum	5. a defect of the eye in which the curvature of the cornea or lens is uneven.						
daltonism	6. partial or total opacity of the crystalline lens of the eye						
cataract	7. a condition of elevated fluid pressure within the eyeball						
strabismus	8. the oily secretion of the sebaceous glands						
1	2	3	4	5	6	7	8

Exercise 4. Read and memorize words and word combinations:

curvature - different curvatures of lenses, the eyeball's degree of curvature, curvature of the spine

blur – blurs, to blur, a blurry image, a gradual blurring of vision, a blurred vision, to blur vision

to converge – to **converge completely**, to **converge** to a point, to converge together

exposure- exposure to ultraviolet light, exposure to radiation, long-term exposure, to be exposed

advanced- advanced age, advanced case, advanced research, the signs of advanced disease

Exercise 5. Read the text:**EYE DISEASES**

Disorders of vision affect various parts of the eye. Some disorders are the result of aging, a genetic tendency, or both. Eye diseases may be classified as congenital and acquired, infectious and non-infectious, acute and chronic, and unilateral and bilateral.

Such disorders include glaucoma (increased fluid pressure within the eye), cataract (clouding of the lens), and various retinal problems. New techniques and medications for detecting and treating glaucoma and cataract have made these two leading causes of blindness very treatable. Today's modern surgical procedures make the treatment of cataracts among the most successful of all operations. **Cataract** is a major cause of vision loss worldwide. Almost 20 million people are blind because of this condition. A cataract is a clouding of the normally clear lens of the eye. The clouding of the lens blocks the passage of light needed for sight. Although a cataract often starts in only one eye, usually both become involved. Cataracts are accompanied by changes in the chemical composition of the lens, but the cause of these alterations is unknown. The signs of cataract are blurred vision, impaired vision at night or in very bright light, and halos around lights. A certain amount of lens clouding occurs in 65% of patient over the age of 50 and 95% of patients over the age of 65. The most effective treatment for cataract is surgical removal.

Glaucoma is a group of diseases that can damage the eye's optic nerve and result in vision loss and blindness. However, the group has a single feature in common: progressive

damage to the optic nerve due to increased pressure within the eyeball. The risk is much greater for people over 60. The symptoms of glaucoma are blurred vision, usually in one eye, halos appearing around lights, pain in the eye, and loss of peripheral vision. There are several different forms of glaucoma. In general the group of disease is divided into two ones, acute and chronic. Most of these involve the drainage system within the eye. There is no cure for glaucoma. Vision lost from the disease cannot be restored. However, there are treatments (medications and surgery) that may save remaining vision. That is why early diagnosis is important.

Two common disorders of the eye are the myopia and hyperopia. **Myopia** is inability to see distant objects clearly because the images are focused in front of the retina. This condition is due to elongation of the eyeball or it may be caused by insufficient adjustment of a lens during accommodation. Glasses with biconcave lenses are used to focus the image on the retina.

Hyperopia is inability to see near objects clearly because the images received by the eye are focused behind the retina and blurred because the eyeball is too short or because the lens is too flat to permit nearby vision. This defect often happens as the lens loses elasticity with age. Glasses with biconvex lenses are used to focus the image on the retina.

Astigmatism is a type of faulty vision caused by irregular curvature of a lens or cornea. It results in a light refraction so that the rays fall on different areas of the retina, thereby producing a blurry image. Astigmatism is the inability to separate two closely placed points. The condition is corrected by using cylinder-shaped lenses.

Another visual defect is **color blindness** resulting from the inability of cones to react to certain colors of the spectrum. For example, a person may be color blind to red and green colors. In this case red and green cannot be distinguished because of the lack of cones sensitive to red and green. Color blindness is usually a sex-linked genetic trait carried by females and expressed in males.

A **sty** is a localized inflammation of a sebaceous gland of the eyelid. This common infection results from blocked glands within the eyelid. When the gland is blocked, the sebum produced by the gland occasionally backs up and extrudes through the wall of the gland, forming a lump which can be red, painful, and nodular. Frequently bacteria can infect the blocked gland causing increased inflammation, pain, and redness of the eye, and even redness of the surrounding eyelid and cheek tissue. The lump frequently goes away when the blockage of the gland opening is relieved. Furthermore, the infection goes away the pus is drained from the sty.

Strabismus is a condition that causes crossed eyes, a condition in which eyes do not converge together and a person sees two images instead of one. It is usually caused by paralysis of an eye muscle. Its treatment may include glasses, patches (any protective dressing), eye drops, vision therapy or surgery.

Exercise 6. Answer the following questions:

1. How can eye disorders be classified?
2. What are the common disorders of the eyes?
3. What is astigmatism usually caused by?
4. What is the main cause of color blindness?
5. What are the common symptoms of cataract?
6. What are the causes of cataract development?
7. What glasses can correct myopia and hyperopia?
8. What are the symptoms of a sty?
9. What is the treatment for strabismus?

Exercise 7. Match the words with their definitions:

1. Eye	a) The cavity in the skull that contains the eye. It is formed from parts of the frontal, sphenoid, zygomatic, lacrimal, ethmoid, palatine and maxillary bones.
2. Iris	b) The light-sensitive membrane forming the inner lining of the

3. Orbit	posterior wall of the eyeball composed largely of a specialized terminal expansion of the optic nerve.						
4. Cone	c) The organ of sight, containing light-sensitive cells associated with nerve fibres, so that light entering the eye is converted to nervous impulses that reach the brain.						
5. Cornea	d) The body of the eye, which is roughly spherical, is bounded by the sclera, and lies in the orbit.						
6. Lens	e) The transparent crystalline structure situated behind the pupil of the eye and enclosed in a thin transparent capsule. It helps to refract incoming light and focus it onto the retina.						
7. Eyeball	f) The convex transparent membrane that forms the anterior covering of the eyeball and is continuous with the sclera						
8. Retina	g) One of the two types of light-sensitive cells in the retina of the eye. The human retina contains more than 6 million cones.						
1	2	3	4	5	6	7	8

Exercise 8. Find synonyms of the following words or words combinations:

A	B
double vision	cataract
colour blindness	senility
Myopia	long-sightedness
Sty	short-sightedness
Strabismus	hordeolum
Hyperopia	daltonism
advanced age	crossed eyes
clouding of the lens	diplopia

Exercise 9. Insert the missing words given in the box:

The eye is composed of three coats or tunics. The fibrous tunic is the outer _ of the eye. It consists of the _ and cornea. The sclera is the posterior four fifths of the _. It is white connective tissue that maintains the _ of the eye and provides a site for muscle attachment. The _ is the anterior four fifths of the eye. It is transparent and retracts _ that enters the eye. The vascular tunic of the eye is the _ layer. This layer contains most of the blood vessels of the _. The vascular tunic consists of the _ , ciliary body, and iris.

sclera; eyeball; eye; layer; light; cornea; shape; choroids; middle.

Exercise 10. Choose the proper continuation on the right:

1. Eye diseases may be classified as ...	the inability of cones to react to certain colours of the spectrum.
2. Myopia is inability to see ...	crossed eyes, a condition in which eyes do not converge together and a person sees two images instead of one.
3. Hyperopia is inability to see ...	to focus the image on the retina.
4. Glasses with biconcave lenses are used	near objects clearly because the images received by the eye are focused behind the retina.

5. Astigmatism is a type of faulty vision caused by	the intraocular pressure of the eyeball.
6. Cataract is a ...	congenital and acquired, infectious and non-infectious, acute and chronic, and unilateral and bilateral.
7. Color blindness results from ...	clouding of the lens.
8. Glaucoma is an abnormal increase in ...	irregular curvature of a lens or cornea.
9. A sty is a	localized inflammation of a sebaceous gland of the eyelid.
10. Strabismus is a condition that causes ...	distant objects clearly because the images are focused in front of the retina.

Exercise 11. Define if the following statements are true or false:

1. Astigmatism results from inability of cones to react to certain colors.
2. There is only one cause of cataract.
3. In myopia glasses with biconcave lenses are used.
4. Cataracts can develop in both eyes.
5. A sty is a localized inflammation of a sebaceous gland of the eyelid.
6. Color blindness is usually a sex-linked genetic trait carried by males and expressed in females.
7. It is very difficult and expensive to treat glaucoma.
8. Persons with strabismus see two images instead of one.
9. The symptoms of cataract include a gradual blurring of vision, halos around lights, and double vision.
10. Glasses with biconcave lenses are used to focus the image on the retina.

Exercise 12. Choose the proper preposition and complete the text:

- The primary mode (of\ with\ from) treatment for a sty is application (by\ at\ of) warm compresses. Incision and drainage is performed if resolution does not begin (in\ on\ to) the next 48 hours after warm compresses are started.
- As a part of self-care at home patients may cleanse the affected eyelid (from\ in\ with) water. Cleansing must be done gently and while eyes are closed to prevent eye injuries.
- Patients are highly advised not to lance the sty as it may result (in\ by\ at) a serious infection.
- Medical treatment can also be provided (by\ with\ in) a doctor and it is aimed (at\ by\ to) relieving symptoms. Antibiotic are normally given (to\ on\ in) patients with multiple sties. Antibiotic ointments can also be administered (on\ from\ in) sty treatment.
- Eye sty sufferers should avoid eye make-up, lotions and wearing contact lenses, since these can aggravate and spread the infection (sometimes (to/with/for) the cornea).

Exercise 13. Put questions to the underlined words:

1. Many people with diabetes notice that their vision becomes blurry.
2. Eyes receive light from the image on the nervous cells of the retina.
3. Lens is tightly attached to its place by a ligament.
4. Additional structures of the eye include eyebrows, eye lashes, conjunctiva and the

lacrimal apparatus.

5. Eyebrows and eyelashes protect eyes from foreign matters.
6. Human eye differs 10 million colors.
7. The cones enable one to see details and are responsible for colour vision.
8. The lump frequently goes away when the blockage of the gland opening is relieved.

Exercise 14. Open the brackets and use verbs in the correct tense form:

1. Color blindness, or color vision deficiency, (to be) the inability or decreased ability to see color, or perceive color differences, under normal lighting conditions.
2. Color blindness (affect) a significant percentage of the population.
3. Color blindness also (can to produce) by physical or chemical damage to the eye, the optic nerve, or parts of the brain.
4. Color blindness usually (to classify) as a mild disability.
5. Color vision deficiencies (can to classify) as acquired or inherited.
6. About 8 percent of males, but only 0.5 percent of females, (to be) color blind.
7. Causes of color blindness (to include) brain or retinal damage.
8. The different kinds of inherited color blindness (to result from) partial or complete loss of function of one or more of the different cone systems.

TASKS FOR SELF-CONTROL

Answer the following questions:

1. How can eye disorders be classified?
2. What are the common disorders of the eyes?
3. What is astigmatism usually caused by?
4. What is the main cause of color blindness?
5. What are the common symptoms of cataract?
6. What are the causes of cataract development?
7. What glasses can correct myopia and hyperopia?
8. What are the symptoms of a sty?
9. What is the treatment for strabismus?

Explain the medical terms: eye diseases, cataract, sty, glaucoma, color blindness, strabismus, astigmatism, myopia, hyperopia.

EAR DISEASES

Exercise 1. Active vocabulary:

benefit, <i>v</i>	['benɪfɪt]	receive an advantage
exposure, <i>n</i>	[ɪk'spəʊʒə]	the state of having no protection from something harmful
heredity, <i>n</i>	[hɪ'redɪtɪ]	the passing on of physical or mental characteristics genetically from one generation to another
incus, <i>n</i>	['ɪŋkəs]	a small anvil-shaped bone in the middle ear, transmitting vibrations between the malleus and stapes
irritability, <i>n</i>	[,ɪrɪtə'bɪlɪtɪ]	the quality or state of being irritable
ossicle, <i>n</i>	[ˈɒsɪk(ə)l]	a very small bone, especially one of those in

		the middle ear
stapes, <i>n</i>	[ˌɪrɪtəˈbɪlɪtɪ]	a small stirrup-shaped bone in the middle ear, transmitting vibrations from the incus to the inner ear
tympanic membrane	[ˌtɪmˈpænikˈmembreɪn]	the eardrum
temporary, <i>adj</i>	[ˈtemp(ə)rərɪ]	lasting for only a limited period of time; not permanent
wax, <i>n</i>	[wæks]	The secretion of the ceruminous glands in the skin of the outer ear canal

Exercise 2. Insert the missing letters:

Ea_ ; a_ricle; eardr_m; ossi_le; mall_us; in_us; sta_es; coc_lea; d_liver.

Exercise 3. Read and remember interesting facts about ears:

1. The smallest bones are the ossicles in the middle ear: the *incus*, the *malleus*, and the *stapes* (also called the anvil, hammer, and stirrup).
2. Your ear drum is less than 17.5 mm in diameter
3. Your ear never stops working, even when you're asleep. The ear continues to hear sounds, but your brain just ignores incoming sounds.
4. Your ear does more than just let you hear—it also gives you a sense of balance. Maybe you've noticed feeling dizzy if you've had an ear infection.
5. The three bones in your ear are the smallest bones in your body, and all three could fit together on a penny.
6. The inner ear is about the size of a pencil eraser, but it contains more than 20,000 hairs.
7. Your sense of hearing is dependent upon tiny hairs deep inside your ear. If you lose these hairs, you lose your hearing.
8. Not all living creatures hear with ears. Snakes use jawbones, fish respond to pressure changes, and male mosquitoes use antennae.
9. Your hearing can be damaged permanently even after a single incident of exposure to extremely loud noise (shotgun blast, explosion, *etc.*).
10. You do not need to clean wax out of your ears unless you have an abnormal condition. Ears push excess wax out as needed.

Exercise 4. Match the following words with their definitions:

1. Auricle	1. The bony and membranous labyrinth of the inner ear.
2. Auditory ossicle.	2. Middle of the three ossicles in the middle ear.
3. Eardrum.	3. Cellular membrane that separates the outer from the middle ear.
4. Malleus.	4. Smallest of the three auditory ossicles.
5. Incus.	5. Bone of the middle ear: includes the malleus, incus, and stapes.
6. Stapes.	6. Largest of the three auditory ossicles.
7. Labyrinth.	7. Part of the outer ear that protrudes from the side of the head.

Exercise 5. Read and translate the text:

EAR DISEASES

A variety of disorders may affect your hearing or balance. The most common is hearing loss.

Hearing impairment may result from disease, injury, or developmental problems that affect the ear itself or any nervous pathways concerned with the sense of hearing. Heredity, toxins, exposure to loud noises, and the aging process are possible causes for hearing loss. It may range from inability to hear certain frequencies of sound to a complete loss of hearing (**deafness**). People with extreme **hearing loss** that originates in the inner ear may benefit from a cochlear

implant. This prosthesis stimulates the cochlear nerve and may allow the recipient to hear medium to loud sounds.

The most common disorders of the ear are perforated eardrum, occupational or age-related hearing loss, ear infections, otosclerosis, wax blockage, otitis media and others. **Otosclerosis** is an ear disorder in which spongy bone grows over the oval window and immobilizes the stapes, leading to progressive loss of hearing. Otosclerosis is the most frequent cause of middle ear hearing loss in young adults. It is more common in women than in men. Symptoms usually become apparent between the ages of 15 and 35. They are gradual hearing loss in one or both ears and noise in the ear. This disorder can be corrected surgically. During surgery the oval window is covered by a fat pad or a synthetic membrane, and the stapes is replaced by a small rod connected to the fat or membrane over the oval window at one end and to the incus at the other. Infections of the middle ear (otitis media) are common in young children. These infections usually result from the spread of infection from the mucous membrane of the pharynx through the auditory tube to the mucous lining of the middle ear. **Otitis media** occurs in four basic forms: serous otitis media, otitis media with effusion, purulent otitis media, and secondary otitis media. The symptoms of otitis media, consisting of low-grade fever, feeling of fullness in the ear, and irritability, are often not easily recognized by the parent as signs of middle ear infection. The infection can also cause a temporary decrease or loss of hearing because fluid buildup has dampened the tympanic membrane or ossicles. The treatment includes a course of antibiotics to fight the infection, nasal decongestants or antihistamines. In some cases a surgical incision in the eardrum is necessary.

Otitis externa is inflammation of the external auditory canal. Infections in this region may be caused by a fungus or bacterium and are most common among those living in hot climates and among swimmers, so it is called "swimmer's ear." It often presents with [ear pain](#), swelling of the ear canal, and occasionally [decreased hearing](#). Effective solutions for the ear canal include acidifying and drying agents, used either singly or in combination. [Acetic acid](#) ear drops may be used as a preventative measure. Treatment of acute cases is typically with [antibiotic](#) drops such as [ofloxacin](#) or acetic acid. [Steroid](#) drops may be used in addition to antibiotics. [Pain medications](#) such as [ibuprofen](#) may be used for the pain.

Exercise 6. Answer the following questions:

1. What are the main disorders of the ear?
2. What are the causes of hearing loss?
3. What kind of disease is otitis media?
4. What are the basic forms of otitis media?
5. What symptoms is otitis media characterized by?
6. What does the treatment for otitis media include?
7. What is otitis externa caused by?
8. What can otitis externa be characterized by?

Exercise 7. Match the terms with their definitions:

1. equilibrium	a) the two-carbon carboxylic acid, the characteristic component of vinegar; used as a solvent;
2. hearing	b) the capacity to hear;
3. cochlea	c) the tube that connects the middle ear with the nasopharynx and serves to equalize pressure between the outer and middle ear;
4. otitis	d) the smallest bones of the middle ear;
5. acetic acid	e) the sense of balance;
6. eustachian tube	f) the coiled portion of the inner ear that contains the receptors for hearing;
7. ossicles	g) lack or loss of all or a major part of the sense of hearing;
8. deafness	h) any inflammation of the ear.

Exercise 8. Choose the terms from the text to match the following definitions:

1. _____ inflammation of the middle ear with accumulation of watery (serous) or mucoid fluid.
2. _____ surgical incision of the tympanic membrane; performed to drain the middle ear cavity or to insert a tube into the tympanic membrane for drainage.
3. _____ an antipyretic and analgesic, with potency similar to that of aspirin. .
4. _____ inflammation of the external auditory canal; swimmer's ear.
5. _____ a hole or break in the containing walls or membranes of an organ or structure of the body.
6. _____ any of a class of compounds that bind with a number of closely related specific receptors in the central nervous system to block the perception of pain or affect the emotional response to pain.

Exercise 9. Complete this description using the words and phrases below:

Auricle	inner ear
ear canal	oval window
Eardrum	Cochlea
sound waves	hair cells
middle ear	auditory nerve

How the Ear Works

Sounds from the outside world are picked up by the outer ear, which is made up of the ... (1) and the ear canal. As the sound waves enter the ear, the ... (2) serves to increase the loudness of those pitches that make it easier to understand speech. At the same time the ear canal protects another important part of the ear: the ... (3) - a flexible, circular membrane which vibrates when touched by ... (4).

The sound vibrations continue their journey into the ... (5), which contains three tiny bones called the ossicles, which are also known as the hammer, anvil and stirrup. These bones form the bridge from the eardrum into the ... (6). They increase and amplify the sound vibrations even more, before safely transmitting them on to the inner ear via the ... (7).

The inner ear, or ... (8), resembles the circular shell of a snail, and houses a system of tubes which are filled with a watery fluid. As the sound waves pass through the oval window the fluid begins to move, setting tiny ... (9) in motion. In turn, these hairs transform the vibrations into electrical impulses that travel along the ... (10) to the brain itself.

Exactly how the brain actually translates these nerve impulses remains a mystery.

Exercise 10. Read the text and insert the missing prepositions:

By, to(2), with, of, for(2), on

How Are Ear Infections Diagnosed?

If you or your child has an [earache](#) that is accompanied ___ a stuffy or [runny nose](#) and a [sore throat](#) and fever, it is likely that the [ear pain](#) is due ___ an [ear infection](#).

Your doctor will examine the eardrum ___ an instrument called an otoscope for signs of infection. The doctor may also check for blockage or filling ___ the middle ear using a pneumatic otoscope, which blows a little air at the eardrum. This air should cause the eardrum to move a little back and forth. If fluid is present, the eardrum will not move as readily.

Another test ___ [ear infections](#) is tympanometry, which uses sound and air pressure to check for fluid in the middle ear. If needed, an audiologist will perform a hearing test ___ determine if there is [hearing loss](#).

___ rare occasions, when the person is quite ill, a doctor may make an opening in the eardrum, draw out a sample of fluid from the middle ear to culture the sample in a lab. This more extreme measure is usually used only ___ serious infections.

Exercise 11. Put questions to the underlined words and words combinations:

1. An otoscope is a device to look into the ear canal to see the drum.
2. An audiologist examines a person's hearing in each ear, using sounds of varying volume and frequency.
3. **Audiogram has just been** compared with that of an individual with normal hearing.
4. ACT scanner uses X-rays and a computer to create images of the ears and surrounding structures.
5. Using radio waves in a magnetic field, a scanner creates high-resolution images of the ears and surrounding structures.
6. The ear changes sound into electrical signals, so the brain can interpret it.
7. Otosclerosis mainly affects the tiny stapes bone.
8. People with extreme **hearing loss** may benefit from a cochlear implant.

Exercise 12. Complete the text using one word in each gap:

Do you ever wish that your neighbours (**turned / will turn / had turned**) down their music? Perhaps you are trying to sleep and you wish that the people next-door (**do / were / will be**) not holding an all-night barbecue party in their garden. Or do you feel it is high (**time / place / site**) you moved to an uninhabited island? Don't worry - you are just another victim of noise pollution. Of course most people would prefer if cars (**make / made / will make**) no noise at all, neighbours (**was / were / are**) as quiet as mice, and nobody (**drive / drove will have drive**) about the streets in cars with open windows and high-powered sound systems. You may even wish you (**stop / stopped / have stopped**) children from playing in the street, or planes from passing overhead. But in the end, if I (**was / am / will be**) you I (**would / will / will have**) just get used to it. Close the windows, buy some earplugs, laugh and turn up your own stereo. Just act (**as / though / that**) if the noise (**is / was / will be**) simply not there! Who knows, perhaps it will go away.

Exercise 13. Fill in the table to describe the term "Otitis externa":

Definition	
Causes	
Symptoms	
Treatment	

TASKS FOR SELF-CONTROL

Answer the following questions:

1. What are the main disorders of the ear?
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6. What does the treatment for otitis media include?
7. What is otitis externa caused by?
8. What can otitis externa be characterized by?

Explain the medical terms: otitis, deafness.

