ЗБІРНИК РОЗМОВНИХ ТЕМ З АНГЛІЙСЬКОЇ МОВИ

для студентів медичного університету спеціальності 222 «МЕДИЦИНА»

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

Вінницький національний медичний університет ім. М. І. Пирогова

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спеціальності 222 «МЕДИЦИНА»

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Збірник містить підібрані текстові матеріали фахової спрямованості, які включають інформацію про тіло людини та системи людського організму, про аптеку та ліки та історію медицини. Збірник розмовних тем з англійської мови призначений для студентів першого та другого курсів медичних університетів, що навчаються за спеціальностями 222 "Медицина".

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ПЕРЕДМОВА

Збірник розмовних тем з англійської мови призначений для студентів першого та другого курсів медичних університетів, що навчаються за спеціальностями 222 "Медицина".

Збірник створено відповідно до вимог робочої програми з навчальної дисципліни «Англійська мова в т. ч. за професійним спрямуванням» підготовки фахівців другого (магістерського) рівня вищої освіти галузі знань 22 «Охорона здоров'я» спеціальності 222 «Медицина». Зазначена дисципліна є обов'язковим компонентом освітньо-професійної програми «Медицина», циклу загальної (соціально-гуманітарної) підготовки магістра медицини.

Збірник містить підібрані текстові матеріали фахової спрямованості, вокабулярій до кожної теми, а також запитання для вдосконалення знань і мовленнєвих умінь студентів. Кожна розмовна тема супроводжується короткою анотацією, що уможливлює диференціацію змісту навчання відповідно до індивідуальних можливостей студентів.

Навчальні матеріали збірника можуть використовуватися як під час проведення практичних занять під керівництвом викладача, так і в процесі самостійної роботи студентів. Запропоновані англомовні тексти професійної спрямованості дають змогу активізувати пізнавальну діяльність студентів, розвивати їхні іншомовні комунікативні навички, вміння здійснювати професійну комунікацію на необхідному рівні тематичної складності, ефективно використовувати іноземну мову в різноманітних ситуаціях соціального, навчально-академічного та професійного спілкування.

Текстовий матеріал збірника – це адаптовані матеріали сучасних оригінальних англомовних джерел – словників, енциклопедій, сайтів довідкового характеру. Зокрема, було використано словники:

- Bma Illustrated Medical Dictionary, Fourth Edition. Dorling Kindersley, 2018;
- Webster's New World Medical Dictionary, Third Edition. Hoboken : Wiley Publishing, 2008;
- енциклопедії:
- Human Diseases and Conditions, Third edition / Project editor : Miranda Herbert Ferrara. Charles Scribner's Sons, 2016;
- The Gale Encyclopedia of Medicine, Sixth edition. Gale Research Inc., 2020;

сайти:

- https://www.tga.gov.au
- https://nida.nih.gov
- https://www.drugs.com
- https://my.clevelandclinic.org
- https://www.britannica.com
- https://www.healthdirect.gov.au

- https://www.mayoclinic.org
- https://www.msdmanuals.com/professional
- https://medshadow.org
- https://www.kenhub.com

Матеріали збірника забезпечують професійну спрямованість студентів спеціальностей 222 "Медицина" під час вивчення англійської мови, готують студентів до іншомовної комунікації за допомогою іншомовного лексичного матеріалу, пов'язаного зі сферою професійної діяльності; формують уміння, необхідні для розвитку лінгвістичних, соціолінгвістичних та прагматичних компетенцій відповідно до рівня B2.

ЗМІСТ

OUR FUTURE PROFESSION

Increase your vocabulary:

ability	[ə'biliti]	здатність, уміння
antiquity	[æn'tɪkwɪtɪ]	стародавній світ, античність
confidence	['kɔnfid(ə)ns]	довіра
course	['kɔ:s]	курс (навчання)
to cure	[kjʊə]	виліковувати
to diagnose	['daɪəgnəʊz]	діагностувати, ставити діагноз
field	['fi:ld]	галузь
harm	['ha:m]	шкода
health	['he̲lθ]	здоров'я
Hippocrates	[hi'pɔkrəti:z]	Гіпократ
kind	['kaɪnd]	добрий
medicine	['meds(ə)n]	медицина
motto	['mɔtəʊ]	девіз, гасло
noble	['nəʊb(ə)l]	благородний
particular	[pə'tikjulə]	особливий, саме той
prestigious	[pre'stidʒəs]	престижний
prominent	['prɔminənt]	видатний
protection	[prə'tekʃ(ə)n]	захист, охорона
renowned	[rɪ'naund]	відомий, знаменитий
surgery	['sɜ:dʒ(ə)ri]	хірургія
therapeutist	[,θera'pju:tist]	терапевт
therapy	['θe̲rəpi]	терапія
valuable	['væ̲ljuəb(ə)l]	цінний, дорогий

If you ask me about my future profession, I will say that I want to be a doctor. In my opinion, being a doctor is highly noble and prestigious. I have chosen this profession because I love people, I want to help them to become healthy. For me, a doctor is a person who is able to inspire patients with faith. I want to be a doctor with the best qualifications, who diagnoses and institutes therapy correctly. I want to make people happier giving them joy and warmth. People trust doctors since their lives and health are the most important things they have.

To become a doctor, I must be good at studies because a doctor is a responsible profession. Medical students study a lot of theoretical and special subjects and have some practical training. They should have high academic achievements in such subjects as biology, anatomy, histology, chemistry, pathology, microbiology, psychology, therapy, surgery and other disciplines. Such a course of studies helps them *to gain much knowledge of medicine and learn how to diagnose different diseases and treat people.

In fact, a doctor is one of the oldest professions in the world. It has existed since the antiquity. Hippocrates was one of the first renowned doctors, and all doctors today should remember the Hippocratic Oath. It says: "*Whatever houses I may visit, I will apply all*

measures for the benefit of the sick according to my ability and judgment, I will keep them from harm and injustice."

Medical students must remember that it is not easy to be a good doctor. It is often difficult to diagnose a disease and sometimes it is even more difficult to cure it. But a good doctor always *does his best *to gain his patient's confidence. And the confidence of a patient in his doctor is "a valuable remedy".

A good doctor must have not only deep knowledge of a particular field of medicine such as surgery or therapy. He must love people and have a kind heart. He must give all his knowledge, all his abilities, all his talent, and all his time to people, to the protection of their health.

Notes:

* to gain much knowledge – набувати багато знань
* to do one's best – робити все можливе
* to gain confidence – завойовувати довіру
* Hippocratic Oath – ['hɪpə'krætɪk 'əʊθ] клятва Гіпократа

Answer the questions:

1. What kind of occupation is a doctor?
2. Why have you decided to become a doctor?
3. Why is medical profession one of the most responsible occupations?
4. What knowledge should students have to become a good doctor?
5. What subjects do medical students study?
6. What is one of the oldest professions that is known in the world?
7. Why was Hippocrates one of the most renowned doctors in the world?
8. What does Hippocratic Oath say? What is the main idea of Hippocratic Oath?
9. What must a good doctor do to gain his patient's confidence?
10. What must medical students remember in order to be a good doctor?

SUMMARY

I want to be a doctor. In my opinion, being a doctor is highly noble and prestigious. I have gone for this profession because I love people and I want to help them.

To become a doctor, I must be good at studies. Medical students study theoretical and special subjects such as biology, anatomy, histology, chemistry, pathology, microbiology, therapy, surgery and others. They also have medical practice during which they learn how to diagnose diseases and treat people.

It is not easy to be a good doctor. A good doctor must have deep knowledge of medicine. He must love people and have a kind heart. Medical students must remember that to treat patients is a great art. Hippocrates Oath says: "I shall enter any house for the good of the patients. I shall not do my patient any harm." These words must become the motto of future doctors' life.

HISTORY OF MEDICINE

Increase your vocabulary:

accurate	[ˈækjərət]	точний
achievement	[əˈtʃiːvmənt]	досягнення
advance	[ədˈvɑːns]	прогрес, досягнення
anaesthesia	[ˌænəsˈθiːziə]	анестезія, знеболення
ancient	[ˈeɪnʃənt]	стародавній, античний
antibiotic	[ˌæntibaɪˈɒtɪk]	антибіотик
bleeding	[ˈbliːdɪŋ]	кровотеча, кровопускання
cause	[ˈkɔːz]	причина; спричинювати
circulation	[ˌsɜːkjuˈleɪʃn]	циркуляція
diagnosis	[ˌdaɪəgˈnəʊsɪs]	діагноз
dislocation	[ˌdɪsləˈkeɪʃn]	вивих
dissection	[dɪˈsekʃn]	розтин
evil spirit	[ˈiːvl ˈspɪrɪt]	злий дух
excretion	[ɪkˈskriːʃn]	виділення, екскреція
forbid	[fəˈbɪd]	забороняти
foundation	[faʊnˈdeɪʃn]	установа, заклад
fracture	[ˈfrækʧə]	перелом
medieval	[ˌmediˈiːvl]	середньовічний
medical imaging	[ˈmedɪkl ˈɪmɪdʒɪŋ]	медична візуалізація
microbe	[ˈmaɪkrəʊb]	мікроб
occupation	[ˌɒkjuˈpeɪʃn]	професія
physician	[fɪˈzɪʃn]	лікар
prescribe	[prɪˈskraɪb]	призначати (ліки, лікування)
punishment	[ˈpʌnɪʃmənt]	покарання
Renaissance	[rɪˈneɪsns]	Ренесанс, епоха Відродження
sacred	[ˈseɪkrɪd]	священний
sin	[ˈsɪn]	гріх
sterile equipment	[ˈsteraɪl ɪˈkwɪpmənt]	стерильне обладнання
surgery	[ˈsɜːdʒəri]	хірургія; операція
surgeon	[ˈsɜːdʒən]	хірург
treat	[ˈtriːt]	лікувати
treatment	[ˈtriːtmənt]	лікування
therapy	[ˈθerəpi]	терапія, лікування
vaccine	[ˈvæksiːn]	вакцина
wound	[wuːnd]	рана

Medicine is one of the oldest professions in the world. In ancient times people believed that diseases were caused by evil spirits. So, magic and religion played a significant role in treatment. Hippocrates was the first physician who separated medicine from religion. He supposed that disease had only natural causes and its symptoms were the natural reactions of the body.

In the Middle Ages disease was regarded as a punishment for sin. People thought that the human body was sacred and dissection was forbidden. Medieval physicians analysed symptoms, examined excretions, and made their diagnoses. They prescribed diet, rest, sleep, exercise, baths, or bleeding. Surgeons could treat fractures and dislocations, perform amputations and a few other operations. Many hospitals were established by religious foundations.

During the Renaissance, laws forbidding dissection were relaxed. As a result, the first accurate textbooks on human anatomy were published. The greatest 17th-century achievement in medicine was explanation of the blood circulation made by English physician William Harvey.

In the 19th century scientists proved that some diseases were caused by microbes. Modern surgery was made possible by two revolutionary discoveries. They are the invention of safe methods of anaesthesia and the control of wound infection using antiseptics and sterile equipment.

The 20th century brought many advances in medicine. Antibiotics and vaccines against many diseases were produced. Open-heart surgeries and organ transplantations were successfully performed. New discoveries in science opened the way for medical imaging, more accurate diagnostic tests, and more effective therapies.

Answer the questions:

1. What did people believe in during ancient times?
2. What played a significant role in treatment in ancient times?
3. How did Hippocrates influence the development of medicine?
4. What was regarded as punishment for sin?
5. Why was dissection forbidden in the Middle Ages?
6. How did medieval physicians treat people?
7. What was the greatest achievement in medicine in the 17th century?
8. What was the cause of some diseases that scientists discovered in the 19th century?
9. What discoveries enabled the development of surgery in the 19th century?
10. What advances in medicine in the 20th century do you know?

SUMMARY

In ancient times magic and religion played a significant role in medicine. Hippocrates was the first physician who separated medicine from religion. He supposed that disease had only natural causes. In the Middle Ages disease was regarded as a punishment for sin. Medieval physicians analysed symptoms, examined excretions, and made their diagnoses. They prescribed diet, rest, sleep, exercise, baths, or bleeding. Surgeons could treat fractures and perform some operations.

During the Renaissance, the first accurate textbooks on human anatomy were published. William Harvey explained the circulation of blood in the human body. In the 19th century, scientists proved that some diseases were caused by microbes. The development of surgery was possible due to the use of anaesthesia and sterile equipment. The 20th century brought many advances in medicine like antibiotics and vaccines, open-heart surgery, medical imaging and others.

AT THE THERAPEUTIC DEPARTMENT

Increase your vocabulary:

auscultation	[ɔːskəlˈteɪʃn]	аускультація
bowels	[ˈbaʊəlz]	кишківник
bronchitis	[brɒŋˈkaɪtɪs]	бронхіт
to complain (of)	[kəmˈpleɪn]	скаржитись (на)
colitis	[kəˈlaɪtəs]	коліт
to examine	[ɪgˈzæmɪn]	оглядати (хворого)
to follow	[ˈfɒləʊ]	супроводжувати, слідувати за
gastritis	[gæsˈtraɪtɪs]	гастрит
indigestion	[ˌɪndɪˈdʒestʃən]	розлад травлення
myocarditis	[ˌmaɪəʊkɑːˈdaɪtɪs]	міокардит
nephritis	[nɪˈfraɪtɪs]	нефрит
percussion	[pəˈkʌʃən]	перкусія
pericarditis	[ˌperɪkɑːˈdaɪtɪs]	перикардит
pneumonia	[njuːˈməʊniə]	пневмонія
ulcer	[ˈʌlsə]	виразка
white overall	[ˈwaɪt ˌəʊvəˈrɔːl]	білий халат

There are many different kinds of hospitals in Ukraine. They are health institutions which provide qualified medical care to people.

Every big hospital has several in-patient departments. They are: therapeutic, surgical, cardiological, neurological, gastroenterological, urological, gynecological and others. At the therapeutic department you can see many wards which are large and light. Every ward houses from four to eight patients. In every ward you can find some beds and bedside tables.

There are patients with different diseases of inner organs at the therapeutic department. Some of the patients *suffer from heart diseases, such as myocarditis, pericarditis, infarction, ischaemic heart disease, heart failure and so on. Others have lung diseases as pneumonia, bronchitis, asthma and so on. Some patients *are afflicted with abdominal and bowel diseases, such as ulcer, gastritis, colitis, indigestion. Some of the patients are ill with *kidney and bladder diseases. They are nephritis, inflammation and stones of kidneys and bladder.

The working day in the hospital begins very early. At 7 a.m. the nurses *take the temperature of the patients, give them medicines and *carry out other doctors' prescriptions. At 9 a.m. the *doctor in charge begins *to make the morning round at the therapeutic department. The students follow the doctor. They are all in white overalls. The doctor examines the patients, listens to their lungs and hearts, feels pulses, *measures blood pressure and prescribes different medicines to them. During these examinations the students learn the methods of examining a patient. These methods are: questioning a patient, external examination, percussion, auscultation, palpation, taking blood pressure, laboratory examinations, taking electrocardiograms, etc.

The patient was admitted to the hospital with hypertension. The doctor in charge examined him carefully. The patient complained of headache and weakness, high blood

pressure and emotional tension. The doctor confirmed the diagnosis of hypertension. The physician advised the patient to continue the course of treatment. Then he began to fill in the patients' *case histories.

Notes:

* to suffer from – страждати (від хвороби)
* to be afflicted with a disease - бути ураженим хворобою
* kidney and bladder diseases – хвороби нирок і сечового міхура
* to carry out doctor's prescription – виконувати призначення лікаря
* to make the morning round – робити ранковий обхід
* to measure blood pressure – ['meʒə] вимірювати кров'яний тиск
* doctor in charge – відповідальний лікар
* to take the temperature – вимірювати температуру
* case history - історія хвороби

Answer the questions:

1. What departments are there in every big hospital?
2. What can you see at the therapeutic department?
3. What can you find in the ward?
4. What heart diseases are treated at the therapeutic department?
5. What lung diseases are treated at the therapeutic department?
6. What abdominal and bowel diseases are treated at the therapeutic department?
7. What kidney and bladder diseases are treated at the therapeutic department?
8. What are the duties of nurses in the hospital?
9. What does the doctor in charge do during the morning round?
10. What are the methods of examining a patient?

SUMMARY

Every big hospital has a therapeutic department. Here you can see many wards and some procedure rooms. At the therapeutic department there are patients with different diseases of inner organs. Some of the patients have heart diseases, others have lung diseases. Many patients are ill with abdominal, kidney and bladder diseases. The working day in the hospital begins early. In the morning the nurses take patients' temperature, give them medicines. At 9 o'clock the doctors make the morning round. They examine the patients, listen to their hearts and lungs and administer proper treatment to them. After the morning round the doctors fill in case histories.

AT THE SURGICAL DEPARTMENT

Increase your vocabulary:

acute	[ə'kju:t]	гострий
appendicitis	[ə¸pendı'saıtıs]	апендицит
artificial	[¸ɑ:tı'fiʃ(ə)l]	штучний
benign	[bı'naın]	доброякісний
cholecystitis	[¸kəulısıs'taıtıs]	холецистит
clamp	[klæmp]	затискувач
device	[dı'vaıs]	прилад, пристосування
fracture	['frækʧə]	перелом
handle smb.	['hændl]	поводитись з ким-небудь
harm smb.	[hɑ:m]	зашкодити, пошкодити
narcosis	[nɑ:'kəusıs]	наркоз
respiration	[¸respə'reıʃn]	дихання
reception ward	[rı'sepʃ(ə)n 'wɔ:d]	приймальне відділення
scalpel	['skælp(ə)l]	скальпель
scissors	['sızəz]	ножиці
suture	['s(j)u:ʧə]	шов
suture needle	['s(j)u:ʧə 'ni:dl]	голка для накладання швів
syringe	[sı'rındʒ]	шприц
tumour	['tju:mə]	пухлина
ulcer	['ʌlsə]	виразка
wound clip	['wu:nd 'klip]	скріпка для рани

Every surgical *in-patient department has the reception ward, an operating room, a *scrub-up room, a *dressing room and the wards where one can see patients with surgical diseases such as acute appendicitis, cholecystitis, perforated ulcer, benign tumours and others. In the traumatological wards one can see patients *confined to bed after amputation of extremities, operation of *osteosynthesis, patients *lying under traction as they have fractures of the hip. The fractured bones are set and put in * plaster of Paris for immobilization.

In the reception ward the *first rule to follow is not to harm the patient. When the doctor and the nurse receive the patients, they are very careful in handling them.

In the operating room one can see two operating-tables, instrument tables and cabinets for suture material, dressings and instruments such as scalpels, syringes, suture needles, scissors, clamps, wound clips and others.

The surgeon and his assistants prepare for the operation in the scrub-up room. The preparation for the operation is very important and takes much time. Before the operation the surgeons wash their hands and put on sterile gowns, caps and masks. All instruments are sterilized too. Operations are made under general or local narcosis.

The surgeon and his assistants follow the rules of aseptic and are very attentive and careful during the operation. They use different ways of controlling the patient's condition: listen to the heart, feel the pulse and look at the pupils.

After the operation special care and attention is paid to the patients. The surgeon prescribes them proper treatment and diet. Every day the doctor on duty makes the morning round, examines the patients, tests their abdomens and dresses their wounds in the dressing room. Doctors and nurses pay much attention to patients who are in bad condition.

Notes:

* in-patient department – стаціонарне відділення
* a scrub-up room – передопераційна кімната
* dressing room – кімната для перев'язок
* the first rule to follow – перше правило, якого треба дотримуватися
* confined to bed – прикутий до ліжка
* osteosynthesis – операція остеосинтезу
* lying under traction – ті, що лежать на витяжці
* plaster of Paris – гіпс

Answer the following questions:

1. What patients are treated at the surgical department?
2. What is the first rule to follow in the reception ward?
3. What patients are treated in the traumatological wards?
4. What can one see in the operating room?
5. What surgical instruments do you know?
6. How do the doctors prepare for the operation?
7. How is the operation performed?
8. What ways of controlling the patient's condition are used during the operation?
9. What does the doctor on duty do every day in the surgical department?
10. What do doctors and nurses do after the operation?

SUMMARY

Every large hospital has a surgical department. Here you can see many wards, some procedure rooms and one or two operating rooms. At the surgical department there are patients with appendicitis, ulcers, tumors and other diseases. In the operating room there are two operating tables, instrument tables, cabinets for suture material and dressings. Before the operation the surgeons wash their hands and put on sterile gowns, caps and masks. All instruments are sterilized too. Operations are made under general or local narcosis. The doctors control general condition of the patient during an operation. After the operation the surgeon administers proper treatment and diet to the patient. Every day the surgeon examines the patients and dresses their wounds.

AT THE CHEMIST ’S SHOP

Increase your vocabulary:

access	['ækses]	доступ
administration	[əd¸mınıs'treıʃən]	застосування, призначення
ampoule	[ˈæmpu:l]	ампула
appropriate	[əˈprəʊprııt]	відповідний
composition	['kɔmpə'zıʃ(ə)n]	склад
to confuse	[kənˈfju:z]	плутати (що-небудь)
contraindication	[kɔntrəindi'keiʃ(ə)n]	протипоказання
cough	[kɒf]	кашель
to dispense	[dıs'pens]	відпускати (ліки)
to distribute	[dıˈstrıb.ju:t]	розподіляти
dosage	['dəusıdʒ]	дозування
dropper	['drɔpə]	крапельниця, піпетка
drug	[drʌg]	ліки, лікарський препарат
headache	[ˈhedeık]	головний біль
injection	[ınˈdʒekʃən]	ін’єкція
intramuscular	[¸ıntrəˈmʌskjulə]	внутрішньом’язевий
intravenous	[¸ıntrəˈvi:nəs]	внутрішньовенний
to label	['leıb(ə)l]	наліплювати етикетку, маркувати
medication	['medı'keıʃ(ə)n]	ліки, лікарський препарат
medicine	['meds(ə)n]	ліки, лікарський препарат
to offer	['ɔfə]	пропонувати
overdosage	['əuvə 'dəusıdʒ]	передозування
painkiller	['peın¸kılə]	знеболювальний засіб
prescription	[prı'skrıpʃ(ə)n]	рецепт, призначення
to promote	[prə'məut]	сприяти
to provide	[prəˈvaıd]	забезпечувати
remedy	[ˈremıdı]	засіб
separately	['sɛprətli]	окремо
syringe	[sı'rındʒ]	шприц
therapeutic	[θerəˈpju:tık]	терапевтичний
thermometer	[θə'mɔmıtə]	термометр
warning	['wɔ:nıŋ]	застереження

A chemist’s shop (a pharmacy or a drug store) is a specialized shop that sells medicines, *medical supplies and *medical devices. Chemist’s shops are staffed by pharmacists and pharmacy assistants who are trained to dispense medicines, provide medical advice and offer various pharmacy services.

There are usually two departments at a large chemist’s shop: the chemist's department and the prescription department. At the chemist’s department one can get *over-the-counter medicines, various medical products and supplies. At the prescription department medicines are sold or made up by prescriptions. The pharmacists select the appropriate medication, measure the correct dosage and label the medicine with the patient's name, dosage instructions and warnings.

At the chemist’s all medicines are kept in *drug cabinets, open shelves and refrigerators. They are distributed according to their therapeutic effect: sedatives, painkillers, drugs for cough, headache, flu and cold, cardiac medicines, nasal sprays, eye

drops, *dietary supplements and vitamins. Disinfectants, herbs and things for medical care such as hot water bottles, medicine droppers, syringes and thermometers are kept separately. Here you can also see *drug products of all kinds: powder medicines, ampoules of drugs for intramuscular and intravenous injections, tubes of ointments, different pills and tablets for internal use. Every package with medicine contains *****a drug information leaflet indicating the name of a drug, its composition, dosage and administration, possible side effects, *expiry date, warnings and contradictions. This information is very important for doctors, pharmacists and patients not to confuse different remedies and to avoid severe health problems.

Thus, the chemist's shops are important institutions in providing patients access to medicines and healthcare products, promoting public health and supporting community well-being.

Notes:

*medical supplies [sə'plaɪz] – матеріали медичного призначення, медичні товари
*medical devices [dɪ'vaɪsiz] – вироби медичного призначення, медичні вироби
*over-the-counter['əuvəðə'kauntə] medicines - лікарські засоби, що відпускаються без рецептів
*drug cabinet ['kæb(ɪ)nɪt] – шафа для зберігання ліків
*dietary ['daɪət(ə)rɪ] supplements ['sʌplɪmənts] – біологічно активні добавки
* drug product – лікарський засіб, лікарський препарат
*drug information leaflet – інструкція з використання лікарського засобу
*expiry date [ɪks paiərɪ deɪt] – дата закінчення терміну придатності

Answer the questions:

1. What is a chemist's shop?
2. What specialists are the chemist's shops staffed by?
3. What departments are there at the chemist's shop?
4. What drugs can be bought at the chemist's department?
5. What medicines are dispensed at the prescription department?
6. What are the duties of pharmacists at the prescription department?
7. Where are all drugs kept at the chemist's?
8. How are medicines distributed at the chemist's?
9. What drug products can you get at the chemist's?
10. What is indicated in the drug information leaflet?

SUMMARY

A chemist's shop is a specialized shop where medicines are sold. A large chemist's shop has two departments: the chemist's department and the prescription department. At the chemist's department you can get medicines without prescriptions. At the prescription department medicines are sold or made up by prescriptions. All drugs are kept in drug cabinets, open shelves and refrigerators.There you can see sedatives, painkillers, drugs for flu and cold, cardiac medicines, nasal sprays, eye drops, tonics and vitamins. There are ampoules of drugs for injections, pills and tablets for internal use, nasal sprays, eye drops, tubes of ointments and other remedies**.** Every package with medicine contains a drug information leaflet. It indicates the name of a drug, its composition, dosage and administration, side effects, expiry date, and contradictions. At the chemist's shop we can buy everything necessary for medical care.

DRUGS

Increase your vocabulary:

to administer	[əd'mınıstə]	призначати
analgesic	[ˌænəlˈdʒiːzık]	знеболюючий засіб
brand name	[ˈbrænd ˈneım]	зареєстрована патентована назва
to cause	[kɔːz]	викликати
competitor	[kəmˈpetıtə]	конкурент
to contain	[kənˈteın]	вміщувати
cough	[kɒf]	кашель
definite	[ˈdefınət]	точний, ясний, визначений
generic	[dʒəˈnerık]	загальний, непатентований
gland	[glænd]	залоза
inhalation	[ˌınhə'leıʃ(ə)n]	інгаляція
laxative	[ˈlæksətıv]	проносний засіб
major	[ˈmeıdʒə]	основний, головний
manufacturer	[ˌmænju'fækʧ(ə)rə]	виробник, підприємець
mixture	[ˈmıkstʃə]	мікстура, суміш
ointment	[ˈɔıntmənt]	мазь
orally	[ˈɔːrəli]	перорально
parenterally	[pəˈrentərəlı]	парентерально
prevention	[prıˈvenʃ(ə)n]	профілактика
root	[ruːt]	корінь
secretion	[sıˈkriːʃ(ə)n]	секреція, секрет
source	[sɔːs]	джерело
standard	[ˈstændəd]	стандарт, норматив
substance	[ˈsʌbstəns]	речовина
suffering	[ˈsʌfərıŋ]	страждання
treatment	[ˈtriːtmənt]	лікування
various	[ˈveəriəs]	різноманітний
particular	[pə'tıkjulə]	особливий
property	['prɔpətı]	власність
pure	[pjuə]	чистий, ясний

Drugs are chemical substances used in medicine for treatment or prevention of diseases in man and animals. Drugs can come from different sources and are obtained from various parts of plants such as roots, leaves and fruits. Drugs can also be obtained from animals, for example, hormones and secretions from glands of animals. They can be made from chemical substances in laboratories. Some drugs are contained in food, they are called vitamins.

Drugs often have several names. When a drug is first discovered, it is given a chemical name, which describes the atomic or molecular structure of the drug. This name

is often long and complicated. When a drug is approved by the Food and Drug Administration, it is given a generic (official) name and a brand name. The generic name is public property and any drug manufacturer may use it. There is only one generic name for each drug. The brand name is a private property of the drug manufacturer and no competitor may use it. Most drugs have several brand names given by different pharmaceutical companies.

Two important standards for drugs are that the drug must be clinically useful and available in pure form.

A drug may be classified by the chemical type of active ingredient or by the way it is used to treat a particular condition. Each drug can be classified into one or more drug classes, for instance antiseptics and desinfectants, cough mixtures, laxatives, tonics, analgesics, ointments and others.

Therapeutic effect, side effect and allergic reaction are the major characteristics of drugs. Therapeutic effect of the drug is the ability to act selectively on an organ or tissues and to restore normal body function. Side effect is a negative reaction to the medicine or treatment. Allergic reactions are sensitivities to substances called allergens that come into contact with the skin, nose, eyes, respiratory tract, and gastrointestinal tract. The proper dosage of the drug is of great importance as well.

Drugs are administered in four ways: orally (through the mouth), parenterally (by injection), rectally (into the rectum), and by inhalation through lungs.

Answer the questions:

1. What are drugs?
2. What are drugs obtained from?
3. What is the chemical name of the drug?
4. What is meant by the generic name of a drug?
5. What can you say about the brand name of a drug?
6. What are the two important standards for a drug?
7. How can the drugs be grouped?
8. What are the major characteristics of drugs?
9. What is therapeutic effect of the drug?
10. In what ways are drugs administered?

SUMMARY

Drugs are chemical substances for treatment or prevention of diseases. They relieve suffering and pain. Drugs come from different sources. They are obtained from plants and animals. And they are made from chemical substances in laboratories. Usually drugs have three names: the chemical name, the generic name and the brand name. All drugs are grouped according to their action. There are antiseptics, analgesics, sedatives, laxatives, tonics and other drugs. The main characteristics of drugs are: therapeutic effect, side effect and allergic reaction. Drugs are administered orally, parenterally, rectally and by inhalation.

VITAMINS

Increase your vocabulary:

amount	[əˈmaunt]	кількість
catalyst	[ˈkætəlɪst]	каталізатор
complicated	[ˈkəmplɪkeɪtɪd]	складний
composition	[ˌkəmpəˈzɪʃən]	склад, суміш
to contain	[kənˈteɪn]	містити в собі
cornea	[ˈkɔ:nɪə]	рогівка ока
deficiency	[dɪˈfɪʃənsɪ]	недостатня кількість
enzyme	[ˈenzaɪm]	ензим, фермент
fatigue	[fəˈti:g]	втома
fish liver oil	[fɪʃ ˈlɪvə ɔɪl]	риб'ячий жир
to increase	[ɪn'kri:s]	збільшувати(ся), підвищувати(ся)
to heal	[hi:l]	заживати
maintenance	['meɪnt(ə)nəns]	підтримка
nutrition	[nju:ˈtrɪʃən]	живлення
to participate	[pɑ:ˈtɪsɪpeɪt]	приймати участь
prolonged	[prəuˈlɔŋd]	тривалий
proper	[ˈprɔpə]	належний, відповідний
purpose	[ˈpə:pəs]	мета, ціль
requirement	[rɪˈkwaɪəmənt]	потреба
resistance	[rɪˈzɪstəns]	опірність
to result in	[rɪˈzʌlt]	призводити до
to retard	[rɪˈtɑ:d]	сповільнювати
soluble	[ˈsɔljubl]	розчинний
source	[sɔ:s]	джерело
to store	[stɔ:]	запасати, відкладати
varied	[ˈveərid]	різноманітний
working capacity	[ˈwə:kɪŋ kəˈpæsɪtɪ]	працездатність
yeast	[ji:st]	дріжджі

Vitamins are special organic substances required as nutrients for healthy maintenance of the whole organism. They do not provide energy, but they participate in metabolism as catalysts. They are necessary for the formation of tissue enzymes which influence the transformation of substances in cells and tissues of the body. There are 13 essential vitamins. They are marked by letters A, B, C, D, K, P, etc. The chemical composition and physiological role of most of the vitamins have already been determined. They are classified into two groups - fat-soluble and water soluble. There are nine water-soluble vitamins: eight B vitamins and vitamin C. Vitamins A, D, E and K are soluble only in fats. Fresh, varied food usually contains enough vitamins for the organism.

Vitamin A is necessary for proper growth of bones, for nutrition of the cornea of the eye and for proper functioning of night vision. The best source of vitamin A is fish liver oil.

Vitamin B is really a complicated group of vitamins, twelve of which are known now. Some of them are necessary for growth, for proper functioning of the nervous system, for proper formation of the erythrocytes. B vitamins are found in liver, yeast, eggs and some vegetables.

Vitamin C is necessary for strong bones and teeth, and for healthy blood vessels. It also helps wounds to heal faster. The body stores very little vitamin C. So, we must get it every day with vitamin C-rich foods. These include citrus fruits and fresh vegetables, fruit and berries.

Vitamin D increases the amount of calcium in the blood, which is needed to build strong bones, healthy muscles and for proper work of the immune system.

Vitamin K is known as the clotting vitamin. The body needs vitamin K to make certain proteins in the liver that cause blood to clot. It also helps maintain strong bones in older adults. Vitamin K is found in green leafy vegetables, vegetables such as broccoli, cauliflower and cabbage, fish, liver, meat, eggs and cereals.

Prolonged deficiency of any vitamin results in a disease known as avitaminosis. Vitamin deficiency is accompanied by reduced working capacity, rapid fatigue, reduced resistance of the organism to infection, incorrect development and retarded growth in children.

Vitamins are widely used for medical purposes, many of them are produced synthetically.

Answer the questions:

1. What are vitamins?
2. What is their function in the human body?
3. How many essential vitamins are known today?
4. What is the classification of the vitamins? How are they grouped?
5. What is vitamin A necessary for?
6. Where are B-vitamins found?
7. Why is vitamin C important for the body?
8. What is avitaminosis?
9. What are the main symptoms of avitaminosis?
10. Why are many vitamins produced synthetically?

SUMMARY

Vitamins are special organic substances. They help to carry out chemical changes in the cells. There are 13 essential vitamins. They are marked by letters A, B, C, D, E, K, etc. They are classified into two groups: fat-soluble and water soluble. All of them are important for the human organism. Vitamin A is necessary for proper growth of bones and night vision. Vitamin B is a group of vitamins important for growth and the work of nervous system. Vitamin C is necessary for strong bones and teeth and for healthy blood vessels. Vitamin D increases the amount of calcium in the blood. Vitamin K is necessary for blood clotting. We get most vitamins from food. Different types of food usually contain enough vitamins for the organism. Vitamins are widely used in medicine, many of them are produced synthetically.

THE HUMAN BODY

Increase your vocabulary:

abdomen	[ˈæbdəmən]	живіт; черевна порожнина
blood	[blʌd]	кров
bone	[bəʊn]	кістка
breastbone	[ˈbrestbəʊn]	грудна кістка
cartilage	[ˈkɑːtəlɪdʒ]	хрящ
cavity	[ˈkævɪtɪ]	порожнина
cheekbone	[ˈtʃiːkbəʊn]	вилиця
chest	[tʃest]	грудна клітка
cranial	[ˈkreɪniəl]	черепний
diaphragm	[ˈdaɪəfræm]	діафрагма
facial	[ˈfeɪʃəl]	лицьовий
forearm	[ˈfɔːrɑːm]	передпліччя
forehead	[ˈfɒrɪd]	лоб
gallbladder	[ˈgɒlblædə]	жовчний міхур
heart	[hɑːt]	серце
intestine	[ɪnˈtestɪn]	кишківник
jaw	[dʒɔː]	щелепа
joint	[dʒɔɪnt]	суглоб
kidney	[ˈkɪdnɪ]	нирка
ligament	[ˈlɪgəmənt]	зв’язка
limb	[lɪm]	кінцівка
lung	[lʌŋ]	легеня
muscle	[ˈmʌsl]	м’яз
pelvic	[ˈpelvɪk]	тазовий
shin	[ʃɪn]	гомілка
shoulder	[ˈʃəʊldə]	плече
skull	[skʌl]	череп
spine	[spaɪn]	хребет
spleen	[spliːn]	селезінка
stomach	[ˈstʌmək]	шлунок, живіт
tissue	[ˈtɪʃuː]	тканина
temple	[ˈtempļ]	скроня
thigh	[θaɪ]	стегно
trunk	[trʌŋk]	тулуб
urinary	[ˈjʊərɪnəri]	сечовий
vertebra, vertebrae (*pl*)	['vɜːtɪbrə], [ˈvɜːtɪbrɪː]	хребець, хребці
vessel	[ˈvesl]	судина

The human body consists of three parts. They are the head, the trunk, and the limbs. There are many bones of different sizes and shapes in the skeleton. The bones are connected by cartilages, ligaments, and joints.

The main part of the head is called the skull. The bones of the skull are composed of cranial and facial parts. The skull encloses the brain. The forehead, the temples, the cheeks, the cheekbones, the two jaws and the mouth compose the face.

The trunk consists of the spine, the chest, and the pelvic bones. In the spine there are many vertebrae. The trunk is divided into two large cavities by the diaphragm. The upper cavity of the trunk is called the chest and the lower one is called the abdomen. In the middle of the chest there is the breastbone. The ribs are connected with the breastbone by cartilages.

The lungs and the heart are located above the diaphragm in the chest. In the abdominal cavity there are inner organs such as stomach, liver, urinary bladder, gallbladder, kidneys, spleen, and intestines. The upper limb is divided into the shoulder, the forearm, and the hand. The lower limb consists of the thigh, the shin, and the foot.

The muscles form about 40 per cent of the body weight. They are attached to bones, inner organs, and blood vessels. Muscles allow us to make internal or external movements. The body is covered by the skin. There are blood vessels and nerves in all tissues of the human body.

Answer the questions:

1. What parts does the human body consist of?
2. What parts are the bones of the skull composed of?
3. What does the trunk consist of?
4. What cavities is the trunk divided into?
5. Where are the lungs and the heart located?
6. What organs are there in the abdominal cavity?
7. What is the upper limb divided into?
8. What does the lower limb consist of?
9. What are the muscles attached to?
10. What is the body covered by?

SUMMARY

The human body consists of the head, the trunk, and the limbs. The main part of the head is called the skull. The skull encloses the brain. The trunk consists of the spine, the chest, and the pelvic bones. The trunk is divided into two large cavities by the diaphragm. The upper cavity of the trunk is called the chest and the lower one is called the abdomen. The lungs and the heart are located above the diaphragm in the chest. In the abdominal cavity there are inner organs such as stomach, liver, urinary bladder, gallbladder, kidneys, spleen and intestines. The upper limb is divided into the shoulder, the forearm, and the hand. The lower limb consists of the thigh, the shin, and the foot. The muscles form about 40 per cent of the body weight. They are attached to bones, inner organs, and blood vessels. The body is covered by the skin.

THE SKELETAL SYSTEM

Increase your vocabulary:

adult	[ˈædʌlt], [əˈdʌlt]	дорослий
appendicular skeleton	[ˌæpənˈdɪkjələ ˈskeləʈən]	апендикулярний скелет
average	[ˈævərɪdʒ]	середній, пересічний
axial skeleton	[ˈæksiəl ˈskeləʈən]	осьовий скелет
to be knit together	[nɪt təˈgeðə]	бути з'єднаним
birth	[bɜːθ]	народження
bone	[bəʊn]	кістка
breastbone	[ˈbrestbəʊn]	груднина, грудна кістка
covering	[ˈkʌvərɪŋ]	покриття, зовнішній шар
definite	[ˈdefɪnət]	визначений, певний
fiber	[ˈfaɪbə]	волокно
fibrous	[ˈfaɪbrəs]	волокнистий
framework	[ˈfreɪmwɜːk]	каркас
function	[ˈfʌŋkʃn]	функція
injury	[ˈɪndʒəri]	травма
joint	[dʒɔɪnt]	суглоб
junction	[ˈdʒʌŋkʃn]	з'єднання
layer	[ˈleɪə]	шар
membrane	[ˈmembreɪn]	мембрана, оболонка
motor apparatus	[ˈməʊtə ˌæpəˈreɪtəs]	руховий апарат
movement	[ˈmuːvmənt]	рух
muscle	[ˈmʌsl]	м'яз
nerve	[nɜːv]	нерв
pelvis	[ˈpelvɪs]	таз
periosteum	[ˌperɪˈɒstiəm]	окістя, надкісниця
protection	[prəˈtekʃn]	захист
rib	[rɪb]	ребро
shoulder girdle	[ˈʃəʊldə ˈgɜːdl]	плечовий пояс
skull	[skʌl]	череп
spine	[spaɪn]	хребет
spongy	[ˈspʌndʒi]	губчастий
structure	[ˈstrʌktʃə]	структура
substance	[ˈsʌbstəns]	речовина
supply	[səˈplaɪ]	постачати
support	[səˈpɔːt]	підтримка; підтримувати
tissue	[ˈtɪʃuː]	тканина
vital	[ˈvaɪtl]	життєво важливий

The bony structure of the body is called the skeleton. It is a framework of the body. The average adult skeleton has around 206 bones. At birth there are around 270 bones in

the skeleton. Bones are knit together by fibrous tissues. The junction between two bones is called a joint.

Bones have a complex structure. They consist of compact and spongy bony substance. Bones contain organic and inorganic substances. Each bone is supplied with nerves, blood and lymphatic vessels. Bones have the outer covering called the periosteum. It is a fibrous membrane which has two layers. The outer layer performs protective function. The inner layer contains many nerve fibers and blood vessels. Bones are classified by their shape as long, short, flat, and irregular.

The skeleton performs functions of support, movement, and protection. The supporting function includes supporting all the organs and giving the body a definite form and position. The skeleton with muscles form motor apparatus which allows movement. Bones protect the central nervous system and vital organs from external injuries. Bones also produce red and white blood cells and store minerals.

Bones are grouped into two categories: the axial skeleton and the appendicular skeleton. The axial skeleton is the central supporting part of the body. It is composed of the skull, spine, ribs, and breastbone. The appendicular skeleton consists of the upper and lower limbs, which include the shoulder girdle and the pelvis.

Answer the questions:

1. What is the skeleton?
2. How many bones are there in the adult skeleton?
3. How many bones does the skeleton contain at birth?
4. What do bones consist of?
5. What is the periosteum?
6. What functions does the skeleton perform?
7. What do bones protect vital organs from?
8. What categories are bones grouped?
9. What is the axial skeleton?
10. What is appendicular skeleton composed of?

SUMMARY

The bony structure of the body is called the skeleton. It is a framework of the body. The average adult skeleton has around 206 bones. Bones are knit together by fibrous tissues.

Bones consist of compact and spongy bony substance. They contain organic and inorganic substances. Each bone is supplied with nerves, blood and lymphatic vessels. Bones have the outer covering called the periosteum. Bones are classified by their shape as long, short, flat, and irregular.

The skeleton performs functions of support, movement, and protection. Bones also produce red and white blood cells and store minerals. Bones are grouped into two categories: the axial skeleton and the appendicular skeleton.

THE RESPIRATORY SYSTEM

Increase your vocabulary:

alveolus alveoli (*pl*)	['ælvɪ'əuləs] ['ælvɪ'əulaɪ]	альвеола альвеоли
breathing	['bri:ðɪŋ]	дихання
bronchus bronchi (*pl*)	['brɔŋkəs] ['brɔŋkaɪ]	бронх бронхи
bronchial	['brɔŋkɪəl]	бронхіальний
carbon dioxide	['kɑ:bən daɪ'ɔksaɪd]	вуглекислий газ
cartilage	['kɑ:tɪlɪʤ]	хрящ
cellular	['seljulə]	клітинний
exchange	[ɪks'ʧeɪnʤ]	обмін
homeostasis	[ˌhəʊmiəʊˈsteɪsɪs]	гомеостаз
larynx	['lærɪŋks]	гортань
lobe	[ləub]	доля, частка
passageway	['pæsɪʤweɪ]	прохід
pleura	['pluərə]	плевра
pulmonary	['pʌlmən(ə)rɪ]	пульмональний, легеневий
respiration	['respɪ'reɪʃ(ə)n]	дихання
respiratory	['respirət(ə)ri], [ri'spai(ə)rət(ə)ri]	респіраторний, дихальний
to supply	[sə'plaɪ]	постачати; постачання
trachea	[trə'ki:ə]	трахея
windpipe	['wɪndpaɪp]	трахея

The respiratory system includes organs, tissues and muscles involved in the process of respiration (breathing). The primary function of the respiratory system is to deliver oxygen to the cells of the body and remove carbon dioxide, a cell waste product. In addition to air distribution and gas exchange, the respiratory system helps the body maintain homeostasis, regulate body temperature and create sounds of speech.

The organs of the respiratory system form a continuous system of passages called the respiratory tract, through which air flows into and out of the body. The main structures of the human respiratory system are the nasal cavity, the trachea, the bronchi and the lungs.

The trachea, or windpipe, is the widest passageway in the respiratory tract. It is formed by rings of cartilage. The trachea connects the larynx to the lungs for the passage of air through the respiratory tract. The trachea is devided into the right and left primary bronchi which extend to the lungs.

The lungs are the largest organs of the respiratory tract located in the thorax. They are the principal organs of respiration. The right lung is larger and contains three lobes. The left lung is smaller and contains two lobes. Both lungs are covered by a thin serous membrane, the pleura. Lung tissue consists mainly of alveoli. These tiny air sacks are the functional units of the lungs where gas exchange takes place.

The lungs receive blood supply from two major sources - pulmonary artery and bronchial arteries. Pulmonary artery brings de-oxygenated blood from the right side of the heart to the lungs. This blood absorbs oxygen in the lungs and returns to the heart to be

pumped to cells throughout the body. Bronchial arteries bring oxygenated blood from the heart that provides oxygen to the cells of the lungs for cellular respiration.

Answer the following questions:

1. What are the functions of the respiratory system?
2. What is the respiratory tract?
3. What are the main structures of the human respiratory system?
4. What is the widest passageway in the respiratory tract?
5. What does the trachea connect the larynx to?
6. Where are the lungs located?
7. What are the lungs covered by?
8. Are the lungs equal in size?
9. What are the alveoli of the lungs?
10. What blood does pulmonary artery bring from the heart to the lungs?

SUMMARY

The respiratory system includes the organs, tissues and muscles involved in the process of respiration (breathing). The primary function of the respiratory system is to deliver oxygen to the cells of the body and remove carbon dioxide.

The main structures of the human respiratory system are the nasal cavity, the trachea, the bronchi and the lungs. The trachea, or windpipe, is formed by rings of cartilage. The trachea connects the larynx to the lungs. The lungs are the largest organs of the respiratory tract. They are located in the thorax. They are the principal organs of respiration. The right lung is larger and contains three lobes. The left lung is smaller and contains two lobes. Both lungs are covered by the pleura. Alveoli are the functional units of the lungs where gas exchange takes place.

THE CARDIOVASCULAR SYSTEM

Increase your vocabulary:

abnormality	['æbnɔ:'mælıtı]	порушення
affect	['æ.fɛkt]	уражувати
aortic	[eı'ɔ:tık]	аортальний
arteriole	[ɑ:'tı(ə)rıəul]	артеріола, мала артерія
artery	['a:təri]	артерія
atrium atria (*pl*)	['eitriəm] ['eitriə]	пересердя
bicuspid	[baı'kʌspıd]	двостулковий (клапан)
capillary	[kæ`piləri]	капіляр
chamber	['ʧeimbə]	порожнина серця
common	['kɔmən]	частий, поширений
contraction	[kən'trækʃ(ə)n]	скорочення
heartbeat	['hɑ:tbi:t]	серцебиття
hollow	['hɔləʊ]	порожнистий
injury	['ınʤərı]	пошкодження, ураження
mitral	['maitrəl]	мітральний
pericardium	[peri'ka:diəm]	перикард
rate	[reıt]	частота
rhythm	['rıð(ə)m]	ритм
semilunar	[semi'lu:nə]	півмісяцевий
stroke	[strəuk]	інсульт
tricuspid	[trai'kʌspid]	тристулковий
valve	['vælv]	клапан
vascular	['væskjulə]	судинний
vein	[vein]	вена
ventricle	['ventrikl]	шлуночок
venule	[venju:l]	венула
vessel	['vesl]	судина

The cardiovascular system consists of the heart, the blood vessels and the blood. Its major function is to transport oxygenated blood to all parts of the body and to carry deoxygenated blood back to the lungs. Besides, it provides all organs, muscles and tissues with nutrients and hormones, and removes waste products of cell metabolism.

The heart is located at the centre of the cardiovascular system. It is a hollow muscular organ located in the chest and included in pericardium. There are four chambers that make up the heart. Two upper chambers are the atria and two lower chambers are the ventricles. The atria receive and collect blood. The ventricles pump blood to other parts of the body.

The valves separate the atria from the ventricles. The heart has four valves. They open and close to let blood flow from one area of the heart to another. Each valve has a specific location, structure and function. The mitral (also called bicuspid) and the tricuspid valves are located between the atria and the ventricles. The aortic and pulmonary valves are located between the ventricles

and arteries which originate from the heart (aorta and pulmonary artery). These valves are also known as the semilunar valves. The electric system of the heart stimulates contraction of the heart muscle and controls the rate and rhythm of the heartbeat.

The vascular system consists of three groups of vessels – arteries, veins and capillaries. Arteries carry oxygenated blood from the heart to all parts of the body. Veins return deoxygenated blood to the heart. Capillaries connect very small arteries (arterioles) and veins (venules).

The vessels carrying blood to and from the tissues of the body compose the general system. They are called the systemic vessels. The pulmonary system is formed by the vessels carrying blood to and from the lungs. The portal system is formed by the veins passing to the liver.

Abnormalities or injuries to any part of the cardiovascular system can result in serious health problems. Common conditions that can affect the cardiovascular system include coronary artery disease, heart attack, high blood pressure (hypotension) and stroke.

Answer the following questions:

1. What does the cardiovascular system consist of?
2. What are the major functions of the cardiovascular system?
3. Where is the heart located?
4. How many chambers make up the heart?
5. Where are the mitral and the tricuspid valves located?
6. Where are the semilunar valves located?
7. What does the vascular system consist of?
8. What vessels are called the systemic vessels?
9. What is the pulmonary system formed by?
10. What are common conditions that can affect the cardiovascular system?

SUMMARY

The cardiovascular system consists of the heart, the blood vessels and the blood. Its major function is to transport oxygenated blood to all parts of the body. Besides, it removes waste products of cell metabolism.

The heart is located at the centre of the cardiovascular system. It is a hollow muscular organ located in the chest and included in pericardium. There are four chambers in the heart – two atria and two ventricles. The valves separate the atria from the ventricles. The heart has four valves: mitral, tricuspid, aortic and pulmonary.

The vascular system consists of three groups of vessels – arteries, veins and capillaries. The vessels carrying blood to and from the tissues of the body are the systemic vessels. The portal system is formed by veins passing to the liver. The pulmonary system is formed by the vessels carrying blood to and from the lungs.

CARDIOVASCULAR DISEASES

Increase your vocabulary:

atherosclerosis	[ˌæθərəusklə'rəusɪs]	атеросклероз
blockage	['blɔkɪdʒ]	блокування, закупорка
blood supply	[blʌd sə'plaɪ]	кровопостачання
cholesterol	[kə'lest(ə)rɔl]	холестерин
circulation	[ˌsɜ:kjə'leɪʃ(ə)n]	кровообіг
congestive	[kənˈdʒestɪv]	застійний, закупорений
coronary	['kɔrən(ə)ri]	вінцевий, коронарний
to dissolve	[dɪ'zɔlv]	розчиняти, розріджувати
hardening	[ˈhɑ:dənɪŋ]	затвердіння
heart failure	[hɑ:t 'feɪljə]	серцева недостатність
ischaemic	[ɪ'ski:mɪk]	ішемічний
myocardial infarction	[ˌmʌɪə(ʊ)ˈkɑ:dɪəl ɪnˈfɑ:kʃ(ə)n]	інфаркт міокарда
nausea	['nɔ:sɪə]	нудота
obstruction	[əb'strʌkʃ(ə)n]	блокування, закупорка
oedema	[ɪ'di:mə]	набряк
palpitation	[ˌpælpɪ'teɪʃ(ə)n]	прискорене серцебиття
peripheral	[pə'rɪf(ə)r(ə)l]	периферійний
plaque	[plæk]	бляшка
shortness of breath	['ʃɔ:tnəs ɔv breθ]	задишка
sign	[saɪn]	ознака
sweating	['swetɪŋ]	потовиділення

Cardiovascular diseases are disorders of the heart, blood vessels and blood circulation. They are the leading cause of death globally. Cardiovascular diseases include ischaemic heart disease, heart failure, myocardial infarction, atherosclerosis and others.

Ischemic heart disease, also called coronary heart disease (CHD) or coronary artery disease, is the most common heart disorder. It is characterized by reduced blood supply of the heart muscle. It is usually caused by narrowing or obstruction of the coronary arteries. Some people who have this disease do not have any signs or symptoms. When they occur, the most common one is chest pressure or pain on the left side of the body. Treatment for ischaemic heart disease involves improving blood flow to the heart muscle. It may include medications and surgery to open blocked arteries.

Heart failure, also known as congestive heart failure (CHF), occurs when the heart is unable to pump blood as well as it should. It may involve the right side of the heart, the left side or both. In left heart failure, the main symptom is shortness of breath. The symptoms of right heart failure include peripheral oedema, starting in the feet and ankles, chest discomfort, breathlessness, palpitations. Proper treatment and lifestyle changes - such as losing weight, exercising and reducing salt in diet - can improve the quality of life.

Myocardial infarction (MI), commonly known as heart attack, is sudden death of part of the heart muscle due to blockage in the blood supply to the heart. Severe chest pain is the most common symptom. Other symptoms include shortness of breath, sweating,

weakness, nausea, vomiting, and palpitations. Two main treatments are using medicines to dissolve blood clots and surgery to restore blood supply to the heart.

Atherosclerosis is a hardening of arteries due to gradual plaque buildup, causing them to narrow. Plaque is a sticky substance made of fat, cholesterol, calcium and other substances. Atherosclerosis can affect arteries in any area of the body. There are usually no symptoms in the early stages. Later, symptoms are caused by reduced blood flow to the organs supplied by the affected arteries. The best treatment for atherosclerosis is to prevent it from progressing by following a healthy lifestyle.

Answer the following questions:

1. What is ischemic heart disease?
2. What is the cause of ischemic heart disease?
3. What does treatment for ischaemic heart disease involve?
4. What is heart failure?
5. What are the symptoms of heart failure?
6. What is myocardial infarction?
7. What are the symptoms of myocardial infarction?
8. How is myocardial infarction treated?
9. What is atherosclerosis?
10. How can atherosclerosis be treated?

SUMMARY

Cardiovascular diseases are disorders of heart, blood vessels and blood circulation. They are the leading cause of death.

Ischemic heart disease is characterized by reduced blood supply of the heart muscle. The most common symptom is chest pain on the left side of the body. Treatment for this disease may include medications and surgery to open blocked arteries.

Heart failure occurs when the heart is unable to pump blood as well as it should. It may involve the right side of the heart, the left side or both. The symptoms of heart failure include oedema of the feet, chest discomfort, shortness of breath. Proper treatment and lifestyle changes can improve the quality of life.

Myocardial infarction is a sudden death of the heart muscle. It is caused by blockage in the blood supply to the heart. Severe chest pain is the most common symptom. Treatment involves medications and surgery to restore blood supply to the heart.

Atherosclerosis is a hardening of arteries due to plaque buildup. Atherosclerosis can affect arteries in any area of the body. The best treatment for atherosclerosis is to prevent it from progressing by following a healthy lifestyle.

THE DIGESTIVE SYSTEM

Increase your vocabulary:

absorption	[əbˈzɔːpʃən]	поглинання, всмоктування
alimentary	[ælɪˈmentərɪ]	травний
antrum	[ˈantrəm]	порожнина (органу)
anus	[ˈeɪnəs]	відхідник
caecum	[ˈsiːkəm]	сліпа кишка
cavity	[ˈkævɪti]	порожнина
colon	[ˈkoʊlən]	ободова кишка
diaphragm	[ˈdaɪəfræm]	діафрагма
digestive	[daɪ (ɪ)ˈdʒestɪv]	травний
dilated	[daɪˈleɪtɪd]	розширений
to dissolve	[dɪˈzɒlv]	розчинятись
duodenum	[ˌdjuːəˈdiːnəm]	дванадцятипала кишка
enzyme	[ˈenzaɪm]	фермент
esophagus	[ɪˈsɒfəgəs]	стравохід
fundus	[ˈfʌndəs]	дно (органу)
gallbladder	[ˈgɒlblædər]	жовчний міхур
hard palate	[ha:d ′ pælit]	тверде піднебіння
ileum	[ˈɪliəm]	клубова кишка
intestine	[ɪnˈtestɪn]	кишківник, кишка
jejunum	[dʒɪˈdʒuːnəm]	порожня кишка
mouth	[ˈmaʊθ]	рот
palate	[ˈpælit]	піднебіння
pancreas	[ˈpæŋkriəs]	підшлункова залоза
pharynx	[ˈfærɪŋks]	зів, глотка
rectum	[ˈrektəm]	пряма кишка
saliva	[səˈlaɪvə]	слина
salivary	[ˈsælɪvəri]	слинний
soft palate	[soft ′ pælit]	м’яке піднебіння
stomach	[ˈstʌmək]	шлунок
tongue	[tʌŋ]	язик

The organs of gastrointestinal system, commonly called the alimentary tract, form a tube-like passage through the body cavities, extending from the mouth to the anus. The alimentary tract consists of the mouth, pharynx, esophagus, stomach, small and large intestines. The liver with gallbladder and pancreas are the major digestive glands.

The main functions of this system are to carry food for digestion, prepare it for absorption and to carry waste material for elimination.

The mouth is the first division of the alimentary tract. Important structures of the mouth are the teeth and the tongue, which is the organ of taste, the salivary glands, the soft and hard palates. From the mouth food passes through the pharynx to the esophagus and then to the stomach.

The stomach is a dilated portion of the alimentary canal. It is located in the upper part of the abdomen under the diaphragm. The stomach is composed of a fundus, a body and an antrum. In the stomach the components of food are dissolved and hydrolyzed by enzymes

of saliva and gastric juice. Different gastric glands are found in the stomach. They produce hydrochloric acid and pepsin to digest food.

The small intestine is a thin-walled muscular tube about 6.5 meters long. It is composed of the duodenum, jejunum and ileum. The large intestine is about 1.5 meters long. It is divided into caecum, colon and rectum.

The liver is the largest gland in the human body. It is located in the right upper part of the abdominal cavity under the diaphragm. Liver removes toxins from the body's blood supply, maintains healthy blood sugar level, regulates blood clotting and performs other vital functions.

The gallbladder is a hollow sac lying on the lower surface of the liver. Its main function is to store bile. Bile helps the digestive system to break down fats.

The pancreas is a long thin gland lying under and behind the stomach. The pancreas has two main functions: an exocrine function that helps in digestion and endocrine function that regulates blood sugar.

In the case of gastrointestinal disease or disorders, the functions of the gastrointestinal tract are not achieved successfully.

Answer the following questions:

1. What are the organs of the digestive system?
2. What are the main functions of the digestive system?
3. What are the important structures of the mouth?
4. What kind of organ is the stomach?
5. What parts is the small intestine divided into?
6. What kind of organ is the large intestine?
7. What is the largest gland in the human body?
8. What are the functions of liver?
9. What kind of organ is the gallbladder?
10. What can you say about the pancreas and its functions?

SUMMARY

The gastrointestinal system consists of the mouth, pharynx, esophagus, stomach, small intestine and large intestine. The liver, gallbladder and pancreas are the major digestive glands.

The mouth is the first division of the alimentary tract. From the mouth the food passes through the pharynx to the esophagus and then to the stomach.

The stomach is located in the upper part of the abdomen under the diaphragm. There are different gastric glands in the stomach. They produce stomach acid and enzymes that break down food.

The small intestine is a thin-walled muscular tube about 6.5 meters long. It is divided into duodenum, jejunum and ileum. The large intestine is about 1.5 meters long. It is divided into caecum, colon and rectum.

The liver is the largest gland in the human body. It is located in the right upper part of the abdominal cavity under the diaphragm. The liver removes toxins from the blood, controls blood sugar levels and has many other vital functions.

The gallbladder is a hollow sac lying on the lower surface of the liver. Its main function is to store bile.

The pancreas is a long thin gland lying under and behind the stomach. The pancreas has exocrine and endocrine functions.

THE IMMUNE SYSTEM

Increase your vocabulary:

acquired	[ə'kwaiəd]	набутий, придбаний
antibody	['æntɪˌbɔdɪ]	антитіло
antigen	['æntɪdʒən]	антиген
to defend	[dɪ'fend]	захищати, обороняти
goal	[gəul]	мета, завдання
immunity	[ɪ'mjuːnətɪ]	імунітет, несприйнятливість
immune	[ɪ'mjuːn]	імунний, несприйнятливий
immunization	[ɪˌmjunaɪ'zeɪʃ(ə)n]	імунізація
to induce	[ɪnˈdjuːs]	викликати, стимулювати
integumentary	[ɪnˌtegjə'mentərɪ]	покривний
to neutralize	[ˈnjuːtrəlaɪz]	знищувати, нейтралізувати
pathogen	[ˈpæθədʒ(ə)n]	патоген, патогенний мікроорганізм
placenta	[pləˈsentə]	плацента
to recover	[rɪˈkʌvə]	одужати
to release	[rɪˈliːs]	виділяти, вивільняти
resistance	[rɪ'zɪst(ə)n(t)s]	опірність (організму), протидія, опір
vaccination	[ˌvæksɪ'neɪʃ(ə)n]	вакцинація

The immune system is a complex network of cells, tissues and organs that work together to defend the body against antigens. It includes the lymphatic system and some components of integumentary, cardiovascular, respiratory, digestive and other systems. The goal of the immune system is to prevent illnesses by destroying antigens. The immune system also helps the body recover from infections and injuries.

Immunity is the specific resistance of an organism to disease. The body is able to defend itself against pathogens by releasing antibodies and thus protecting against diseases. Antibodies are proteins that help neutralize or kill pathogens in the body.

There are two types of immunity: passive immunity and active immunity.

Passive immunity is acquired by newborn babies from their mothers through the placenta or breast milk. People can also get passive immunity through blood products that contain antibodies. This kind of immunity does not provide long-lasting protection.

Active immunity, also called adaptive immunity, develops when you are infected with or vaccinated against a foreign substance. Active immunity is long-lasting and sometimes life-long. Active immunity can be acquired through natural immunity or vaccine-induced immunity. Natural immunity develops after you have been ill with a certain disease. Vaccine-induced immunity results after you receive a vaccine. Vaccines can protect your immune system against diseases. Vaccines consist of killed or modified microbes, parts of microbes or their DNA. They are usually given by injections, orally or as a nasal spray.

Immunization is the process of getting the vaccine and becoming immune to the disease after vaccination. Vaccination is the best way to improve the immune system and prevent many infectious diseases in children and adults.

Dysfunction of the immune system affects all organs and systems leading to allergies, asthma, immunodeficiency diseases, genetic disorders and many other health problems.

Answer the following questions:

1. What is the immune system?
2. What is the goal of the immune system?
3. What is immunity?
4. What do you know about antibodies and their function?
5. What types of immunity are there?
6. What can you say about passive immunity?
7. How does adaptive immunity develop?
8. What does a vaccine consist of?
9. What is immunization?
10. What diseases of the immune system do you know?

SUMMARY

The immune system is a complex network of cells, tissues and organs. They work together to defend the body against antigens. The goal of the immune system is to prevent illnesses by destroying antigens.

Immunity is the specific resistance of an organism to disease. The body defends itself against pathogens by releasing antibodies. Antibodies help kill pathogens in the body.

There are two types of immunity: passive immunity and active immunity.

Newborn babies can get passive immunity from their mother through the placenta. People can also get this type of immunity through blood products that contain antibodies.

Active immunity develops when you are infected with a certain disease. Vaccine-induced immunity results after you receive a vaccine. Vaccines consist of killed or modified microbes, parts of microbes or their DNA. They are usually given by injections, orally or as a nasal spray.

Immunization is the process of getting the vaccine and becoming immune to the disease. Vaccination is the best way to prevent many infectious diseases.

Dysfunction of the immune system can lead to allergies, asthma, immunodeficiency diseases, genetic disorders and many other health problems.

THE ENDOCRINE SYSTEM

Increase your vocabulary:

adrenal gland	[əd'riːnl glænd]	надниркова залоза
endocrine	['endəukraɪn]	ендокринний
exocrine	[ˈɛksə(ʊ)kraɪn]	екзокринний
gonads	[ˈgəʊnadz]	гонади (статеві залози)
hormone	['hɔːməun]	гормон
hypophysis	[haɪ'pɔfɪsɪs]	гіпофіз
lacrimal gland	['lækrɪm(ə)l glænd]	слізна залоза
mammary gland	['mæm(ə)rɪ glænd]	молочна залоза
mucous gland	['mjuːkəs glænd]	слизова залоза
ovary	['əuv(ə)rɪ]	яєчник
parathyroid gland	[ˌpærə'θaɪrɔɪd glænd]	паращитоподібна залоза
pineal gland	['pɪ(aɪ)nɪəl glænd]	шишковидна залоза
pituitary gland	[pɪ'tjuːɪt(ə)rɪ glænd]	гіпофіз
to release	[rɪˈliːs]	випускати, виділяти
salivary gland	['sælɪv(ə)rɪ glænd]	слинна залоза
to secrete	[sɪ'kriːt]	виділяти
sweat gland	[swet glænd]	потова залоза
testes	[ˈtɛstiːz]	яєчка
thymus gland	[ˈθʌɪməs glænd]	підгрудинна залоза
thyroid gland	['θaɪrɔɪd glænd]	щитоподібна залоза

The endocrine system is a complex network of glands and organs located in many different regions of the body. Endocrine glands produce special substances called hormones which are secreted directly into the blood. These chemical substances can regulate many functions of the organism.

Hormones play a very important part in the organism. Many of them affect metabolism and the functioning of the cardiovascular, reproductive, immune and other systems, mood, attention, learning and memory, sleep cycles, stress responses, etc. A disturbance in the activity of the endocrine glands is accompanied by changes in the organism. These changes may be due to increased or decreased functioning of glands.

There are endocrine and exocrine glands. Pituitary gland, thyroid gland, parathyroid glands, adrenal glands, gonads (ovaries and testes), pineal gland and thymus gland belong to endocrine glands. Mammary, mucous, salivary, lacrimal and sweat glands belong to exocrine ones. The pancreas is known as a mixed gland. It is both an organ and a gland as well as a part of digestive system.

Each gland consists of glandular epithelial tissue and has an extensive network of blood vessels and a large number of nerve fibers. The functions of all endocrine glands are interconnected and the glands make up a single system. The hypophysis is the chief gland of this system. It releases several important hormones and controls the functioning of many other glands of the endocrine system.

The activities of endocrine glands are regulated by the nervous system. The hormones in their turn affect the functioning of different parts of the nervous system.

Answer the following questions:

1. What is the endocrine system?
2. What are hormones?
3. Where are hormones secreted?
4. What is the role of hormones?
5. What glands are of internal secretion?
6. What glands are exocrine ones?
7. Why is the pancreas called a mixed gland?
8. What does each gland consist of?
9. Is the hypophysis the “master” gland of this system?
10. What can you say about the hypophysis?

SUMMARY

The endocrine system is composed of glands. They are located in many different regions of the body. Endocrine glands produce special substances. They are called hormones. These chemical substances can regulate many functions of an organism.

Hormones play a very important role in the organism. A disturbance in the activity of the endocrine glands is accompanied by changes in the organism. These changes may be due to increased or decreased functioning of glands.

There are endocrine and exocrine glands. The functions of all endocrine glands are interconnected. The hypophysis is the chief gland of this system. It releases important hormones and controls the functioning of endocrine system.

The nervous system regulates the activities of endocrine glands. The hormones in their turn affect the functioning of different parts of the nervous system.

THE NERVOUS SYSTEM

Increase your vocabulary:

autonomic	[ˌɔːtəˈnɒmɪk]	вегетативний
beneath	[bɪˈniːθ]	нижче, під
to conduct	[kənˈdʌkt]	проводити
dendrite	[ˈdɛndraɪt]	дендрит
distinct	[dɪˈstɪŋkt]	виразний
entire	[ɪnˈtaɪə]	цілий
gland	[glænd]	залоза
glia	[ˈgliːə]	глія
involuntary	[ɪnˈvɒləntərɪ]	мимовільний
meninges	[mɪˈnɪndʒiːz]	менінги
neuron	[ˈnjʊərɒn]	нейрон
parasympathetic	[ˌpærəˌsɪmpəˈθɛtɪk]	парасимпатичний
peripheral	[pəˈrɪfərəl]	периферичний
reflex	[ˈriːflɛks]	рефлекс
synapse	[ˈsaɪnæps]	синапс

The nervous system is divided into two parts: the central nervous system (CNS) and the peripheral nervous system (PNS). The central nervous system consists of the brain and the spinal cord. The peripheral nervous system consists of the cranial nerves and the spinal nerves. The peripheral nervous system also includes the autonomic nervous system (ANS), which controls the involuntary movements of the body's smooth muscles, cardiac muscles, and glands. The two divisions of the autonomic nervous system are the parasympathetic division, which dominates and controls the body during non-stressful situations, and the sympathetic division, which dominates and controls the body during stressful situations.

A nerve is defined as a group of nerve fibers located outside the CNS. Nerve fibers make up nerve cells, also known as neurons, which are the building blocks of the entire nervous system.

Neurons vary in size, shape and functions but they all consist of the following four distinct parts: cell body, dendrites, axon and transmitting region.

Neurons are classified into three groups: sensory, motor, and interneurons. In the CNS neurons communicate with each other when the axon of one neuron comes into contact with the cell body or dendrite of another neuron. The space between the axon and dendrite of these two neurons is known as a synapse.

The central nervous system is made up of two major organs: the brain and the spinal cord. The spinal cord connects the brain to the peripheral nervous system. The functions of the spinal cord are: to conduct sensory impulses, to conduct motor impulses and to carry out direct reflexes.

The weight of the human brain is from one to two kilograms. It consists of over 100 billion of neurons and trillions of glia. The brain is covered by fluid, membranes, and bones.

Because the brain is such an important organ, it needs a lot of protection. The initial layer of protection is the scalp or skin layer. Right beneath the scalp is the skull, which is followed by three layers of connective tissue called meninges.

The brain contains four ventricles - the two lateral ventricles, a third and a fourth ventricles.

Answer the questions:

1. What is the nervous system divided into?
2. What does the central nervous system consist of?
3. What does the peripheral nervous system consist of?
4. What is the function of the autonomic nervous system?
5. What is a nerve?
6. What are the constituents of neurons?
7. What groups are neurons classified into?
8. What is a synapse?
9. What are the functions of the spinal cord?
10. What is the brain covered by?

SUMMARY

The nervous system is divided into two parts: the central nervous system (CNS) and the peripheral nervous system (PNS). The central nervous system consists of the brain and the spinal cord. The peripheral nervous system consists of the cranial nerves and the spinal nerves. A nerve is a group of nerve fibers located outside the CNS. Nerve fibers make up nerve cells, also known as neurons. Neurons consist of cell body, dendrites, axon and transmitting region. Neurons are classified into three groups: sensory, motor and interneurons. The central nervous system is made up of two major organs: the brain and the spinal cord. The spinal cord connects the brain to the peripheral nervous system. The brain is the central part of the nervous system.

THE BRAIN

Increase your vocabulary:

Alzheimer's disease	[ˈæltshaɪməz]	хвороба Альцгеймера
to analyze	[ˈænəlaɪz]	аналізувати
automatically	[ˌɔːtəˈmætɪkli]	автоматично
brain	[breɪn]	мозок
to hear	[hɪə]	чути
beneath	[bɪˈniːθ]	під
cerebellum	[ˌserəˈbeləm]	мозочок
cerebrum	[ˈserɪbrəm]	головний (кінцевий) мозок
electrical	[ɪˈlektrɪkl]	електричний
epilepsy	[ˈepɪlepsi]	епілепсія
glial	[ˈglɪəl]	гліальний
hemisphere	[ˈhemɪsfɪə]	півкулі
homeostasis	[ˌhəʊmiəʊˈsteɪsɪs]	гомеостаз, баланс організму
to store	[stɔː]	зберігати, накопичувати
throughout	[θruˈaʊt]	через
hypothalamus	[ˌhaɪpəˈθæləməs]	гіпоталамус
weight	[weɪt]	вага
matter	[ˈmætə]	речовина
neurological	[njʊərəˈlɒdʒɪkl]	неврологічний
neuron	[ˈnjʊərɒn]	нейрон
spinal	[ˈspaɪn(ə)l]	спинний, спинномозковий
stem	[stem]	стовбур (мозку)

The human brain is the main organ of the central nervous system. It is a complex organ that allows us to move, think, feel, see, hear, smell and taste. The brain controls our body, receives, analyzes and stores information. The brain produces electrical signals. Nerves send these signals throughout the body.

The weight of the human brain is from 1 to 2 kg. It has the volume of about 3 litres and consists of billions of cells. The brain consists of gray matter (40%) and white matter (60%) contained within the skull. Brain cells include neurons and glial cells. The main parts of the brain are: the cerebrum, the cerebellum and the brain stem.

The cerebrum is split into two hemispheres by a deep fissure.The cerebral hemispheres are covered with grey matter which forms the cerebral cortex. The cerebrum is the largest area of the brain. It deals with all higher mental functions such as thinking and memory.

The cerebellum is at the back of the brain, below the cerebrum. Cerebellum is concerned with balance and coordination. These activities are not under a person’s control and are carried out automatically.

The brain stem is located in front of the cerebellum and beneath the cerebrum. It connects the rest of the brain to the spinal cord. It controls the basic functions such as blood pressure, breathing, heartbeat, eye movements and swallowing.

The hypothalamus is a structure deep within our brain. It's the main link between the endocrine system and the nervous system. The hypothalamus keeps the body balanced in homeostasis.

Some brain diseases, also known as neurological disorders are Alzheimer's disease, Parkinson's disease, epilepsy and stroke. A neurologist is a specialist who treats diseases of the brain, spinal cord, nerves and muscles.

Answer the following questions:

1. What is the brain?
2. What does the brain produce?
3. What is the weight of the brain?
4. What are the main parts of the brain?
5. What is the cerebrum?
6. What are the cerebral hemispheres covered with?
7. Where is the cerebellum located?
8. What are the functions of the brain stem?
9. Where is the brain stem located?
10. What is hypothalamus?

SUMMARY

The human brain is the main organ of the central nervous system. It controls our body, receives, analyzes and stores information. The brain produces electrical signals. Nerves send these signals throughout the body. The weight of the human brain is from 1 to 2 kg. It has the volume of about 3 litres and consists of billions of cells. Brain cells include neurons and glial cells. The main parts of the brain are: the cerebrum, the cerebellum and the brain stem. The hypothalamus keeps the body balanced in homeostasis. Some brain diseases, also known as neurological disorders, are Alzheimer's disease, Parkinson's disease, epilepsy and stroke.

SENSE ORGANS

Increase your vocabulary:

bud	[bʌd]	сосочок
to convert	[kənˈvɜːt]	перетворювати
comprehensive	[ˌkɒmprɪˈhensɪv]	всеосяжний
debris	[ˈdebrɪː]	сміття
ear	[ɪə]	вухо
to enable	[ɪnˈeɪbl]	дати змогу
environment	[ɪnˈvaɪrənmənt]	середовище
hearing	[ˈhɪərɪŋ]	слух
to interact	[ˌɪntərˈækt]	взаємодіяти
to moisten	[ˈmɔɪsn]	зволожувати
to receive	[rɪˈsɪːv]	отримувати, сприймати
specialized	[ˈspeʃəˌlaɪzd]	спеціалізований
surroundings	[səˈraʊndɪŋz]	середовище
taste	[teɪst]	смак, смакувати
tongue	[tʌŋ]	язик
vision	[ˈvɪʒ(ə)n]	зір
visual	['vɪʒuəl]	зоровий, наочний

Sense organs are specialized organs in the human body that enable the perception of the external environment. These organs gather information from the surroundings and transmit signals to the brain for interpretation. The five main sense organs are eyes, ears, nose, tongue, skin.

The eyes are responsible for vision. They are complex structures that work together to receive visual information from the environment and transmit it to the brain.

The ears are responsible for the sense of hearing. They detect sound waves and convert them into electrical signals that are transmitted to the brain through the auditory nerve.

The nose is responsible for the sense of smell. It is the part of the respiratory system. It allows air to enter the body, then filters debris,warms and moistens the air. We can sense 10 basic smells and their combinations.

The tongue is responsible for the sense of taste. Taste buds on the tongue detect different flavors like sweet, salty, sour and bitter. At the base of each taste bud there is a nerve that sends the sensations to the brain.

The skin is the largest sense organ and is responsible for the sense of touch. It detects pressure, temperature and pain with different receptors specialized for each of these sensations.

These sense organs work together to provide a comprehensive understanding of the external world. They allow individuals to interact with and respond to their surroundings.

Answer the following questions:

1. What are sense organs of the human body?
2. What sense organs do you know?
3. What are the functions of sense organs?
4. What are the eyes responsible for ?
5. What are the ears responsible for?
6. What is the function of the nose?
7. What basic tastes are the taste buds able to detect?
8. What is the skin?
9. What is the main function of the skin?
10. What do the sense organs provide?

SUMMARY

Sense organs are specialized organs in the human body. These organs gather information from the surroundings and transmit signals to the brain for interpretation. The five main sense organs are eyes, ears, nose, tongue, skin. The eyes are responsible for vision. The ears are responsible for the sense of hearing. The nose is responsible for the sense of smell. The tongue is responsible for the sense of taste. The skin is the largest sense organ and is responsible for the sense of touch. These sense organs work together to provide understanding of the external world. They allow individuals to interact with their surroundings.

THE SKIN

Increase your vocabulary:

absorption	[əb'zɔːpʃ(ə)n]	поглинання, абсорбція
dermis	[ˈdəːmɪs]	дерма
elastic	[ɪ'læstɪk]	еластичний, гнучкий, пружний
epidermis	[ˌepɪ'dəːmɪs]	епідерміс
excretion	[eks'kriːʃ(ə)n, ɪks-]	виділення
follicle	['fɔlɪkl]	фолікул
insulation	[ˌɪnsjə'leɪʃ(ə)n]	ізоляція
to interact	[ˌɪntər'ækt]	взаємодіяти
keratin	['kerətɪn]	кератин
layer	[ˈleɪə]	шар, пласт
melanin	['melənɪn]	меланін
outer	[ˈautə]	зовнішній, віддалений (від центру)
papilla	[pə'pɪlə]	сосок, сосочок, горбик
pathogen	['pæθədʒən]	патоген
pigment	['pɪgmənt]	пігмент
receptor	[rɪ'septə]	рецептор
rudiment	[ˈruːdɪm(ə)nt]	рудимент, зачаток
sebaceous gland	[sɪ'beɪʃəs]	жирова, сальна залоза
sweat gland	[swet]	потова залоза
ultraviolet light	[ˌʌltrə'vaɪələt]	ультрафіолетове випромінювання
to wear away	['weə(r)ə'wei]	стиратися, зникати

The human skin is the outer covering of the body. It is the soft outer tissue which protects internal organs from the environment. It is the largest organ in the human body. The skin has two layers: the outer epidermis and the inner dermis.

The epidermis is composed of dead cells and the protein keratin. As these dead cells are worn away, they are replaced by new ones from the inner epidermis. Some cells in the epidermis produce the pigment melanin, which protects the body from ultraviolet light in sunlight. The nails and hair are special structures developed from the epidermis.

The dermis is the layer of skin beneath the epidermis. It consists of connective tissue and contains hair follicles, sweat glands, sebaceous glands, blood and lymph vessels and sensory receptors for pressure, temperature and pain. It can be divided into layers.

An outer layer is composed of conical projections termed papillae. Each papilla contains blood vessels, nerve endings and also the rudiment of a hair. An inner layer consists of bands of connective tissue that make the dermis strong and elastic.

Because it interacts with the environment, the skin plays an important immunity role in protecting the body against pathogens and excessive water loss. Its other functions are insulation, temperature regulation, sensation, synthesis of vitamin D, excretion and absorption.

Answer the following questions:

1. What is the skin?
2. What are the layers of the skin?
3. What is the epidermis composed of?
4. What is the function of melanin?
5. What is the dermis composed of?
6. What does each papilla contain?
7. What is the inner layer?
8. Why the skin is so important?
9. What vitamin synthesis does the skin perform?
10. What are the functions of the skin?

SUMMARY

The human skin is the outer covering of the body. It is the largest organ in the human body. The skin has two layers: the outer epidermis, and the inner dermis.

The epidermis is composed of dead cells and the protein keratin. Some cells in the epidermis produce the pigment melanin. It protects the body from ultraviolet light in sunlight. The nails and hair are special structures developed from the epidermis.

The dermis is the layer of skin beneath the epidermis. It consists of connective tissue and contains hair follicles, sweat glands, sebaceous glands, blood and lymph vessels, and sensory receptors for pressure, temperature, and pain.

The skin plays an important immunity role in protecting the body against pathogens and excessive water loss. Its other functions are insulation, temperature regulation, sensation, synthesis of vitamin D, excretion and absorption.

APPENDIX

THE HIPPOCRATIC OATH: CLASSICAL VERSION

I swear by Apollo Physician and Asclepius and Hygieia and Panaceia and all the gods and goddesses, making them my witnesses, that I will fulfill according to my ability and judgment this oath and this covenant:

To hold him who has taught me this art as equal to my parents and to live my life in partnership with him, and if he is in need of money to give him a share of mine, and to regard his offspring as equal to my brothers in male lineage and to teach them this art—if they desire to learn it—without fee and covenant; to give a share of precepts and oral instruction and all the other learning to my sons and to the sons of him who has instructed me and to pupils who have signed the covenant and have taken an oath according to the medical law, but no one else.

I will apply dietetic measures for the benefit of the sick according to my ability and judgment; I will keep them from harm and injustice.

I will neither give a deadly drug to anybody who asked for it, nor will I make a suggestion to this effect. Similarly I will not give to a woman an abortive remedy. In purity and holiness I will guard my life and my art.

I will not use the knife, not even on sufferers from stone, but will withdraw in favor of such men as are engaged in this work.

Whatever houses I may visit, I will come for the benefit of the sick, remaining free of all intentional injustice, of all mischief and in particular of sexual relations with both female and male persons, be they free or slaves.

What I may see or hear in the course of the treatment or even outside of the treatment in regard to the life of men, which on no account one must spread abroad, I will keep to myself, holding such things shameful to be spoken about.

If I fulfill this oath and do not violate it, may it be granted to me to enjoy life and art, being honored with fame among all men for all time to come; if I transgress it and swear falsely, may the opposite of all this be my lot.

Translation from the Greek by Ludwig Edelstein. From The Hippocratic Oath: Text, Translation, and Interpretation, by Ludwig Edelstein. Baltimore: Johns Hopkins Press, 1943.

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
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