

О.М. Бінкевич, Т.В. Череповська

**ENGLISH
FOR
PHYSIOTHERAPISTS**

Lviv-2021

О.М. Бінкевич, Т.В. Череповська. English for Physiotherapists : навчальний посібник. Львів, 2021. 68 с.

Рецензент: канд.п.наук, завідувач кафедри української та іноземних мов імені Якіма Яреми **Подоляк М.В.**

Затверджено на засіданні кафедри української та іноземних мов імені Якіма Яреми: протокол

№ _____ від _____.

Посібник призначений для студентів першого курсу університету, які обрали своїм фахом фізіотерапію та вивчають англійську мову за професійним спрямуванням. Метою посібника є допомога майбутнім фахівцям у підготовці до опрацювання англійської оригінальної літератури за обраною спеціальністю.

Посібник розрахований на аудиторні та самостійні заняття, містить тексти для читання та переказу із завданнями для самоконтролю у вигляді лексико-граматичних вправ та словник-мінімум.

© О.М. Бінкевич, Т.В. Череповська, 2021

PART 1. THE INTRODUCTION TO THE PROFESSION

Topic 1

Occupational Therapy. Physical Therapy

Occupational Therapy is the use of purposeful activity or interventions designed to develop, recover, or maintain the meaningful activities, or *occupations*, of individuals, groups, or communities. It is an allied health profession performed by occupational therapists and occupational therapy assistants. Occupational therapists often work with people with mental health problems, disabilities, injuries, or impairments.

An Occupational Therapist is someone who helps people across their lifespan to take part in the things they want and need to do through the therapeutic use of everyday activities (occupations). Common **occupational therapy interventions** include helping children with disabilities to participate fully in school and social situations, injury rehabilitation, and providing supports for older adults experiencing physical and cognitive changes.

Occupational therapists often work closely with **professionals in:** physical therapy, speech therapy, audiology, nursing, social work, clinical psychology, medicine

(Adapted from:

https://en.wikipedia.org/wiki/Occupational_therapy)

Physical Therapy versus Occupational Therapy

Two Key Differences

It is essential to differentiate between two terms that are easily confused: “**physical therapy**” and “**occupational therapy**”. Physical therapy is more focused on evaluating and diagnosing movement dysfunctions as well as treating a person’s injury itself. The specialist in this sphere is called a physical therapist. Occupational therapy focuses more on evaluating and improving a person’s confidence and functional abilities.

(Adapted from <https://uk.strephonsays.com>)

Essential Vocabulary

Occupational therapy	ерготерапія, працетерапія
Intervention	втручання
To recover	відновити(ся)
Meaningful activities	значущі види діяльності
Allied profession	споріднена професія
Disability	інвалідність

Injury	пошкодження
Impairment	порушення
To participate	брати участь
To provide support	забезпечити підтримку
Nursing	догляд
Audiology	аудіологія

Ex. 1. Answer the questions:

1. What is occupational therapy?
2. What does an occupational therapist do?
3. What allied spheres do you know?
4. What is the difference between occupational therapy and physical therapy?
5. What are specialists in these spheres called?

Ex. 2. Match the synonyms:

The use	An occupation
To maintain	To deal with

To perform	To participate
Injury	Necessary
To work with	To support
To take part	To do, to conduct
An activity	Damage
Essential	The application

Ex. 3. Continue the sentences:

1. Occupational therapy is ...
2. An occupational therapist is ...
3. An occupational therapist works with people ...
4. Occupational therapy as a science is close to ...
5. Physical therapy is ...
6. A physical therapist is ...

Topic 2

The History of Occupational Therapy

The earliest evidence of using occupations as a method of therapy can be found in ancient times. In about 100 BC, Greek physicians treated patients with a mental illness humanely using therapeutic baths, massage, exercise, and

music. Later, Roman doctors prescribed music, travel, conversation and exercise to such people. However, by medieval times the use of these interventions with patients with mental illness was rare, if not nonexistent.

In 18th-century Europe the hospital system was reformed. Instead of the use of metal chains and restraints, their institutions used rigorous work and leisure activities. This was the Moral Treatment era, developed in Europe during the Age of Enlightenment, where the roots of occupational therapy lie. Although it was thriving in Europe, interest in the reform movement fluctuated also in the United States throughout the 19th century. It re-emerged in the early decades of the 20th century as Occupational Therapy.

The Arts and Crafts movement that took place between 1860 and 1910 also impacted occupational therapy. The arts and crafts societies emerged in Europe and America. Arts and crafts were used as a way of promoting learning through doing, provided a creative outlet, and served as a way to avoid boredom during long hospital stays.

Eleanor Clarke Slagle (1870-1942) is considered to be the “mother” of occupational therapy. Slagle was one of the founding members of the National Society for the Promotion of Occupational Therapy (NSPOT) created in 1917 in Chicago.

She proposed habit training as a primary occupational therapy model of treatment. Based on the philosophy that engagement in meaningful routines shapes a person's wellbeing, habit training focused on creating structure and balance between work, rest and leisure. Although habit training was initially developed to treat individuals with mental health conditions, its basic tenets are apparent in modern treatment models that are utilized across a wide scope of patients. In 1915 Slagle opened the first occupational therapy training program, the School of Occupations in Chicago.

In the early twentieth century the incidence of disability related to industrial accidents, tuberculosis, World War I, and mental illness was rising. It brought about an increasing social awareness of the issues involved. Up until this time, occupational therapy had been concerned primarily with the treatment of people with mental illness. During the post-war years there was a struggle to keep people in the profession.

The first textbook for occupational therapy was published in United States in 1947, edited by Helen S. Willard and Clare S. Spackman. The profession continued to grow and redefine itself in the 1950s. The World Organization of Occupational Therapists was created in 1952 (nowadays, it enlists 92 countries). In the 1960s and 1970s new

developments in the areas of neurobehavioral research led to new treatment approaches, possibly the most groundbreaking being the sensory integrative approach developed by A. Jean Ayers.

The profession has continued to grow and expand its scope and settings of practice. Occupational science, the study of occupation, was created in the late 1980s to support and advance the practice of occupational therapy. Nowadays, occupational therapy strives toward concepts of occupational justice and other human rights issues that have both local and global impacts. The World Federation of Occupational Therapist's Resource Centre has many position statements on occupational therapy's roles regarding their participation in human rights issues.

(Adapted from

https://en.wikipedia.org/wiki/Occupational_therapy)

Essential Vocabulary

Evidence	свідчення
To treat humanely	лікувати або ставитися гуманно

To prescribe	призначати
Restraints	обмеження
Rigorous work	сувора праця
To impact	впливати
To emerge	з'являтися
To avoid boredom	уникати нудьги
Engagement in	залучення до
Basic tenets	основні засади
Awareness	усвідомлення
To redefine itself	переосмислюватись
Neurobehavioral research	нейроповедінкове дослідження
Treatment approaches	підходи до лікування

Groundbreaking	новаторський
----------------	--------------

Ex. 1. Answer the questions:

1. What is the first evidence of using the methods of occupational therapy in history?
2. Were patients with mental disorders treated humanely during medieval times?
3. What were the methods of occupational therapy in the 18th century?
4. What new methods were used in the period between 1860 and 1910?
5. Who is considered to be “the mother” of occupational therapy?
6. When was the first textbook in occupational therapy published?
7. What approach was developed in 1960s and 1970s?
8. What does occupational therapy strive towards nowadays?

Ex. 2. True or False:

1. In ancient times, physicians treated patients with mental illnesses humanely using therapeutic baths, massage, exercise, and music.

2. By medieval times the use of humane interventions with people with mental illness was common.
3. In the 18th century metal chains and restraints were still used.
4. The National Society for the Promotion of Occupational Therapy (NSPOT) was created in 1917 in Europe.
5. In 1915 Eleanor Slagle opened the first occupational therapy training program, the School of Occupations in Chicago.
6. Up until World War I, occupational therapy had been concerned primarily with the treatment of people with physical illnesses.
7. The interest in occupational therapy after World War I increased.
8. The first textbook for occupational therapy was published in United States in 1957.
9. The World Organization of Occupational Therapists was created in 1992.
10. New developments in the areas of neurobehavioral research appeared in the 20th century.

Ex. 3. Translate the following word combinations:

Ерготерапевт, фізіотерапія, фізичні порушення, психічні розлади, призначати фізичні вправи, лікувати, дозвілля.

Topic 3

The Basic Principles of Rehabilitation

Occupational therapists work in a variety of fields, including pediatrics, orthopedics, neurology, and geriatrics. The methods of work in these spheres are different, but the main task is to assist individuals in increasing their abilities and decreasing limitations or disabilities of any kind. Disabilities may be born or acquired during lifetime.

One may lose abilities because of a disaster or injury, or as a side effect from a medical treatment. Such a person needs rehabilitation. Rehabilitation is care that can help you get back, keep or improve abilities that you need for daily life. These abilities may be physical, mental, and cognitive (thinking and learning).

Three main types of rehabilitation therapy are occupational, physical and speech ones. Each form of rehabilitation serves a unique purpose in helping a person reach full recovery, but all share the ultimate goal of helping the person return to a healthy lifestyle.

It is necessary to remember the following:

- 1) rehabilitation is an active process done by the patient, not to him/her. It is hard work for the patient, like training for a marathon;
- 2) good occupational therapists are always optimists. So, don't forget about positive attitude to the patient;
- 3) rehabilitation is a team work. So, don't forget about sharing goals and work;
- 4) individual approach to every patient is necessary.

5) (Adapted from

https://en.wikipedia.org/wiki/Occupational_therapy)

Essential Vocabulary

pediatrics	педіатрія
orthopedics	ортопедія
neurology	неврологія
geriatrics	геріатрія
increasing	збільшення
decreasing	зменшення
ability	здатність

disability	нездатність щось робити, інвалідність
limitation	обмеження
born	вроджений
acquired	набутий
disaster	лихо, нещастя
side effects	побічні дії
rehabilitation	реабілітація
to improve	покращувати
unique purpose	єдина мета
to reach full recovery	досягти повного одужання
ultimate goal	кінцева мета
to share	поділяти
healthy lifestyle	здоровий спосіб життя
positive attitude	позитивне ставлення
approach	підхід

Ex. 1. Answer the following questions:

1. In what spheres do occupational therapists work?
2. What is the main task in the work of all occupational therapists?
3. Can disabilities be born?
4. What are the causes of disabilities?
5. What is rehabilitation?
6. What abilities may be lost?
7. What types of rehabilitation are there?
8. Is rehabilitation an easy process for a patient?
9. What quality must a good occupational therapist possess?
10. Is rehabilitation a team work?
11. Why is an individual approach to the patient important?

Ex. 2. Complete the sentences:

1. Occupational therapists work in a variety of _____.
2. The main task is to assist individuals in _____ their abilities and _____ limitations or disabilities of any kind.
3. Disabilities may be _____ or _____ during lifetime.

4. One may lose _____ because of a _____ or injury, or as a side effect from a medical _____.
5. A disabled person needs _____.
6. Rehabilitation is _____ that can help you get back, keep or _____ abilities that you need for _____ life.
7. Abilities may be _____, _____, and _____ (thinking and learning).
8. Rehabilitation is a _____ work.

Ex. 3. Put the words in the correct order:

1. treatment. / a side effect / because of / lose / may / One / abilities / a / disaster / or / as / from / a medical
2. and / physical / abilities / be / mental / cognitive / These / may / ones.
3. main / of / rehabilitation / are / physical / speech ones. / Three / types / therapy / occupational, / and
4. not / process / is / Rehabilitation / an / active / done / the / patient / him./ by / to /
5. Individual / to / every / necessary. / approach / patient / is

Topic 4

Leading Physical Therapy Techniques

Physical therapists treat a broad spectrum of ailments and movement disorders: from bursitis and back pain to osteoarthritis and overuse injuries. In order to support the clients' diverse treatment needs, physical therapists use an extensive list of techniques:

1. **Manual Therapy.** Perhaps the most convenient tool at a physical therapists' disposal is his/her hands. This technique comprises a number of different methods, including massage, mobilization, and manipulation and strengthening exercises. Manual therapy is so effective that it is considered by many to be a foundation part of any physical therapy treatment plan.
2. **Exercise.** It is used to target weak muscles, address muscular imbalances, and keep aches and pains at bay. One popular form of exercise used by physical therapists to treat disease and promote health is water exercise.
3. **Hot and Cold Therapy.** Ice is used to reduce inflammation and swelling in acute soft tissue injuries because of its ability to constrict blood vessels. Heat, on the other hand, is more appropriate for treating

tightness and muscular spasms for pain reduction. Additionally, heat also enhances tissue pliability making it a useful tool for stretching tendons, ligaments, and muscles.

4. **Ultrasound** uses a wand to apply high-pitched sound waves which promote circulation while generating heat deep within connective tissues. It is also thought to speed up the ligament healing process. Phonophoresis, meanwhile, is a technique which uses ultrasound to enhance the delivery of topical medications, such as xylocaine and cortisone.
5. **Traction** is a form of decompression therapy designed to alleviate pressure on the spine. It is used to treat a number of different back conditions. It helps strengthen the spine and accelerate healing without surgical intervention.
6. **Laser Therapy.** Physical therapists use low-level lasers to generate wavelengths of light which stimulate healing. In addition to helping treat inflammation, pain and muscle fatigue, laser therapy can also be used to reduce discomfort during manual joint manipulation.
7. **Electrical Stimulation.** These techniques cause otherwise-dormant muscles to contract. Following

traumatic injuries and certain types of surgery, it helps restore function and movement.

8. **Education.** Physical therapy also includes an educational component. From instructing clients on daily exercises to perform at home to training them on the use of assistive devices such as wheelchairs and crutches, physical therapists teach clients how to play a direct role in recovery and injury prevention.

(Adapted from <https://www.sochi.edu>)

Essential Vocabulary

ailment	хвороба
bursitis	бурсит
manual therapy	мануальна терапія
at one's disposal	у розпорядженні когось
strengthening exercise	зміцнювальні вправи
inflammation	запалення
swelling	пухлина, набряк
to constrict	звужувати
blood vessel	кровоносна судина
pain reduction	зменшення болю

to enhance pliability	підвищити податливість, гнучкість
high-pitched sound waves	високі звукові хвилі
healing process	процес загоювання
to alleviate pressure	зменшити тиск
surgical intervention	хірургічне втручання
muscle fatigue	втома м'язів
to restore function	відновити функцію
assistive devices	допоміжні засоби
crutches	милиці

Ex. 1. Answer the questions:

1. What is the most convenient tool at a physical therapists' disposal?
2. What technique includes massage, mobilization, and manipulation and strengthening exercises?
3. What is the method of exercise used for?
4. What technique is applied for reducing inflammation?
5. What function does hot therapy perform?
6. How does ultrasound method work?

9. What technique is used to strengthen the spine and accelerate healing without surgical intervention?
7. What lasers are applied in laser therapy?
8. What does electrical stimulation do?
9. Is education important in physical therapy? Why?
10. What assistive devices are there?

Ex. 2. Fill in the table:

The technique	The purpose	The equipment
Manual therapy	To strengthen muscles, to relieve pain	-

Ex. 3. Fill in the prepositions and particles required:

To accelerate healing ... surgical intervention, ... the other hand, a number ... different methods, an extensive list ... techniques, because ... its ability ... constrict blood vessels, the delivery ... topical medications, ... order ... support, ... a

physical therapists' disposal, to keep aches and pains ... bay, to speed ... the ligament healing process, a useful tool ... stretching tendons, to be more appropriate ... treating tightness, generating heat deep ... connective tissues, pressure ... the spine, ... addition ... helping treat inflammation, to perform ... home, instructing clients ... daily exercises.

PART 2. THE HUMAN BODY AND ITS SYSTEMS

Topic 5

The Human Body

The main parts of the human body are: the head, the neck, the **trunk** and the limbs (**extremities**).

The head is the seat of the brain, several sense organs and **inlets** for air and food. The neck contains the **cervical vertebrae**, the pharynx, the larynx and important **vessels** and nerves.

The diaphragm divides the trunk into the **thoracic cavity** and the **abdominal cavity** with the **pelvis** at its lower end. The principal parts of the thorax (chest) are the lungs, the heart, the great blood vessels, the trachea (windpipe) and esophagus (**gullet**), the **dorsal spine**, the **ribs** and the **sternum** (breastbone). On the chest there are two **nipples** and, in woman, the **breast**.

The vertebrae are bony rings which together form the spinal column (spine, backbone, vertebral column). This is an elastic pillar which supports the trunk and the **skull**. Through the colon runs a canal which contains the spinal cords. Inside the abdominal cavity we find the stomach, the liver, the **gallbladder**, the **pancreas**, the **spleen**, the **kidney**, the **urinary bladder**, the small and large **intestines** (bowels), and the internal reproductive organs.

The skeleton of an adult consists of more than 200 bones of various shapes and sizes. It gives firm but flexible support to the soft **tissues**, muscles and organs. Bones are made up of hard **osseous** tissues and are described as long, short, flat or irregular. The point where two bones meet is a joint or **articulation**. **Ligaments** are strong, fibrous bands which hold the bones together. Movement is made possible by the contraction of muscles.

The inside of a joint contains an oily substance called **synovia**, which allows the ends of bones to glide smoothly over one another.

The following are the principal systems of the human body: skeletal, muscular, locomotive, respiratory, digestive, excretory, reproductive, cardiovascular, lymphatic, and nervous.

Essential Vocabulary:

trunk	тулуб
extremity	кінцівка
inlet	вхідний отвір
cervical	шийний
vertebrae	хребці
vessel	судина
pelvis	таз
gullet	стравохід
dorsal spine	спинний відділ хребта
rib	ребро
sternum	грудна кістка
nipple	сосок
breast	груди
skull	череп
gallbladder	жовчевий міхур
pancreas	підшлункова залоза
spleen	селезінка
kidney	нирка
urinary bladder	сечовий міхур
intestine	кишечник
tissue	тканина

osseous	кістковий
articulation	суглоб
ligament	зв'язка
synovia	синовіальна рідина
digestive system	травна система
cardiovascular system	серцево-судинна система

Ex.1. Translate into English the following words and word combinations:

тулуб і кінцівки, органи чуття, кровоносні судини, черевна порожнина, шлунок та печінка, скелет дорослої людини, твердий і гнучкий, утримувати кістки разом, плавно ковзати, скорочення м'язів.

Ex. 2. Answer the questions:

- 1) Which are the main parts of the body?
- 2) What does the neck contain?
- 3) What is the function of diaphragm?
- 4) What organs do we find in the abdominal cavity?
- 5) What is the lower extremity attached to?
- 6) How many bones are there in skeleton of an adult human?

7) Which are the principal systems of the human body?

Ex. 3. Put questions to the underlined words:

- 1) The head consists of the cranial and facial parts.
- 2) The part of the body between the ribs and the hip is the waist.
- 3) Each hand has four fingers.
- 4) The heart is located inside the thoracic cavity.
- 5) The bones are covered with periosteum (окістя).
- 6) The abdominal cavity includes the small and large intestines.

Ex. 4. Translate into Ukrainian:

* The face consists of the forehead, the eyes with upper and lower eyelids, the cheeks, the nose, the mouth with the tongue and the teeth, the chin and the ears.

* The upper extremity is divided into the shoulder, the upper arm, the elbow, the forearm, the wrist and the hand. Each hand has four fingers and one thumb.

* The lower extremity is attached to the pelvic girdle. It consists of the hip, the thigh, the knee, the lower leg or shank

with shin in front and the calf at the back, the ankle and the foot.

Topic 6

Cardiovascular System

The cardiovascular system is the system of blood circulation. It includes the heart, the arteries, the veins, and capillaries.

The heart is a hollow muscle which is divided into four chambers. The right heart consists of an upper chamber called an atrium and a lower chamber called a ventricle. Between these two chambers there is a one-way valve, called the tricuspid valve. The left heart has two similar chambers, but the valve that separates its chambers is called the mitral valve.

The right heart receives blood from the veins and pumps it into the lung by way of the lesser circulatory system. In the lung the blood is supplied with oxygen. Then it moves into the left heart. From the left heart the well-oxygenized blood is pumped into a large artery called aorta, which distributes it to the entire body by means of the greater circulatory system. The blood is returned to the heart by means of the veins. A continuous circulation is thus kept up.

The walls of the capillaries are so thin that the dissolved nourishment, which comes from the digestive system, and the oxygen, which comes from the lungs and is contained in the blood, can pass through them into the tissues of the body and so nourish it, while the impurities from the tissues are taken up by the capillaries and are carried away in the blood. The capillaries form a close network all over the body, and, gradually joining together and getting larger, they become veins.

The blood is red fluid, which coagulates when it escapes from a blood vessel. It consists of colourless fluid, called plasma, or serum, and many millions of small bodies, which give the blood its colour and substance, the corpuscles.

Essential vocabulary

Cardiovascular system	серцево-судинна система
Blood circulation	кровообіг
An artery	артерія
A vein	вена

A capillary	капіляр
A chamber	камера
An atrium	передсердя
A ventricle	шлуночок
A tricuspid valve	тристулковий клапан
A mitral valve	мітральний клапан
To supply with	забезпечувати
Well-oxygenized blood	кров, насичена киснем
Aorta	аорта
To distribute	поширювати, розносити
Nourishment	живлення, поживні речовини
To nourish	живити
A tissue	тканина
Network	сітка
Fluid	рідина

To coagulate	згортатися
Plasma	плазма
Serum	сироватка
Corpuscles	тільця

Ex. 1. Answer the questions:

1. What is a cardiovascular system?
2. Is a heart divided into three or four chambers?
3. Where is a tricuspid valve situated?
4. How does the right heart work?
5. What is the name of the largest artery?
6. Are the walls of the capillaries thin?
7. What do capillaries form?
8. Blood is fluid, isn't it?
9. Blood can coagulate, can't it?
10. How are tissues nourished?
11. In what way are impurities carries away in the blood?

Ex. 2. Define the types of given above sentences (general, special, alternative or disjunctive ones).

Ex. 3. Complete the sentences:

1. Cardiovascular system consists of
2. The right heart consists of an upper chamber called ... and a lower chamber called
3. The valve that separates the chambers of the left heart is called
4. In the lung the blood is supplied with
5. The blood is returned to the heart by means of the
6. Nourishment comes from the ... system.
7. Oxygen comes from
8. The ... form a close ... all over the ..., and, gradually joining together and getting larger, they become
9. ..., or ... is colourless fluid of the blood.
10. The small bodies in the blood are called

Ex. 4. Fill in missing prepositions and memorize the word combinations:

To be divided ... chambers, to consist ... an atrium and a ventricle, to pump blood ... the lung, to supply ... oxygen, to distribute oxygen ... the entire body, by means ... the greater circulatory system, the circulation is kept ..., to be contained ... blood, to pass ... capillaries, the impurities are carried ..., to escape ... blood vessels.

Topic 7

Digestive System

The digestive system consists of many parts. They are the oral cavity, esophagus, stomach, small and large intestines, the liver, the pancreas, gallbladder and others. The food we eat is propelled through the digestive tract by muscular contractions. The digestive tract is also called the alimentary tract or alimentary canal.

The first division of the digestive tract is the mouth, or oral cavity. Important structures of the oral cavity are the teeth, the tongue, the soft and hard palates, and salivary glands. Digestion begins when the person chews the food. The food is broken into smaller pieces by the teeth and is mixed with saliva secreted by the salivary glands. From the mouth food passes through the pharynx to the esophagus. The major accessory structures of the pharynx and the esophagus are mucous glands.

The esophagus opens into the stomach. It rests in the upper abdomen. It is a dilated portion of the digestive tract. The stomach receives food from esophagus, and its mixing action reduces the food to a semi-liquid mixture. The stomach walls contain many glands from which acid and enzymes are released into the stomach and mixed with ingested food.

The stomach opens into the small intestine. The major accessory structures in this segment of the digestive tract are the liver, the gallbladder, and the pancreas. Small glands exist along the length of the small intestine, and it is the major site of absorption and mucous secretion.

The last section of the digestive tract is the large intestine. Its major accessory glands secrete mucus. It absorbs water and salts and concentrates indigested food into feces.

(Adapted from: Знаменська І.В., Пісоцька О.О., Костенко В.Г. Підручник з англійської мови “English for Medical Specialists” для студентів вищих медичних навчальних закладів України III-IV рівня акредитації. Частина I. С. 190-197)

Essential Vocabulary

Digestive	травний
Oral cavity	ротова порожнина
Esophagus	стравохід
Stomach	шлунок
Intestine	кишечник

Liver	печінка
Pancreas	підшлункова залоза
Gallbladder	жовчний міхур
To propel	проштовхувати
Contraction	скорочення
Tongue	язик
Palate	піднебіння
Salivary glands	слинні залози
Digestion	травлення
Saliva	слина
Mucous glands	слизові залози
Abdomen	живіт
Dilated	розширений
Acid	кислота
Enzymes	ферменти
Feces	фекалії

Ex. 1. Insert the missing letters:

st_mach; di_estive; esop_agus; inte_tine; c_vity; liv_r;
pancre_s; gallb_adder; pha_ynx; to prop_l; f_ces; en_ymes;
contra_tion; tong_e; a_id; p_late; d_lated; _bdomen; s_livary
g_and; mu_ous gl_nds; s_liva.

Ex. 2. Answer the questions:

1. What does the digestive system consist of?
2. What is the food propelled through the digestive tract by?
3. What are the other names of the digestive tract?
4. What is the first division of the digestive tract?
5. What are there in the oral cavity?
6. Where does the food pass from the mouth?
7. Where does the esophagus open into?
8. What is the function of the stomach?
9. Where is the stomach situated?
10. What are the major accessory structures in the small intestine?
11. What is the last section of the digestive tract?

Ex. 3. Complete the phrases with suitable words: consists ...
many parts; to be propelled ... the digestive tract; to be broken
... smaller pieces; to be mixed ... saliva; to pass ... the
pharynx ... the esophagus; to be released ... the stomach; to be

mixed ... ingested food; to open ... the small intestine; to exist ... the length ... the intestine.

Ex. 4. Translate the following verbs into English: їсти, просувати, перетравлювати, називати, жувати, розкладати (подрібнювати), змішувати, виділяти, одержувати, проковтувати, концентрувати, всмоктувати.

Ex. 5. Make up the Past Participle of the mentioned above verbs.

Ex. 6. Translate the following sentences:

1. Їжа жується, ковтається, просувається, перетравлюється.
2. Вода всмоктується у кишечнику.
3. Фекалії концентруються у товстому кишечнику.
4. Кислота та ферменти змішуються з їжею, яку проковтнули.
5. Кислота виділяється у шлунку.
6. Їжа подрібнюється на маленькі шматочки.
7. Найдовший орган травного тракту називається малий кишечник.

Topic 8

Traumas of Skeletal System: Fractures, Dislocation, Sprains and Strains

The musculoskeletal system consists of the bones, muscles, ligaments, and tendons. Fractures, dislocations, sprains, and strains are injuries that occur to the musculoskeletal system.

Fractures are breaks or cracks in bones. They are defined as either closed or open. Closed fractures leave the skin unbroken. They are more common than open fractures. An open fracture involves an open wound. Open fractures are more serious than closed fractures because of the risks of infection and severe bleeding. Fracture of a large bone can cause severe shock because bones and soft tissue may bleed heavily. Fractures can be accompanied by internal injuries. For example, victims with fractured ribs can also have injuries to the lungs, kidneys, or liver. Fractures can be caused by motor-vehicle accidents, falls, blows, sports injuries, or bone diseases.

A dislocation is an injury in which a bone is displaced from its normal position at a joint. A dislocation may involve damage to the ligaments around the joints. Dislocations can be

caused by falls, sports injuries, motor-vehicle accidents, underlying disease (such as rheumatoid arthritis) and others.

A sprain is the partial or complete tearing of ligaments and other tissues at a joint. The more ligaments are torn, the more severe the injury. Sprain most commonly occurs in joints of the ankles and knees. Like dislocations, sprains can be caused by falls, sports injuries, and motor-vehicle accidents.

A strain is a stretching and tearing of muscle or tendon fibers. It is sometimes called a "muscle pull" or "tear". Strains are often caused by lifting something too heavy. They often occur in the neck or back. Strains of the neck or lower back can be very painful. The signs of fractures, dislocations, sprains, and strains are very similar. Five common signs of musculoskeletal injuries are pain, swelling, deformity, bruising of the skin, and inability to use the affected part normally.

*(Adapted from: Знаменська І.В., Пісоцька О.О.,
Костенко В.Г. Підручник з англійської мови
“English for Medical Specialists” для студентів
вищих медичних навчальних закладів України III-IV
рівня акредитації. Частина I. С. 148-151)*

Essential Vocabulary

tendon	сухожилля
fracture	перелом
dislocation	вивих, зміщення
sprain	розтягнення, ушкодження зв'язок
strain	розтягнення, деформація
injury	ушкодження, рана, забиття
break	ушкодження, перелом
crack	тріщина
wound	рана
severe	сильне
bleeding	кровотеча
internal	внутрішній
joint	суглоб
tearing	розрив

ankle	щиколотка
lower back	поперек
swelling	припухлість
deformity	деформація
bruising	забиття
inability	нездатність

Ex. 1. Translate the following words and word-combinations into English:

поперек; розірваний; розрив, порушення цілісності структури; зв'язка; припухлість; розтягнення; пошкодження, забиття; внутрішній; тріщина, щілина; супроводжувати; спричиняти; кровотеча; перелом; сухожилля.

Ex. 2. Insert the missing letters:

to_n, swell_ing, dam_ge, inv_lve, cra_k, in_ury, fra_ture, spra_n, str_in, d_slocation.

Ex. 3. Translate the following words and word-combinations into Ukrainian:

swelling; tendon; severe; stretch; strain; internal; fracture; dislocation; bleeding; ligament; pull; painful; injury; cause; accompany; bruising; involve; sprain; tearing; lower back; separate; damage; closed fracture; displace.

Ex. 4. Read the following words:

fracture; occur; injury; accident; ligament; musculoskeletal; motor-vehicle; call; define; involve; severe; break; damage; victim; sign; lower; either; wound; accompany; fall; position; bruising; accompanied; injury; partial.

Ex. 5. Answer the questions:

1. What does the musculoskeletal system consist of? 2. What are fractures, dislocations, sprains and strains? 3. Give the definition to the medical term "fracture". 4. What kinds of fractures do you know? 5. What are the causes of fractures? 6. What is a dislocation? 7. What are the common causes of dislocations? 8. What do you know about sprains? 9. Define the term "strain". 10. What are the causes of strains? 11. What are the common signs of fractures and dislocations?

Ex. 6. Organize the information of the text "Fractures, Dislocations, Sprains, and Strains" in the table:

	Fracture	Dislocation	Sprain	Strain
Definition				
Cause				
Sign				

Topic 9

Respiratory system

Breathing is of vital importance for the preservation of life. Any interruption of breathing for a long time may cause death.

Air enters through the nose and the nasal cavities. A mucous membrane and cilia warm and moisten the air and filter out foreign bodies

Then the air passes the pharynx or throat where the adenoids and the tonsils are located. The pharynx serves as a common way for food and air. Food reaches the esophagus, which leads into the stomach. Air reaches the larynx (voice box) and then trachea and bronchial tree (bronchi). The bronchial branches are called bronchioles. Each bronchiole has an alveolus (air sack) at the end. There are over 700,000,000

alveoli in the lungs. The thin walls of alveoli allow for the exchange of gases between them and the capillaries. The blood absorbs the oxygen from the alveoli and gives carbon dioxide (carbonic acid gas) away, which is exhaled (breathed out). Then oxygen is carried to all parts of the body along with a protein (hemoglobin) in erythrocytes.

This process occurs in the lungs which occupy the major part of the cavity on both sides of the chest. The pleura envelopes each lung. It is a double-folded membrane. The two lungs are not equal in size. The right lung is divided into three lobes and is a bit larger. The left lung is divided into two lobes. The diaphragm separates the thoracic cavity from the abdominal one and helps in the process of breathing (inspiration-breathing in and expiration-breathing out).

Essential Vocabulary

breathing	дихання
nasal cavities	пазухи носа
a mucous membrane	слизова оболонка
cilium	вія; війка слизового

	епітелію
to moisten the air	зволожувати повітря
tonsils	мигдалики
lymphatic tissue	лімфатична тканина
trachea (pl tracheae)	трахея (мн. - трахеї)
bronchus (pl bronchi)	бронх (мн. - бронхи)
alveolus (pl alveoli)	альвеола (мн. - альвеоли)
carbon dioxide	вуглекислий газ
to exhale	видихати
to inhale	вдихати
pleura	плевра
a lobe	частка (легені)
inspiration	вдих
expiration	видих
diaphragm	діафрагма
thoracic cavity	грудна порожнина

Ex. 1. Use the expressions from the text in the sentences of your own:

to be of vital importance - бути життєво важливим

any interruption of smth. - кожне переривання чогось

to cause smth. - спричиняти щось

it serves as smth. - це слугує чимось

smth. is called smth. - щось називається чимось

to allow for smth. - давати можливість; уможливити

to carry smth. along with smth. - переносити щось разом із чимось

to be (not) equal in size - (не) бути однаковим за розміром

to be divided into ... parts - поділятися на ... частині

to separate smth. from smth. - відокремлювати щось від чогось

to help in the process of smth. (of doing smth.) - допомагати в процесі чогось (під час виконання) чогось

Ex. 2. Answer the questions:

1. What do we need cilia for?
2. Where does the exchange of gases take place?
3. By what means is oxygen carried to all parts of the body?
4. What is the difference between the two lobes of lungs?
5. What membrane separates the thoracic cavity from the abdominal one?

Task 3. Fill in the blanks with the words given below and translate the following sentences:

1. A patient has difficulty in ...
2. When one breathes normally not all ... are opened.
3. The respiratory system consists of the nose, pharynx, larynx, trachea (windpipe) and
4. Each bronchiole leads to a separate
5. When one ..., the external intercostal muscles contract and lift the ribs.
6. ... passes from the blood into the lungs and is breathed out.
7. The tonsils are masses of

(*a — breathes in; b — lungs; c — bronchi; d — alveolus; e — breathing; f — lymphatic tissue; g — carbonic acid gas (carbon dioxide)*)

Topic 10

Nervous System

The nervous system has a complicated histological structure. It includes: *neurons*, which are individual nerve cells of microscopic structure; *nerves*, which are of macroscopic structure; *brain*, which is the centre of regulation and coordination of body activities; *spinal cord*, which is a column of nervous tissue; *meninges*, which are three layers of

connective tissue, membranes that surround the brain and spinal cord.

The size and form of neurons depend upon the length and number of its receptive branching fibers called dendrites. The nervous impulse wave passes the dendrites and reaches the cell body and cell nucleus. The axon carries the impulse away from the cell body. Axons are covered with a tissue called myelin sheath, which gives a white appearance to the fiber. Neurilemma is one more axon covering. It is a membranous sheath which is outside the myelin sheath on the nerve cells of peripheral nerves. The impulses are transmitted from one neuron to another through the terminal and fibers, covering the space between them, which is called synapse.

Scientists consider that that there are up to 12 milliards nerve cells which are performing their function of coordination of the human activities all over the body. We can see, think, hear, speak, respond to pain, temperature, touch, etc. thanks to the activities of the body controlled by the nervous system.

The brain is one of the most complicated structures that has ever been constructed by nature. Within the brain there are four continuous cavities, or canals, called ventricles which contain cerebrospinal fluid. The fluid protects the brain and

spinal cord from shock. Thalamus and hypothalamus are two other important parts of the brain.

When the received stimuli impulses are recognized, interpreted, summarized and analyzed within the central part of the nervous system (brain), they are finally relayed and sent out in a form of specific orders to different parts and organs of the human bodies. The investigators determined some areas in the brain which control vision, hearing, movements and emotions of human being.

Essential Vocabulary

neuron	нейрон
brain	МОЗОК
spinal cord	СПИННИЙ МОЗОК
meninges	МОЗКОВІ ОБОЛОНКИ
dendrites	дендрити (розгалужені відростки нервових клітин)
cell nucleus	ядро клітини
axon	аксон (відросток нервової

	клітини)
to carry the impulse away from	проводити імпульс від
myelin sheath	мієлінова оболонка
neurilemma	неврилема (оболонка нервових волокон)
synapse	синапс (спеціалізовані формування структурно-функціонального зв'язку нейронів один з одним або з клітиною, яку вони іннервують; служать для сприйняття і передачі нервових імпульсів)
stimulus	стимул, подразник
acetylcholine	ацетилхолін - передавач нервового збудження
external (internal) receptors	зовнішні (внутрішні) рецептори

to relay	передавати далі
cerebrum	ГОЛОВНИЙ МОЗОК
cerebral cortex	кора головного мозку
folds and ringes	складки і борозни
convolutions	звивини (закрутки) мозку
gyrus	звивина мозку
fissure	щілина, борозна
sulcus	борозна
ventricle	шлуночок
cerebrospinal fluid	спинно-мозкова рідина
thalamus	таламус, зоровий горб
hypothalamus	гіпоталамус

Ex. 1. Answer the questions:

1. Are neurons of macroscopic or of microscopic structure? 2. What part of nervous system is the centre of regulation and coordination of body activities? 3. What do meninges consist of? 4. What is the function of acetylcholine?

5. What external receptors do you know? 6. How do we call receptive branching fibres of the neurons? 7. What tissue covers axons? 8. What is the function of cerebrospinal fluid? 9. Why do doctors sometimes do the lumbar punctures 10. What does hypothalamus regulate?

Ex. 2. Fill in the blanks with the appropriate words given below:

hearing; nervous cells; pain; to; stimuli; vision; the human brain; ventricles; star-like; efferent nerves

1. The eye is the sense organ of ... 2. The ear is the sense organ of... 3. The nervous system has about ten times more ... than the number of all inhabitants of the globe. 4. The ... come to the brain from sense organs. 5. The weight of ... is up to two kilograms. 6. The brain itself does not feel ... 7. Peripheral nerves carry impulses ... the brain and spinal cord. 8. Nerves which carry impulses from the central nervous system are called ... 9. Astrocytes are ... 10. Within the middle region of the cerebrum there are spaces called ...

Ex. 3. Build anatomic terms:

1. Part of cerebrum which locates under the thalamus.
2. Branching fibres that transmit impulses.

3. Posterior part of the brain. 4. Portion of the brain which is responsible for balance. 5. Nerve network rather a dense one. 6. Outer membrane which is tough. It surrounds the brain and spinal cord.

(a - hypothalamus; b - cerebellum; c - ganglion; d - dura mater; e - medulla oblongata; f - dendrites).

СЛОВНИК-МІНІМУМ

a capillary	капіляр
a chamber	камера
a lobe	частка (легені)
a mitral valve	мітральний клапан
a mucous membrane	слизова оболонка
a tissue	тканина
a tricuspid valve	тристулковий клапан
a vein	вена
a ventricle	шлуночок
abdomen	живіт
ability	здатність
acetylcholine	ацетилхолін - передавач нервового збудження
acid	кислота
acquired	набутий
ailment	хвороба

allied profession	споріднена професія
alveolus (pl alveoli)	альвеола (мн. - альвеоли)
an artery	артерія
an atrium	передсердя
ankle	щиколотка
aorta	аорта
approach	підхід
articulation	суглоб
assistive devices	допоміжні засоби
at one's disposal	у розпорядженні когось
audiology	аудіологія
awareness	усвідомлення
axon	аксон (відросток нервової клітини)
basic tenets	основні засади
bleeding	кровотеча

blood circulation	кровообіг
blood vessel	кровоносна судина
born	вроджений
brain	мозок
break	ушкодження, перелом
breast	груди
breathing	дихання
bronchus (pl bronchi)	бронх (мн. - бронхи)
bruising	забиття
bursitis	бурсит
carbon dioxide	вуглекислий газ
cardiovascular system	серцево-судинна система
cardiovascular system	серцево-судинна система
cell nucleus	ядро клітини
cerebral cortex	кора головного мозку
cerebrospinal fluid	спинно-мозкова рідина
cerebrum	головний мозок
cervical	шийний

contraction	скорочення
convolutions	звивини (закрутки) мозку
crack	тріщина
crutches	милиці
decreasing	зменшення
deformity	деформація
dendrites	дендрити (розгалужені відростки нервових клітин)
diaphragm	діафрагма
digestion	травлення
digestive	травний
digestive system	травна система
dilated	розширений
disability	інвалідність
disability	нездатність щось робити, інвалідність
disaster	лихо, нещастя

dislocation	вивих, зміщення
dorsal spine	спинний відділ хребта
engagement in	залучення до
enzymes	ферменти
esophagus	стравохід
evidence	свідчення
expiration	видих
external (internal) receptors	зовнішні (внутрішні) рецептори
extremity	кінцівка
feces	фекалії
fissure	щілина, борозна
fluid	рідина
folds and ringes	складки і борозни
fracture	перелом
gallbladder	жовчевий міхур
gallbladder	жовчний міхур

geriatrics	геріатрія
groundbreaking	новаторський
gullet	стравохід
gyrus	звивина мозку
healing process	процес загоювання
healthy lifestyle	здоровий спосіб життя
high-pitched sound waves	високі звукові хвилі
hypothalamus	гіпоталамус (скупчення ядер нервових клітин з численними висхідними і нисхідними волокнами нижче зорового горба головного мозку. забезпечує пристосування функцій (обміну речовин, гормональної та інших систем до діяльності організму в цілому)
impairment	порушення

inability	нездатність
increasing	збільшення
inflammation	запалення
injury	пошкодження
injury	ушкодження, рана, забиття
inlet	вхідний отвір
inspiration	вдих
internal	внутрішній
intervention	втручання
intestine	кишечник
intestine	кишечник
joint	суглоб
kidney	нирка
ligament	зв'язка
limitation	обмеження
liver	печінка
lower back	поперек

lymphatic tissue	лімфатична тканина
manual therapy	мануальна терапія
meaningful activities	значущі види діяльності
meninges	мозкові оболонки
mucous glands	слизові залози
muscle fatigue	втома м'язів
myelin sheath	мієлінова оболонка
nasal cavities	пазухи носа
network	сітка
neurilemma	неврилема (оболонка нервових волокон)
neurobehavioral research	нейроповедінкове дослідження
neurology	неврологія
neuron	нейрон
nipple	сосок
nourishment	живлення, поживні речовини

nursing	догляд
occupational therapy	ерготерапія, працетерапія
oral cavity	ротова порожнина
orthopedics	ортопедія
osseous	кістковий
pain reduction	зменшення болю
palate	піднебіння
pancreas	підшлункова залоза
pancreas	підшлункова залоза
pediatrics	педіатрія
pelvis	таз
plasma	плазма
pleura	плевра
positive attitude	позитивне ставлення
rehabilitation	реабілітація
restraints	обмеження
rib	ребро

rigorous work	сувора праця
saliva	слина
salivary glands	слинні залози
serum	сироватка
severe	сильне
side effects	побічні дії
skull	череп
spinal cord	спинний мозок
spleen	селезінка
sprain	розтягнення, ушкодження зв'язок
sternum	грудна кістка
stimulus	стимул, подразник
stomach	шлунок
strain	розтягнення, деформація
strengthening exercise	зміцнювальні вправи
sulcus	борозна

surgical intervention	хірургічне втручання
swelling	пухлина, набряк
swelling	припухлість
synapse	синапс (спеціалізовані формування структурно-функціонального зв'язку нейронів один з одним або з клітиною, яку вони іннервують; служать для сприйняття і передачі нервових імпульсів)
synovia	синовіальна рідина
tearing	розрив
tendon	сухожилля
thalamus	таламус, зоровий горб
thoracic cavity	грудна порожнина
tissue	тканина
to alleviate pressure	зменшити тиск
to avoid boredom	уникати нудьги

to carry the impulse away from	проводити імпульс від
to coagulate	згортатися
to constrict	звужувати
to distribute	поширювати, розносити
to emerge	з'являтися
to enhance pliability	підвищити податливість, гнучкість
to exhale	видихати
to impact	впливати
to improve	покращувати
to inhale	вдихати
to moisten the air	зволожувати повітря
to nourish	живити
to participate	брати участь
to prescribe	призначати
to propel	проштовхувати

to provide support	забезпечити підтримку
to reach full recovery	досягти повного одужання
to recover	відновити(ся)
to redefine itself	переосмислюватись
to relay	передавати далі
to restore function	відновити функцію
to share	поділяти
to supply with	забезпечувати
to treat humanely	лікувати або ставитися гуманно
tongue	язик
tonsils	мигдалики
trachea (pl tracheae)	трахея (мн. - трахеї)
treatment approaches	підходи до лікування
trunk	тулуб
ultimate goal	кінцева мета

unique purpose	єдина мета
urinary bladder	сечовий міхур
ventricle	шлуночок
vertebrae	хребці
vessel	судина
well-oxygenized blood	кров, насичена киснем
wound	рана
cilium	вія; війка слизового епітелію
corpuscles	тільця

ІНФОРМАЦІЙНІ РЕСУРСИ

1. https://en.wikipedia.org/wiki/Occupational_the_rapy)
2. <https://uk.strephonsays.com>
3. <https://www.sochi.edu>

СПИСОК ЛІТЕРАТУРИ

1. Знаменська І.В., Пісоцька О.О., Костенко В.Г. Підручник з англійської мови “English for Medical Specialists” для студентів вищих медичних навчальних закладів України III-IV рівня акредитації. Частина I. 268 с.
2. Gyorffy, M. English for Doctors : Authentic Consulting – Room Activities for Doctors, Dentists, Students and Nurses. Hungary, Schenk Verlag GmbH, Passau 2006. 291 p.