МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РОССИЙСКОЙ ФЕДЕРАЦИИ
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ИНОСТРАННЫЙ ЯЗЫК ПРОФЕССИОНАЛЬНО ОРИЕНТИРОВАННЫЙ

УЧЕБНО-МЕТОДИЧЕСКОЕ ПОСОБИЕ

для обучающихся по направлению подготовки
31.05.01 *Лечебное дело*

Симферополь
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Учебно-методическое пособие разработано для обучающихся направления подготовки 31.05.01 «Лечебное дело».

Предназначено для обучающихся медицинских направленностей, а также для всех, кто стремится совершенствовать свои умения и навыки в области иностранного языка в сфере медицины.

Содержание

Introduction

In the modern world, the role of English learning by future healthcare professionals has become increasingly important as medical science continues to develop and informational space expanding and English serving as a language for international communication. A foreign language is an integral part of the undergraduate training of future doctors. Improving the academic curriculum requires replacing informative forms of training with active ones. A need to acquire a working knowledge of a communicative competence in a foreign language in future healthcare providers results in an intensification of the process of training of future healthcare providers. The main aim of the course "Professional Foreign Language" is to form competences stipulated by FSES 3+ for medical trainees. Acquiring a foreign language by future doctors is essential for professional intercultural communication which suggests mastering both oral and written forms of communication in a foreign language.

Learning a foreign language should also provide:

- higher level of learner autonomy, ability for self-education;
- development of cognitive and research skills;
- development of information culture;
- widening horizons and improving trainees' general culture;
- development of tolerance and respect to spiritual values of different countries and nations.

It was in order to achieve these purposes that *Professional English for Physicians,* a comprehensive course for trainees learning English at medical universities in the training program 31.05.01 "General Medicine" (graduate qualification "general practitioner") was created. It provides the formation and development of skills in speaking, reading, writing and listening, necessary to successfully communicate in both oral and written forms of the language.

The course consists of seventeen units along with supplementary material. In total, *English for Physicians* is to be covered in 34 hours' classroom work. Each submodule ensures coverage of a core of useful language related to a wide range of topics for trainees of medical faculties of higher schools of the Russian Federation. In accordance with the working program, every unit of the main part is to be studied for two hours in class, providing 34 hours of classroom activity. The units follow the same basic structure outlined below.

Lead-In Sections, containing discussion questions. This is designed as a warm-up activity to the unit. It usually consists of a number of pictures, and often introduces key vocabulary and concepts. It should be used to get trainees focus on the topic.

Reading Sections, consisting of one text based on original sources containing key vocabulary of the unit.

Vocabulary Practice Sections, focusing on exploiting the vocabulary introduced in the reading text through various types of exercises such as deduction of the meaning of new words from context, gap-filling, collocations which help trainees remember vocabulary items as parts of set expressions, word formation, and others.

Top Margin containing quotes. These are optional extras and can be used to add variety and interest to the lessons and provide additional material for advanced trainees who are 'fast finishers'.

Grammar Point Sections presenting grammar structures in detail. There is a wide range of exercises comparing and contrasting different grammar phenomena.

Checklist Sections allowing trainees to check their own progress.

Key Words Sections including the main items of medical vocabulary introduced in the unit. A translation of each of these words appears in the Vocabulary (at the back of the book). This section also provides trainees with the opportunity to personalize the Key words by adding more words or expressions that they think are useful.

More supplementary material is to be found at the back of the book (**Appendices**).

This includes **Vocabulary** consisting of both Key Words and other words and word combinations which may not be known to trainees, **the Table of the Most Common Irregular Verbs** (in alphabetical order), **the Table of Tenses** which presents the English Verb Forms of both Active and Passive Voice, **the Verb Patterns** of the most common verbs.

There are also **Test Questions** to be used to make self-assessments and get prepared for the final test at the end of the course.

References provide a list of sources used.

Введение

В современных условиях повышается роль англоязычной подготовки специалиста в связи с непрерывным развитием медицинской науки, расширением информационного пространства и роли английского языка в мире. Иностранный язык является важным компонентом подготовки будущего врача на додипломном этапе. Совершенствование учебного процесса требует перехода от информационно-сообщающих к активным формам обучения. Необходимость формирования у будущих врачей иноязычной коммуникативной компетенции в профессиональной сфере способствует интенсификации учебного процесса.

Основной целью курса «Иностранный язык профессионально-ориентированный» является формирование компетенций, обозначенных во ФГОС 3+ для обучающихся медицинских вузов. Владение иностранным языком будущими врачами необходимо для успешной профессиональной межкультурной коммуникации, что предполагает овладение устными и письменными формами общения на иностранном языке. Изучение иностранного языка призвано также обеспечить:

- повышение уровня учебной автономии, способности к самообразованию;
- развитие когнитивных и исследовательских умений;
- развитие информационной культуры;
- расширение кругозора и повышение общей культуры обучающихся;
- воспитание толерантности и уважения к духовным ценностям разных стран и народов.

Именно для достижения данных целей и был создан ***«Иностранный язык профессионально-ориентированный»***, курс английского языка для обучающихся второго курса по направлению подготовки 31.05.01 «Лечебное дело», квалификация выпускника «врач общей практики». Он обеспечивает формирование навыков и развитие коммуникативных умений в говорении, чтении, письме и аудировании, необходимых для успешного общения на английском языке как в устной, так и в письменной формах.

Курс состоит из **17 уроков (Units)**.

Каждый урок обеспечивает усвоение базового языкового материала по предложенным темам, необходимым для обучающихся медицинских факультетов в вузах Российской Федерации. В соответствии с рабочей программой, каждый урок (Unit) рассчитан на 2 часа практических занятий, в целом обеспечивая необходимый материал для 34 часов аудиторной работы. Пособие имеет следующую структуру уроков, которые включают такие разделы:

Lead-In (Введение). Введение в тему, где преподаватель путем выполнения несложных упражнений, наглядности и в ходе вопросно-ответной беседы выясняет, что студенты уже знают по данной проблеме, таким образом активизируя словарный запас студентов и одновременно знакомя их с новой темой.

Reading (Чтение). Этот раздел включает учебный текст, содержащий новый лексико-грамматический материал по теме урока. Предложенные тексты взяты из аутентичных источников.

Vocabulary Practice (Активизация лексики). Этот раздел содержит упражнения, направленные на работу с новыми словами и словосочетаниями, введенными в тексте. Обучающиеся активизируют лексику, подбирая синонимы и антонимы, однокоренные слова, используя слова в контексте и т.д.

Top Margin (**Верхнее поле страницы**) содержит цитаты. Это дополнительный материал, который внесет разнообразие в урок и будет интересен продвинутым студентам, которые быстрее усваивают материал.

Grammar Point (**Практическая Грамматика).** Раздел презентует грамматический материал и закрепляет его в разнообразных грамматических упражнениях.

Checklist (Проверьте себя). Раздел позволяет студентам проверить, насколько успешно они усвоили изученный материал.

Key Words (Ключевые слова). Раздел содержит активные для данного урока лексические единицы, обязательный для запоминания и употребления вокабуляр по изучаемой теме.

Для удобства работы предложен **Словарь** (в конце книги) с переводом слов на русский язык. Каждый студент может дополнить перечень новых слов, которые он считает полезными и необходимыми для него (в конце каждого урока отведено специальное место для заметок).

Пособие также снабжено **Словарем,** включающим как активную лексику уроков, так и дополнительные слова и словосочетания, встречающиеся в пособии, **Таблицу неправильных глаголов** (в алфавитном порядке), **Таблицу времен**, представляющую английские глагольные формы в активном и пассивном залоге, **Модели управления** наиболее распространенных глаголов английского языка.

В книге представлены **Вопросы к зачету** для самоконтроля и подготовки к зачету по завершении курса.

Литература включает список использованных источников, которые могут быть рекомендованы обучающимся для углубления знаний по английскому языку.

UNIT I. THE RESPIRATORY SYSTEM

In this unit

- describing the human respiratory system and its organs
- talking about the functions of the respiratory system
- *Present and Past Active Tenses*

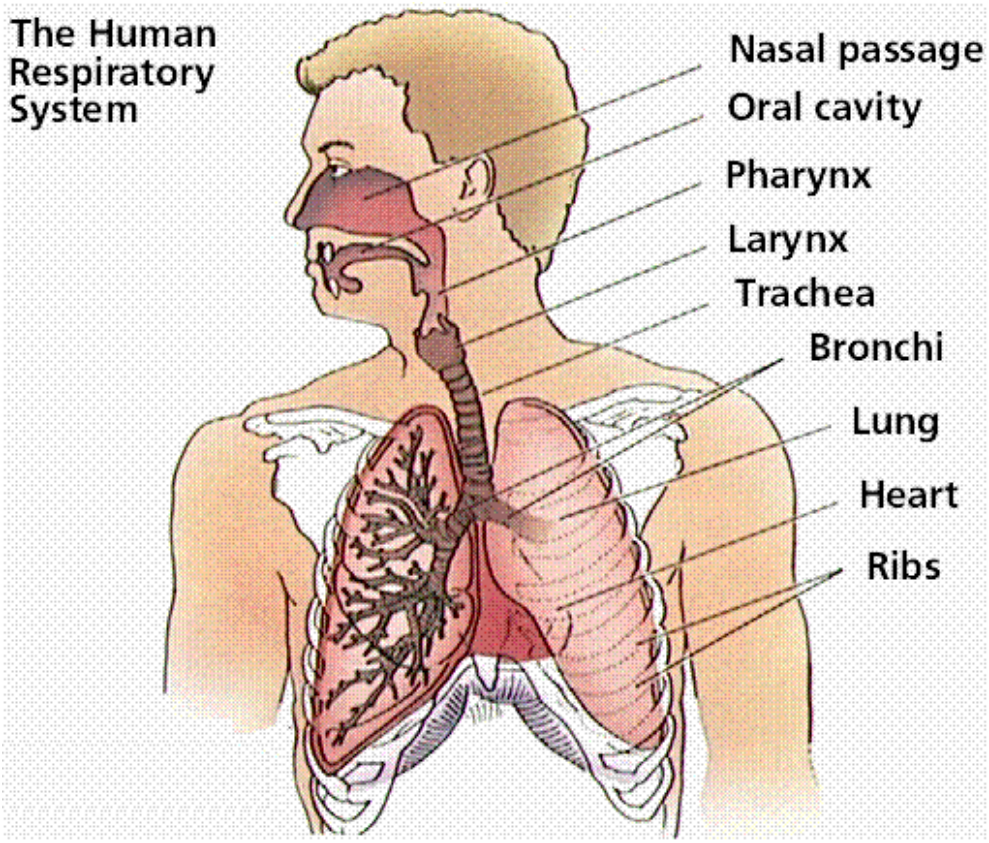
Lead-in

1. Это интересно:

- At rest, we breathe 15 to 20 times a minute and exchange about 500 milliliters of air with each complete breath in and out.
- Approximately about 150 milliliters of the air we breathe in with each breath fills the passageways of the trachea, bronchi, and bronchioles.
- We breathe over 5,000 times a day, taking in enough air throughout a lifetime to fill 10 million balloons.
- The average set of human lungs has approximately 600 million alveoli (300 million per lung), creating a respiratory surface about the size of a singles tennis court or a square about 9 m long on each side.
- At birth, an infant's lung is estimated to have approximately 20 to 30 million alveoli and 1,500 miles of airway passages.
- The right lung is slightly larger than the left.
- The capillaries in the lungs would extend 1,600 meters, or about one mile, if placed end to end.
- As a result of goblet cells and fine hair-like structures called cilia that help to filter foreign particles out of the air before they can enter the lungs, air breathed in through the nose is cleaner than air entering through the mouth.

2. Рассмотрите рисунок и назовите органы дыхательной системы.

3. Прочитайте текст о дыхательной системе и подготовьтесь к его обсуждению.



Life is not measured by the number of breaths we take, but by the moments that take our breath away.
Hillary Cooper

When the aging actress Sophie Tucker was asked what the key to long life was, she replied, "Keep breathing." Although Tucker was making a joke, her answer was also correct in the most fundamental biological way.

Reading

The Respiratory System

The Role of the Respiratory System

Although all of the human body's various systems are **integral** to life, none of them—from the cardiovascular to the nervous systems—would be able to function without the respiratory system. It is the respiratory system that stores up the body's most basic fuel in the form of oxygen that we breathe in from the air. Every cell in our body uses oxygen to produce energy from food and drink. In fact, every chemical process throughout the body ultimately needs oxygen to take place. It is also through the respiratory system that the body eliminates carbon dioxide waste from cell metabolism. If the respiratory system **ceases** to function, death **occurs** within minutes as carbon dioxide rapidly reaches toxic levels in the blood.

The Structure

The respiratory system is a complex system of organs and tissues subdivided into the upper and lower respiratory tracts. Its role is to regulate the respiration process. The organs of **the upper respiratory tract** are the nose and nasal cavity or passage, the **pharynx** or throat, and the **larynx** or **voice box**. Located in the **lower respiratory tract** is the trachea or **windpipe**, the **bronchi**, the **alveoli**, and the lungs.

The lungs are two cone-shaped organs located in the thoracic cavity. A double membrane, the **pleura**, covers the lungs and lines the thoracic cavity. The bottom of the thoracic cavity is formed by the **diaphragm**.

Respiration

Respiration is the exchange of oxygen and carbon dioxide between the atmosphere and the body cells, including **breathing** (**inhalation** and **exhalation**); diffusion of oxygen from alveoli to blood and of carbon dioxide from blood to alveoli; and transport of oxygen to and carbon dioxide from body cells.

Breathing/Ventilation

- Air is warmed, moistened and filtered as it travels through the **mouth** and **nasal passages**.
- It then passes through the trachea and one of the two bronchi into one of the lungs.
- After passing into the many **bronchioles**, it finally arrives into some of the millions of tiny sacs called **alveoli**. This is where gas exchange takes place - **oxygen** passes out of the air into the blood, and **carbon dioxide** passes out of the blood into the air in the alveoli. This process is called **diffusion**.

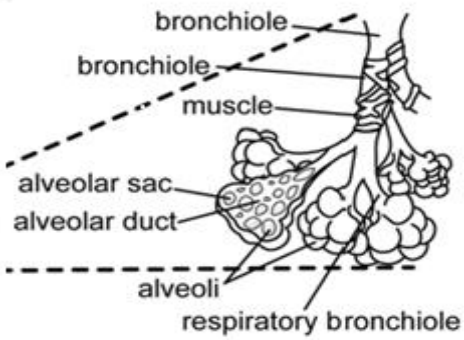
When you inhale:

- the **intercostal muscles** contract and expand the chest;
- the **diaphragm** at this time moves downward enlarging the chest cavity;
- **pressure** inside the chest is lowered. Reduced air pressure in the lungs causes air to enter the lungs.

When you exhale:

- the intercostal muscles relax, the ribs go down;
- the diaphragm relaxes, decreasing the volume of the chest;
- pressure inside the chest increases and air is forced out.

In inhaled air there are 21% of oxygen and 0.04% of carbon dioxide and in exhaled one – 16 and 4% respectively.



Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Поставьте следующие существительные во множественное число.

alveolus – _____
bronchus - _____
focus - _____
basis - _____
bacterium - _____
pharynx - _____
pleura - _____

3. a. Подберите все возможные синонимы к следующим словам, а затем вставьте одно из них в пробел.

breathing →_____
breathing in →_____
breathing out →_____
to breathe in→_____
to breathe out→_____

b. When one _____[1] the lungs dilate. When one _____[2] the lungs contract. On physical exertion the patient's _____[3] became deep. When the temperature is high a patient usually _____[4] deeply. Ventilation is the process of _____[5] and _____[6] . On deep _____[7] a person _____[8] 1.5-2 liters of air.

4. Подберите антонимы к следующим словам и словосочетаниям.

breathe in ≠ _____
contract ≠ _____
to lift/to rise ≠ _____
to move upward ≠ _____
to increase ≠ _____
to enlarge ≠ _____
to go in ≠ _____

5. Подберите синонимы к следующим словам.

1. to occur	**a.** to stop
2. to expand	**b.** essential
3. to cease	**c.** to get through
4. to pass through	**d.** to happen
5. to eliminate	**e.** to spread
6. integral	**f.** to get rid of

6. Заполните пробелы словами из таблицы.

referred, formed, located, surrounded, expanded, subdivided

1. Alveoli are _____ by a network of capillaries.
2. The respiratory system is _____ into the upper and lower respiratory tract.
3. The lungs are _____ in the thoracic cavity.
4. On inhalation the chest is _____.
5. The process of inspiration and expiration is _____ to as pulmonary ventilation.
6. The bottom of the thoracic cavity is _____ by the diaphragm.

7. Заполните пробелы, используя активную лексику урока.

1. The voice box, or the _____, contains vocal cords; they are responsible for producing the human voice.
2. The exchange of oxygen and carbon dioxide _____ in the alveoli.
3. Breathing consists of inhaling and exhaling, these motions are produced by movements of the _____.
4. The small air sacs in the lungs through which gases are exchanged between the atmosphere and the blood are the _____.
5. The tube-like structure is called _____, or windpipe.
6. The outer surfaces of the lungs are covered with a membrane called _____.
7. The scientific name for the throat is the _____ _____ .
8. The trachea divides into the right and left main _____.
9. The _____ rate depends on the amount of carbon dioxide in the blood.
10. At birth, an infant's lung have approximately 20 to 30 million _____ , while in the lung of an adult there are over 700 million _____.
11. _____ perform gas exchange in alveoli.

Language Development

1. Закончите предложения.

1. The organs of the respiratory system are ____
_____
2. The upper respiratory tract consists of _____
_____
3. The lower respiratory tract includes _____
_____
4. It is in the alveoli that _____
_____
5. Breathing, technically called ventilation is the process _____
_____
6. The function of the respiratory system is ____
_____

2. Просмотрите текст о дыхательной системе еще раз и ответьте на вопросы.

1. What is the function of the respiratory system?
_____

2. What are the major subdivisions of the respiratory system? _____
_____

3. What organs are included into the upper respiratory tract? lower respiratory tract?
_____
_____

4. How is the process of gas exchange called and where does it take place?
_____

5. What are the stages of respiration in the human organism?
_____
_____

3. Посмотрите на слова и словосочеиания в упр. 4 на стр. 6 и опишите процесс вдоха и выдоха.

When we breathe in, muscles in the chest ……
_____
_____

*When we breathe out …*_____
_____
_____

4. Тест: Выберите правильный ответ, чтобы закончить следующие предложения.

1. The lungs, nose and trachea are all part of the
a. skeletal system **b.** digestive system
c. respiratory system **d.** circulatory system

2. Air enters the body through the
a. lungs **b.** nose
c. larynx **d**. trachea

3. The voice box is also known as the
a. larynx **b.** windpipe
c. trachea **d.** alveolus

4. Air leaves the trachea and passes through the:
a. bronchioles **b.** capillaries
c. bronchi **d.** air sacs

5. The tiny sacs in the lungs are called:
a. bronchioles
b. capillaries
c. alveoli

6. In the alveoli carbon dioxide:

a. passes out of the blood
b. passes into blood
c. passes away from the air

7. When we exhale, pressure in the chest:
a. reduces
b. remains the same
c. increases

8. Respiration is the exchange of oxygen and carbon dioxide between:

a. the atmosphere and the body cells
b. the lungs and the blood
c. between the atmosphere and the lungs

9. Gaseous exchange takes place in the lungs in the:
a. bronchioles
b. bronchi
c. alveoli

10. The percentage of oxygen in exhaled air is about:
a. 21%
b. 16%
c. 4%

5. Изучите следующие аббревиатуры, чтобы уметь прочитать информацию в истории болезни пациента ниже.

♂ - male
♀ - female
↑ - increased, raised
↓ - decreased, reduced
c/o – complaining of
s.o.b. – short of breath
R – right / respiration
A&E – accident and emergency department
s.l. - sublingual
PH – past history
FH – family history
1/52 – one week
OE – on examination
RR – respiratory rate
c. - with
BP - blood pressure
P - pulse
NAD – no abnormality detected
RS – respiratory system

6. a. Прочитайте информацию о типичных симптомах дыхательных болезней. Будьте готовы обсудить материал.

Respiratory Symptoms

One of the distinct characteristics of the respiratory system is that it is in constant contact with the outside environment, particularly the air. Because of this, it is exposed to substances such as bacteria, viruses, and chemical pollutants. That is why a significant number of diseases and disorders are associated with this system of the body, including influenza, asthma, and even lung cancer.

Cough. Cough is a common symptom of upper respiratory tract infection (URTI) and lung disease. A cough may be **productive**, where the patient coughs up sputum, or **non-productive**, where there is no **sputum**. A productive cough is often described as **loose** and non-productive cough as **dry**. Sputum (or **phlegm**) may be clear or white (**mucoid**), yellow due to the presence of pus (**purulent**), or **blood-stained** (as in haemoptysis).

b. Врач обследует больного с жалобами на кашель. Прочитайте диалог, будьте готовы воспроизвести его.

Doctor:	How long have you had the cough?
Mr. Hamilton:	Oh, for years.
Doctor:	Do you smoke?
Mr. Hamilton:	I used to **smoke heavily**, but I **gave up** a year ago.
Doctor:	Do you cough up any **phlegm**?
Mr. Hamilton:	Yes.
Doctor:	What colour is it?
Mr. Hamilton:	Usually yellow.
Doctor:	Have you ever **noticed any blood** in it?
Mr. Hamilton:	No.
Doctor:	Any **problem with your breathing**?
Mr. Hamilton:	Yes, I get very short of breath. I have to stop halfway up the stairs to get my breath back.

The doctor writes in the patient's case notes:

c/o dyspnoea & cough
c. purulent sputum for years. No haemoptysis.

c. Auscultation. The doctor is examining Mr. Hamilton's chest.

Take **deep breaths in and out** through your mouth. Good. Now say "**ninety-nine**".

Listening to the chest with a stethoscope may reveal the presence of sounds, apart from the normal **breath sounds.** There are two main kinds of **added sounds:**

- **crackles (moist rales),** which sound like hairs being rubbed together and suggest the presence of fluid in the lungs
- **wheezes,** which are more musical sounds, like whistling, and indicate narrowing of the airways. The sound of an asthma patient's breathing is also called wheeze.

The sound heard when the pleural surfaces are inflamed, as in pleurisy, is called a **pleural rub.** The doctor asked Mr. Hamilton to say "ninety-nine" to check **vocal resonance**, which may be increased (as in pneumonia), or decreased (as in pneumothorax).

After examining Mr. Hamilton, the doctor adds to his notes:

OE Chest: early inspiratory crackles both lung bases + exspiratory wheeze

d. Подберите все возможные прилагательные к следующим существительным.

cough→ _____

_____

sputum→ _____

_____

_____

e. Составьте словосочетания, используя следующие слова.

1. blood	**a. cough**
2. breath	**b. rub**
3. pleural	**c. stained**
4. productive	**d. resonance**
5. vocal	**e. sounds**

f. Являются ли следующие утверждения верными или ошибочными?

1. A patient who has a loose cough produces phlegm.
2. Crackles are heard when the airways are narrowed.
3. A patient who has a non-productive cough produces sputum.
4. Wheezes are typical of pleurisy.
5. A pleural rub is a sign of asthma.

g. Ответьте на вопросы.

1. What is one of the most common symptoms of the upper respiratory tract infection?

_____

_____

2. How can you differentiate a productive cough from non-productive?

_____

_____

3. What colour may the sputum be in case of the upper respiratory tract infection?

_____

_____

4. What sounds may the doctor hear on auscultation of the chest of the patient?

_____

_____

5. What command does the doctor give when he listens to the patient's chest?

_____

6. Have you ever had haemoptysis?

_____

7. Do you suffer from dyspnoea? What about your relatives?

_____

_____

h. Напишите историю болезни на основе данных о пациенте и добавьте предполагаемый диагноз.

PATIENT NOTES

36 yr old ♂
c/o sudden R chest pain with s.o.b. while watching TV.
pain ↑ by deep breaths and coughing
s.o.b. persisted over the 4 hours from the onset to his arrival in A&E
sl. non-productive cough
PH & FH nil relevant
3/52 holiday in Australia 3/52 previously
OE T 37.4ºC RR 24/ min BP 110/64
P 128 / min
RS chest expansion ↓ because of pain
pleural rub R lower zone posteriorly no other added sounds
Otherwise NAD

Begin: "A 36-year-old man complained of sudden right-sided chest pain…"

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Grammar Point

Present & Past ActiveTenses

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/english_tenses.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/tenses/time_phrases.htm

https://www.englisch-hilfen.de/en/exercises/tenses/find_tenses3.htm

https://www.englisch-hilfen.de/en/complex_tests/simple_present_progressive1/index.php

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can describe the structure of the respiratory system and its organs
- I know the functions of the respiratory system
- I know the symptoms of upper respiratory tract infection and lung disease.
- I can use *Present & Past ActiveTenses*

Key Words

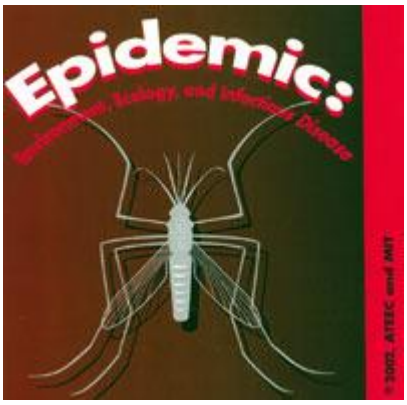
alveolus (pl. alveoli) /æl`vɪələs (æl`vɪəlaɪ/) *n*
blood-stained /`blʌdsteɪnd/ *adj*
breath /breθ/ *n*
breathe /briːð/ in *v*
breathe /briːð/ out *v*
breathing /`briːðɪŋ/ *n* = ventilation /ˌventɪ`leɪʃən/ *n*
bronchus (pl. bronchi) /`brɔŋkəs (`brɔŋkaɪ)/ *n*
cease /siːs/ *v*
cough /kɔf/ *n, v*
crackles /`krækl/ *n pl.*
diaphragm /`daɪəfræm/ *n*
diffusion /dɪ`fjuːʒən/ *n*
dry /draɪ/ *adj*
dyspnoea /dɪsp`niːə/ *n*
expiration /ˌeæspɪ`reɪʃən/ *n*
haemoptysis /hiː`mɔptɪsɪs/ *n*
inspiration /ˌɪnspɪ`reɪʃən/ *n*
integral /ɪn`tegrəl/ *adj*
larynx /`lærɪŋks/ *n* = voice box /vɔɪs bɔks/ *n*
loose /luːs/ *adj*
lower respiratory tract /ləuə rə`spɪrətərɪ trækt/
mucoid /`mjuːkɔɪd/ *adj*
occur /ə`kəː/ *v*
pharynx /`færɪŋks/ *n*
pleura /`pluərə / *n*
pleural rub /`pluərəl rʌb/
productive /prə`dʌktɪv/ *adj*
purulent /`pjuərulənt/ *adj*
respiration /ˌrespɪ`reɪʃən/ *n*
reverse /rɪ`vəːs/ *adj, v*
sputum /`spjuːtəm/ *n* = phlegm /flem/ *n*
upper respiratory tract /`ʌpə rə`spɪrətərɪ trækt/
vocal resonance /`vəukəl `reznəns/
wheezes /`wiːzɪz/ *n pl.*
windpipe /`wɪndpaɪp/ *n* = trachea /trə`kiːə/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT II. INFECTIOUS DISEASES

In this unit

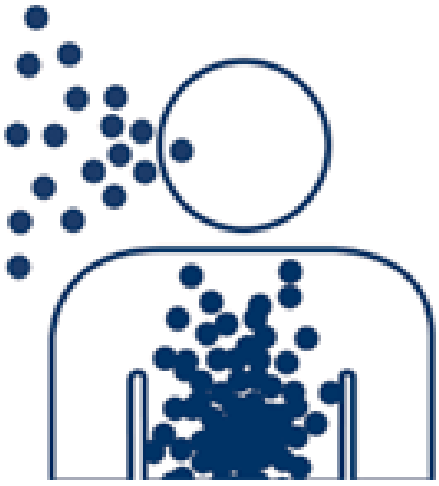
- talking about the main infectious diseases
- describing the main symptoms of infectious diseases
- discussing steps to fight infectious diseases
- *Future Active Tenses*



Lead-in

1. Ответьте на вопросы:

- What infectious diseases do you know?
- Are they dangerous? Why?
- How do they spread?
- Have you ever been ill with any infectious disease? What was it? What was the treatment?
- What is the most common infectious disease?
- Are there any ways of prevention of infectious diseases?



- What examples of disease epidemics in ancient times and nowadays have you heard about?
- What scientists were the first to try to explain the cause of infectious diseases?
- Who was the first to discover the treatment against infections?
- What infectious diseases have been completely eradicated in the world?
- What disease incidence has decreased considerably due to efforts of health care providers?
- What are the methods to control infectious diseases?

2. Прочитайте текст об инфекционных заболеваниях и озаглавьте его части.

Reading

Infectious Diseases

Infectious diseases also known as **transmissible diseases** or **communicable diseases** differ from other diseases in a number of aspects.

1.

Most importantly, they are caused by **pathogens:** viruses, bacteria, fungi, protozoa, and proteins called prions. Another general word for these pathogens is microbes. Patients often refer to microbes as **germs** or **bugs**.

2.

Communicability is another factor which differentiates infectious diseases from non-infectious. Transmission of **pathogenic organisms** to other people, directly or indirectly, may lead to an **outbreak** or epidemic. Infectious diseases can be classified by their means of **transmission** or by the area of the body they attack. For example, tuberculosis is a ***respiratory*** disease and it is transmitted through **airborne** droplets spread by **sneezing** and **spitting**. Hepatitis is a ***gastrointestinal*** disease which is acquired through **contaminated** food and water. Syphilis is a **sexually transmitted** disease which travels to a new **host** via bodily fluids; and it is possible to pick up meningitis, which is an **inflammation** of the brain and spinal cord, by touching a contaminated object such as a doorknob.

3.

Another way of looking at infectious diseases is to classify them according to the type of pathogen that causes them. A ***primary*** pathogen is one that can bring about a disease in a healthy host. Primary pathogens are responsible for illnesses such as HIV and malaria. ***Opportunistic*** pathogens, on the other hand, cause diseases in hosts with depressed **resistance**. They thrive on hospital wards and are responsible for **hospital acquired diseases** such as **MRSA** and **C. difficile.** These diseases are obviously of major concern to hospitals because the pathogens that cause them are always present. They are carried in the noses and on the skin of healthy people without them getting ill. They are very difficult to get rid of and can persist for months on surfaces, surviving standard cleaning procedures.

4.

Each infectious disease has its own specific signs and symptoms. General signs and symptoms common to many infectious diseases include:

- Fever
- Loss of appetite
- **Fatigue**
- Muscle aches

Identifying an infectious disease involves a close examination of a patient followed by the **culturing** of infectious agents taken from the patient. **Cultures** are examined under a microscope and matched against known agents, and scans and x-rays can find clues in internal abnormalities caused by pathogens.

5.

Knowing what type of germ is causing the illness makes it easier for doctor to choose a proper treatment. Thus, certain types of bacteria are especially **susceptible** to particular classes of antibiotics. So, ***antibiotics*** are used for bacterial infections, while ***antiviral*** drugs have been developed to treat some viruses that cause AIDS, hepatitis B and C, influenza, *etc*. ***Anti-parasitics*** may be used for such diseases as malaria.

6.

Most infectious diseases have only minor complications, but some infections — such as pneumonia, AIDS or meningitis — can become life-threatening. To prevent them or decrease the risk of infecting yourself or others follow the next tips:

- **Wash your hands** before and after cooking, eating and after using the toilet.
- **Get vaccinated**
- **Stay home.** Don't go to work if you're vomiting, have diarrhoea or are running a fever.
- **Prepare food safely**
- **Practice safe sex**
- **Don't share personal items** such as toothbrush, comb and razor.
- **Travel wisely.** Don't fly when you're ill.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Расшифруйте следующие аббревиатуры: MRSA, C. difficile, AIDS, HIV, MMR.

3. Словообразование. Зполните таблицу.

Noun	Verb	Adjective
asepsis		1_____
contagion		2_____
contaminant/ contamination	3_____	4_____
hygiene		5_____
immunity	6_____	immune/ immunized
7_____	inoculate	inoculated
pathogen		8_____
9_____		prophylactic
susceptibility		10_____
transmission	11_____	transmitted
infection	12_____	13_____
14_____	resist	15_____
vaccination	16_____	17_____

4. Закончите предложения, употребив правильную форму слов из упр. 3.

1. Gloves protect medical staff from _____ diseases.
2. The anthrax bacterium is _____ to the antibiotic Ciprofloxacin.
3. I think I must be _____ to chickenpox – I had it when I was a child.
4. A disease needs a route of _____ to a host.
5. A _____ doesn't cure disease, but prevents it.
6. The bestmethod of _____ is to wash your hands in hot water for at least one minute.
7. Maintain an _____ environment by killing all germs.

5. Подберите синонимы к следующим словам.

infectious diseases = _____
pathogen = _____
outbreak = _____
immunity = _____
fatigue = _____
fever = _____
vaccination = _____
abnormality = _____
life-threatening = _____

6. В тех случаях, когда у вас была простуда, как вы были инфицированы? Какие пути передачи инфекции вам знакомы?

1. **droplet contact** (respiratory route) through coughs and sneezes, kissing, sharing cups, etc.
2. **faecal-oral transmission** – from contaminated food or water
3. **direct physical contact**, including sexual contact
4. **vertical transmission** – mother to child
5. **iatrogenic transmission** – due to medical procedures
6. **vector-borne** – carried by insects or other animals
7. **indirect contact** – by touching contaminated surfaces

7. Соотнесите следующие болезни с путями их передачи, указанными в упр. 6.

a. measles	**g.** meningitis
b. chickenpox	**h.** MRSA
c. cholera	**i.** polio
d. HIV	**j.** rabies
e. influenza	**k.** syphilis
f. malaria	**l.** tuberculosis

8. Изучите предложения a-j и, используя слова, выделенные жирным шрифтом, завершите определения 1-10.

Describing Symptoms

a. The disease is gone when the patient is free from all **morbid** signs and symptoms.
b. Despite all the treatment she received, the symptoms of the disease remained **persistent**.
c. We didn't expect weight loss. It's an **atypical** sign and led to the wrong diagnosis.
d. At first, meningitis is hard to identify, but eventually the **classic** sign of a haemorrhagic rash appears.
e. The final symptomatic phase of HIV is **full-blown** AIDS.
f. In the early stages of the disease, the **initial** symptoms are things like nausea and muscle pain.
g. He showed only **minimal** signs of the disease for quite a long time and didn't feel particularly ill.
h. The symptoms are **progressive**, starting in the spinal cord and continuing to the brain.
i. The **cardinal** signs of leprosy are readily 15ecognized in countries where the disease is common.
j. Early clinical presentations of ehrlichiosis are **non-specific** and resemble various other infectious diseases.

1. Signs and symptoms that do not go away are _____ .
2. _____ signs are textbook examples.
3. A complete set of signs and symptoms are _____
4. _____ symptoms indicate disease or abnormality.
5. _____ signs and symptoms appear in a number of different diseases.
6. The sign and symptom that leads to a diagnosis is known as _____
7. Signs and symptoms that are not usual are _____ .
8. Symptoms that get worse are _____ symptoms.
9. _____ symptoms are often not noticed.
10. The _____ signs of an infectious disease appear early on.

9. Выберите правильный ответ.

1. _____ can protect children against six common infectious diseases during childhood.
a. radiology **c.** surgery
b. vaccination **d.** dehydration

2. _____ diseases spread easily from one person to another directly or indirectly.
a. chronic **c.** serious
b. acute **d.** contagious

3. _____ is the inflammation of the lungs caused primarily by bacteria, viruses, dusts and allergy.
a. hepatitis **c.** pneumonia
b. cancer **d.** meningitis

4. The word ***epidemics*** is closest in meaning to _____.
a. studies **c.** bacteria
b. vaccines **d.** plagues

5. Which of the following is NOT a probable cause of infection?

a. Eating food cooked with contaminated water
b. Eating undercooked seafood
c. Eating overcooked pork
d. Eating raw vegetables

6. Which of the following is NOT an example of an infectious disease?
a. pneumonia **c.** dysentery
b. malaria **d.** rickets

Language Development

1. Просмотрите текст об инфекионных болезнях и ответьте на вопросы.

1. What are other terms for infectious diseases?
_____

2. What are infectious diseases caused by?
_____
_____

3. How are infectious diseases transmitted?
_____
_____

4. What factor makes infectious diseases especially dangerous and why?
_____
_____

5. What are opportunistic infections? What are they responsible for?
_____
_____

6. What are the most common signs and symptoms of infectious diseases?
_____
_____

7. What does identifying an infectious disease include?
_____
_____

8. What is the treatment of infectious diseases? What does it depend on?
_____
_____

9. What are methods of prevention of infectious diseases?
_____
_____

10. Give examples of infectious diseases.
_____
_____
_____

2. a. Студент-медик выделил несколько слов в истории болезни. Прочитайте и запомните эти слова.

Case 45
A 24- year-old man presented with a **fever** which he had had for three days. On the third day he had had a severe attack of fever with sweating and **rigors**. The only past history of relevance was hepatitis four years earlier and **glandular fever** (infection with Epstein-Barr virus) at the age of 18 years. He had returned from Africa three weeks previously.

fever = **pyrexia** (also remember PUO – **pyrexia of unknown origin)**
fever also known as **temperature –** I've got a temperature".
adjective = **feverish/febrile** and **pyrexial**
opposites = **afebrile/apyrexial**

Some symptoms of fever
sweating
rigors (severe shivering and sensation of coldness, also known as **chills**)

b. Завершите описание клинического случая больного, предсталенное в упр. 2. а.

Case 45
On examination, he looked unwell. His pulse rate was 100/min. He had a palpable spleen. The combination of 1. _____ and 2. _____ in a patient who has recently returned from Africa strongly suggests a diagnosis of malaria. The 3. _____ period is usually 10-14 days. In this case, the patient admitted he had not been taking 4. ___ _____ regularly. The diagnosis was confirmed by the presence of 5. _____ in his blood film.

c. Закончите следующие предложения.

1. An infection which can be treated successfully with antibiotics is _____ .
2. Another word for an epidemic is an _____ .
3. Bacteria and viruses are examples of _____.
4. Someone whose temperature is normal is _____ .
5. The common infection with Epstein-Barr virus is known as _____ .

3. a. Прочитайте информацию о больном и выполните упражнения.

Source and Spread of Infection

Infection may originate from the patient (**endogenous**), usually from skin, nasopharynx or bowel, or from outside sources (**exogenous**), often another person who may be either suffering from an infection or **carrying** a pathogenic microorganism. **Carriers** are usually healthy and may harbour the organism in the throat (for example diphtheria), bowel (salmonella), or blood (hepatitis B or HIV). Non-human sources of infection include water (*e.g.* cholera), milk (*e.g.* tuberculosis), food (*e.g.* botulism), animals (*e.g.* rabies), birds (*e.g.* psittacosis) and also the soil (*e.g.* legionella – **Legionnaires' disease**).

The **incubation period** is the period between the invasion of the tissues by pathogens and the appearance of clinical features of infection. The **period of infectivity** is the time that the patient is infectious to others.

b. Соотнесите две части предложения.

1. Chickenpox (varicella) is a common infectious
2. Rabies has an incubation
3. The patient remained febrile
4. He was admitted with a four-day history of influenza-type symptoms of fever with
5. Quite a proportion of patients who recover from hepatitis B
6. The central part of Africa is in the midst of an epidemic
7. Measles (rubeola) is most
8. Lyme disease is caused by transmission
9. PUO stands for
10. 1988 saw the UK start live attenuated

a. period ranging from four days to many months.
b. rigors, myalgia and general malaise.
c. become carriers of the virus.
d. infectious during the catarrhal stage.
e. disease of childhood.
f. of AIDS.
g. of B.burgdorferi from animal to man by ixodid ticks.
h. with peaks of temperature of 39.5ºC.
i. pyrexia of unknown origin.
j. measles, mumps, and rubella (MMR) vaccine.

c. Ответьте на вопросы.

1. What infectious diseases are mentioned in the text?
2. How may pathogens be classified?
3. Where may the carriers harbour microorganisms?
4. What is the difference between the incubation period and period of infectivity?

4. a. Прочитайте текст о кори, будьте готовы обсудить эту болезнь.

Measles

Measles is an extremely contagious, febrile disease of high morbidity characterized by rash and catarrhal inflammation of the eyes and respiratory tract. It is principally a benign disease of childhood, but may affect with equal frequency persons of any age not previously attacked by the virus.

It may occur at any time of the year, but most outbreaks are in late winter and early spring, with a peak at the end of April.

All over the world measles is a disease of children; most adults possess acquired immunity. Beyond the age of ten more than 90% of the population have specific antibody. Morbidity and mortality rates do not appear to be influenced by sex or race. Case fatality rates are highest in children less than five years of age, and are also relatively high in the aged. Congenital infection has occurred.

Characteristics of measles.

1. The virus is spread by breathing in virus-containing droplets or by touching contaminated surfaces.

2. The virus grows in cells in the back of the throat and lungs. Symptoms appear after 10 to 12 days.

3. Infected person has a fever lasting two to four days, followed by a cough, runny nose and red watery eyes.

4. A rash lasting five to six days appears about the face and head spreading through the torso to the hands and feet.

5.The virus can be transmitted from four days prior to and four days after the appearance of the rash.

b. Выберите правильный ответ.

1. Which of the following statements is TRUE?

a. Measles occurs in only a few countries
b. Adults do not usually have measles.
c. Measles rarely causes fever.
d. Measles is not a contagious disease.

2. Which of the following statements is NOT true?

a. Measles mortality rates are highest in children under five years old.
b. Measles is principally a benign disease of childhood.
c. Measles never occurs in summer.
d. Rash, inflammation of the eyes, etc. are the usual symptoms of measles.

3. According to the text, measles is a disease of children because:

a. most adults possess acquired immunity
b. they often die from measles.
c. they aren't brought up well.
d. they often play together.

4. According to the text, 10% of the population over ten years of age

a. do not possess acquired immunity.
b. die from measles.
c. never have measles.
d. have specific antibody.

5. Fatalities caused by measles may vary in incidence

a. according to the ability of the population to develop acquired immunity.
b. according to the time of the year when measles occurs.
c. according to sex or race.
d. according to every country.

c. Расскажите о причинах и симптомах кори.

5. Проект.

Исследуйте одну из данных в таблице инфекционных болезней. Сделайте презентацию: опишите, когда и где были эпидемии данной болезни, ее симптомы и пути передачи.

cholera	malaria	yellow fever
influenza	meningitis	plague
leprosy	tuberculosis	elephantiasis

Grammar Point

Future Active Tenses

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar_list/zeitformen.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/tenses/will_future_mix.htm

https://www.englisch-hilfen.de/en/exercises/tenses/going_to_future_mix.htm

https://www.englisch-hilfen.de/en/exercises/tenses/future_perfect_statements.htm

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I know the main infectious diseases
- I can describe the main symptoms of infectious diseases
- I know how to fight and prevent infectious diseases
- I can use Future Active Tenses

Key Words

airborne /ˋeɜbɔːn/ *adj*
bug /bʌg/ *n*
carrier /ˋkerɪə/ *n*
chickenpox /ˋʧɪkɪnpɔks/ *n* = varicella /ˌverɪˋselə/ *n*
chill /ʧɪl/ *n*
communicable /kəˋmjuːnikəbl/ *adj*
contamination /kənˌtæmɪˋneɪʃən/ *n*
culture**/**culturing /ˋkʌlʧə(rɪŋ)/ *n*
droplet contact /ˋdrɔplɪt ˋkɔntəkt/
faecal-oral /ˋfiːkəl ˋɔːrəl/ transmission
fatigue /fəˋtiːg/ *n*
fever /ˋfiːvə/ *n* = pyrexia /paiˋreksɪə/ *n*
full-blown /ˋfulbləun/ *adj*
germ /ʤəːm/ *n*
hospital acquired diseases /ˋhɔspɪtəl əˋkwaɪəd dɪˋziːz/
host /həust/ *n*
incubation period /ɪnkjuˋbeɪʃən ˋpɪərɪəd/
inflammation /ɪnfləˋmeɪʃən/ *n*
influenza /ɪnfluˋenzə/ *n* = flu /fluː / *n*
malaria /məˋleɜrɪə/ *n*
measles /ˋmiːzlz / *n* = rubeola /ruˋbiːələ/ *n*
meningitis /menɪnˋʤaɪtɪs/ *n*
morbid /ˋmɔbɪd/ *adj*
MRSA /əmɑːrəsˋeɪ/ (methicillin-resistant Staphylococcus aureus)
opportunistic /ɔpətuːˋnɪstɪk/ *adj*
outbreak /ˋautbreɪk/ *n*
persistent /pəˋsɪstənt/ *n*
rabies /ˋreɪbiːz/ *n*
resistance /rɪˋzɪstəns/ *n*
rigors /ˋriːgə/ *n*
sneezing /ˋsniːzɪŋ/ *n*
spitting /ˋspɪtɪŋ/ *n*
susceptible /səˋseptɪbl/ *adj*
sweating /ˋswetɪŋ/ *n*
transmission /trænzˋmɪʃən/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT III. INFLUENZA

In this unit

- describing the symptoms of influenza
- determining the sources of influenza
- speaking about prevention of flu
- *Present Passive Tenses*

Lead-in

1. Изучите список самых печально известных и смертоносных эпидемий и сраните их.

- What was the most famous and lethal outbreak of flu in the world? How many people did it kill?
- What was the mortality rate in the least severe pandemic?
- What type of virus caused flu pandemic in 2009? How is this virus strain commonly referred to?
- What in your opinion helped reduce mortality of people in later pandemics?

2. Прочитайте текст о гриппе и подготовьтесь к обсуждению причин, симптомов и методов профилактики этого заболевания.

Known Flu Pandemics					
Name of pandemic	**Date**	**Deaths**	**Case fatality rate**	**Subtype involved**	**Pandemic severity index**
Asiatic (Russian) flu	1889-1890	1 million	0.15%	possibly H3N8	NA
1918 flu pandemic (Spanish flu)	1918-1920	20 to 100 million	2%	H1N1	5
Asian flu	1957-1958	1 to 1.5 million	0.13%	H2N2	2
Hong Kong flu	1968-1969	0.75 to 1 million	<0.1%	H3N2	2
2009 flu pandemic	2009-2010	18,000	0.03%	H1N1 swine flu	NA

A *pandemic* is an epidemic that spreads to many different countries.
A **pandemic** can start when the following three conditions are met:

- a new disease appears
- the agent infects humans causing serious illness
- the agent spreads easily among humans.

The first convincing record of an influenza pandemic was of an outbreak in 1580, which began in Russia and spread to Europe via Africa.

In Rome, over 8,000 people were killed, and several Spanish cities were almost wiped out.

Reading

Influenza

What is the flu?

Influenza, commonly known as “the flu”, is a **contagious** respiratory illness caused by influenza viruses. It can cause **mild** to **severe** illness, and at times can lead to death. Some people, such as older people, young children, and people with certain health conditions, are at high risk for serious flu **complications**.

How is the flu spread?

The flu is spread in droplets released by coughing and sneezing. It usually spreads from person to person, though occasionally people may be infected by touching something with virus on it and then touching their mouth or nose.

What are the symptoms of the flu?

The flu usually starts suddenly and may include these symptoms:

- Fever or feeling feverish/**chills**
- Cough
- Sore throat
- Runny or **stuffy nose**
- Muscle or body aches
- Headaches
- Fatigue (tiredness)
- Some people may have vomiting and **diarrhea**, though this is more common in children than adults.

It's important to note that not everyone with flu will have a fever.

It can be difficult to **distinguish** between the common **cold** and influenza in the early stages of these infections, but a flu can be identified by a high fever with a sudden **onset** and extreme fatigue.

What are the complications associated with the flu?

Some of the complications caused by flu include pneumonia, dehydration, and **worsening** of chronic medical conditions, such as heart or lung disease, asthma or diabetes. Children may get sinus problems and ear infections.

How to protect oneself against the flu?

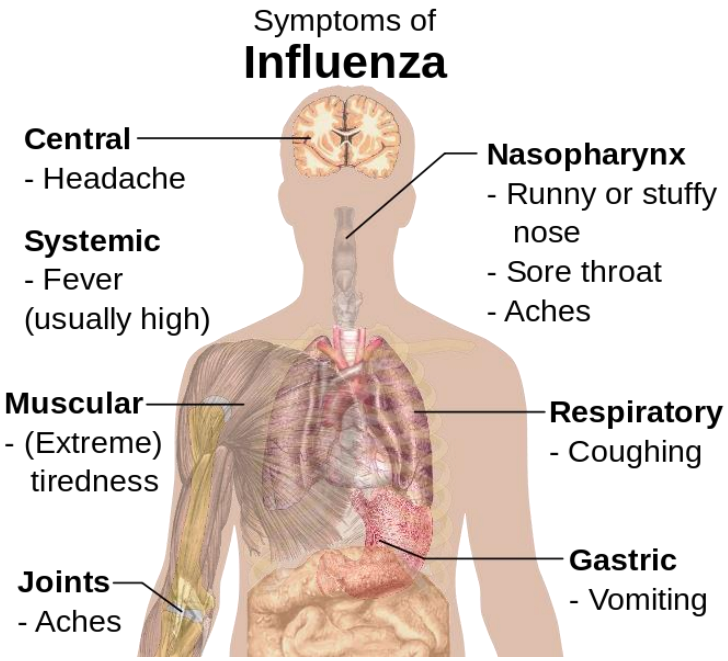
The influenza vaccine is recommended by the WHO for high-risk groups, such as children, the elderly, health care workers, and people who have chronic illnesses such as asthma, diabetes, heart disease.

Reasonably effective ways to reduce the transmission of influenza include good personal health and hygiene habits such as: not touching your eyes, nose or mouth; frequent hand washing (with soap and water, or with alcohol-based hand rubs); covering coughs and sneezes; avoiding close contact with sick people; and staying home yourself if you are sick.

Can the flu be treated?

People with the flu are advised to get plenty of rest, drink plenty of liquids, avoid using alcohol and tobacco and, if necessary, take medications such as paracetamol to relieve the fever and muscle aches associated with the flu.

Antiviral medication may be effective, but some **strains** of influenza can show resistance to the standard antiviral drugs and pharmaceutical companies have to develop new vaccines that will provide the best **immunity** against these strains.



Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Найдите определения для данных слов.

1. contagious (of a disease)	**a.** a type of plant, virus or bacterium whose characte-ristics are different from others of the same group
2. fever	**b.** rigors
3. chills	**c.** pyrexia
4. strain	**d.** spreading by direct or indirect contact
5. diarrhea	**e.** a large amount
6. to distinguish	**f.** an abnormally frequent discharge of fluid fecal matter from the bowel
7. plenty	**g.** to recognize the difference
8. complication	**h.** the beginning of a disease
9. onset	**i.** an unfavorable evolution of a disease

3. Заполните пробелы словами из таблицы в упр 2.

1. Some diseases of the respiratory tract are hard to _____.
2. Influenza is caused by a highly_____ virus that is spread by coughs and sneezes.
3. Elderly people, pregnant women can develop serious _____ due to influenza.
4. The _____ of the disease was marked by attacks of vomiting and _____.
5. Influenza pandemics have occurred four times in the past 100 years and caused _____ of deaths.
6. Certain _____of bacteria are especially susceptible to particular classes of antibiotics.

4. Подберите синонимы к словам.

1. contagious	**a.** blocked
2. sore	**b.** shivering
3. chill	**c.** painful; aching; tender
4. stuffy	**d.** communicable
5. to distinguish	**e.** to make less
6. to reduce	**f.** to differentiate
7. ache	**g.** tiredness
8. fatigue	**h.** pain
9. to relieve	**i.** to connect
10. to associate	**j.** host
11. carrier	**k.** to free from pain or discomfort

5. Соотнесите слова в столбике А с их антонимами в столбике В.

A.	**1.** mild	**B.**	**a.** rare
	2. diarrhea		**b.** severe
	3. to distinguish		**c.** constipation
	4. worsening		**d.** to escape recognition
	5. common		**e.** improvement
	6. include		**f.** exclude

6. Прочитайте текст, заполните пробелы словами из таблицы. Ответьте на вопрос: Какие типы вирусов, вызывающие грипп, вы знаете?

Transmitted, included, outbreaks, caused, common, pandemic recognized, mutates, strains, infects

Flu viruses are divided into three broad categories: **influenza A, B or C**. Influenza A is the most _____1 type**. H1N1** flu is a variety of influenza A. There are many different _____ 2 of H1N1 flu. Varieties of influenza A (H1N1), influenza A (H3N2) and influenza B are _____3 in each year's flu vaccine. This year, the vaccine protects against the strain of H1N1 flu that _____4 the 2009 pandemic.

Bird flu is caused by a type of influenza virus that rarely _____5 humans. But when bird flu does strike humans, it's often deadly. More than half the people who become infected with bird flu die of the disease. In recent years, _____6 of bird flu have occurred in Asia, Africa and parts of Europe. Health officials worry that a global outbreak could occur if a bird flu virus _____7 into a form that transmits more easily from person to person.

The term **swine flu** refers to influenza in pigs. Occasionally, pigs transmit influenza viruses to people, mainly to farm workers and veterinarians. Less often, someone infected occupationally passes the infection to others.

The human respiratory infection caused by the influenza virus H1N1 — popularly known as swine flu — was first _____8 in spring 2009. In August 2010 the World Health Organization declared the infection a global_____9. H1N1 is still circulating in humans as a seasonal flu virus and is included in the seasonal flu vaccine. Another strain of swine flu — H3N2 variant — has also made its way into humans. This flu contains a gene from the H1N1 virus. The virus has only been _____10 through human exposure to swine, not from human to human.

Language Development

1. Просмотрите текст и ответьте на вопросы.

1. What kind of disease is influenza?

_____

2. How is the flu spread?

_____

_____

3. What are the symptoms of the flu?

_____

_____

4. What are the complications associated with the flu?

_____

_____

5. What is the treatment of influenza?

_____

_____

6. What are methods of prevention of influenza?

_____

_____

2. Тест: Выберите правильный ответ, проверив свои знания по гигиене.

1. What is MRSA?

a. a virus	**b.** a bacterium	**c.** an antibiotic

2. How do you catch MRSA?
a. by eating from dirty plates
b. from poor hospital hygiene
c. by drinking bad water

3. Which of these things have nothing to do with bacreia?

a. wine making	**b.** yoghurt	**c.** the common cold	**d.** bad smells

4. In an operating theatre, which of these things break hygiene rules?
a. wearing your mask over your nose
b. wearing your hair loose
c. wearing make-up

5. Which of these things is most important in stopping the spread of MRSA?
a. hospital staff should wash their hands between patients
b. cleaners should disinfect door handles
c. visitors should wear masks

6. Where do staphyloccocus bacteria live?

a. in noses	**b.** in soil	**c.** in toilets

7. How long should you wash your hands in hot water to be sure they are clean?

a. 15 seconds	**b.** half a minute	**c.** 1 minute

3.a. Прочитайте текст, будьте готовы его обсудить.

Pandemics and Tamiflu

When someone who has flu sneezes nearby, you take tiny droplets of their saliva into your lungs. The droplets contain viruses that are looking for a new home. They get into your lungs and then into your blood, and can quickly take over your whole body, using it as a factory in which they can reproduce.

At any time, a deadly bacterium or virus can become very successful and spread across the world, killing millions of human beings. When this happens it is called a “pandemic”.

There was a pandemic in 1918. An influenza virus called H1N1, or “Spanish flu”, killed between 50 to 100 million people. More people died from H1N1 than were killed in the First World War.

A letter from a doctor in a military camp in 1918 describes the situation:

> *“ It is only a few hours until death comes. It is horrible. We have been averaging about 100 deaths per day. We have lost many nurses and doctors. Special trains carry away the dead. For several days there were no coffins and the bodies piled up”.*

Since 1918 the H1N1 virus has mutated. Now there is a mutation called H5N1. When this mutation first appeared in China in 1996, there was a desperate search for a medicine to deal with it. The pharmaceutical company Roche came up with the drug called Tamiflu.

Tamiflu does not kill H5N1, but stops it making copies of itself. If given early enough, vaccinations of Tamiflu could perhaps save many lives. However, the virus will continue to mutate, and might become resistant to Tamiflu. The next mutation may already be with us by the time you’re reading this!

3 b. Прочитайте предложения и определите: какие предложения верны (T), а где допущены ошибки (F)? Исправьте неверные утверждения.

1. A pandemic is a type of virus. _____
2. Viruses reproduce outside your body. _____
3. More people died from Spanish flu than were killed in the First World War. _____
4. H1N1 is the name of a pandemic. _____ .
5. H5N1 is an antiviral drug. _____
6. Tamiflu is made by Roche. _____
7. Tamiflu stops H5N1 spreading. _____

3c. Ответьте на вопросы.

1. Can you name any deadly infectious diseases that have spread around the world?
2. What is the latest news on bird flu?
3. How does infection get into your body?
4. What do you know about “Spanish flu”?
5. How did the military doctor describe the situation with the flu pandemic in 1918?
6. What medicine against flu was discovered in 1996? How does it act? Is it really effective?

4. Прочитайте описания и соотнесите их с названиями болезней в таблице.

infectious parotitis, influenza, rubella, rubeola, varicella, pertussis

1. A common illness, the symptoms of which include inflammation of the nasal passages, sneezing, coughing, a running nose and fever.

2. A common infectious viral disease of children, with mild fever, swollen lymph nodes, and rash. It can cause stillbirth or malformation of the unborn baby if it is caught by a mother while she is pregnant.

3. An infectious disease of children where the body is covered with a red rash. It can weaken the body’s resistance to other diseases, *e.g.* bronchitis and ear infection. If caught by an adult it can be very serious.

4. An infectious disease of children, caused by a herpes virus and characterized by fever and red spots which turn into itchy blisters.

5. An infectious disease of children, with fever and swelling in the salivary glands, caused by paramyxovirus.

6. An infectious disease affecting the bronchial tubes. The patient suffers from a severe cough and makes a loud noise when inhaling after a coughing fit.

5. Все болезни в упр. 4 имеют и неофициальное название. Соотнесите неофициальное название с официальным.

Informal	**Formal**
1. *Chickenpox* is the same as	**a.** allergic rhinitis
2. *German measles* is the same as	**b.** infectious parotitis
3. The *flu* is the same as	**c.** coryza
4. A *cold* is the same as	**d.** influenza
5. *Hay fever* is the same as	**e.** rubella
6. *Measles*	**f.** rubeola
7. *Mumps*	**g.** pertussis
8. *Whooping cough* is the same as	**h.** varicella

6. Завершите следующие диалоги между врачом и пациентом, написав название болезней. Используйте неофициальные названия из таблицы выше. Будьте готовы воспроизвести диалоги.

1. What’s the problem?:
   It’s my son. He’s got a rash and swelling in his armpits.
   Does he have a fever?
   Yes.
   Hmm. He may have _____ .

2. How are you feeling?
   I’ve got this terrible cough.
   Mm-hmm.
   And after I cough I make a noise when I try to breathe.
   Sounds like _____ .

3. How are you today?
   Oh, not very well. I’ve got a cough and a terrible cold.
   Do you have a fever?
   Umm, yes I do.
   It’s probably a touch of _____ .

4. What seems to be the trouble?:
   It’s my daughter. She’s got a fever and this swelling.
   Where’s the swelling?
   In her throat.
   It could be _____ .

5. What can I do for you?
   It’s the twins. They are covered in these dreadful red spots.
   Are they experiencing any itching?
   Yes, they are.
   It may be _____ .

Grammar Point

Present Passive Tenses

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/active_passive.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/active_passive/active_or_passive.htm

https://www.englisch-hilfen.de/en/exercises/active_passive/form_sentences_simple_present.htm

https://www.englisch-hilfen.de/en/exercises/active_passive/sentences_present_progressive.htm

6. Проект.
You are working as a family physician. Today you are going to see a family with two children (a 6-year-old girl and a 12-year-old boy) who are about to travel to India in two months. Search the web and make a list of recommendations for the travellers (not less than 5-7 items).
Some useful websites:
http://wwwnc.cdc.gov/travel/destinations/traveler/none/india
http://www.lonelyplanet.com/india/practical-information/health
http://goindia.about.com/od/planningyourtrip/tp/india-common-health-concerns.htm

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can describe the symptoms of influenza
- I can list the sources of influenza
- I can talk about about prevention of flu
- I can use Present Passive Tenses

Key Words

a cold /kəuld/ *n*, *мж.* common cold
associate /ə`səuʃɪeɪt/ *v*
chickenpox /`tʃɪkɪnpɔks/ *n* = varicella /,verɪ`selə/ *n*
chill /tʃɪl/ *n*
complication /kɔmplɪ`keɪʃn/ *n*
contagious /kən`teɪdʒəs/ *adj*
diarrhea /ˌdaɪə`rɪə/ *n*
distinguish /dɪ`stɪŋgwɪʃ/ *v*
german measles /`ʤə:mən `mi:zlz/ *n* = rubella /ru`belə/ *n*
immunity /ɪ`mju:nɪtɪ/ *n*
measles /`mi:zlz / *n* = rubeola /ru`bi:ələ/ *n*
mild /maɪld/ *adj*
mumps /mʌmps/ *n* = infectious parotitis /ɪn`fekʃəs perə`taɪtɪs/ *n*
onset /`ɔnsət/ *n*
severe /sɪ`vɪə/ *adj*
strain /streɪn/ *n*
stuffy nose /`stʌfɪ nəuz/
whooping cough /`hu:pɪŋ kɔf/ *n* = pertussis /pə`tʌsɪs/ *n*
worsen /`wə:sən/ *v*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT IV. THE CARDIOVASCULAR SYSTEM

In this unit

- describing the structure of the cardiovascular system
- talking about the blood vessels and circulation of blood
- *Past Passive Tenses*

Lead-in

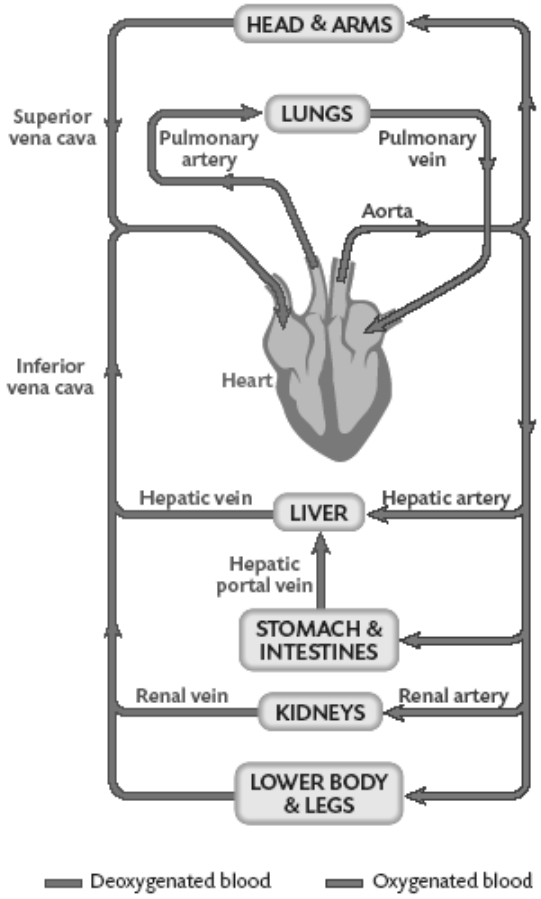
1. Интересные факты

- If all of the blood vessels in an average adult were strung together end to end, they would reach at least 60,000 miles long, more than twice the distance around the Earth's equator. The capillaries alone make up 60 percent of that total.
- Every minute, 5 litres of blood is pumped through the pulmonary capillaries and around the alveoli.
- Overall, blood takes approximately one second to pass through the lung capillaries, during which time it becomes nearly 100 percent saturated with oxygen, while losing all of its excess carbon dioxide.
- At any given time, the veins and venules typically hold about two thirds of the blood flowing through the body.
- As the heart contracts and blood rushes into the aorta, it is travelling at a speed of about 20 centimetres per second.
- Scientists have estimated that it takes about 30 seconds for a given portion of the blood to complete the entire cycle: from lungs to heart to body, back to the heart and out to the lungs.
- **One** drop of blood contains a half a drop of plasma, **5 million** red blood cells, **10 thousand** white blood cells and **250 thousand** platelets.

2. Прочитайте текст о сердечно-сосудистой системе. Выберите из списка утверждений A-E те, что лучше всего отражают содержание каждой части (1-4) текста. Здесь есть одно лишнее утверждение, которое вам не понадобится.

1. Types of vessels
2. Systems of blood circulation
3. The structure of the blood vessel wall
4. Subdivisions of the pulmonary system
5. Subdivisions of the general system

3. Рассмотрите рисунок и обозначьте системы циркуляции крови красным и синим карандашом, чтобы показать артериальное и венозное кровообращение соответственно.



As the arteries grow hard, the heart grows soft.
H. L. Mencken

*You have thousands of miles of blood vessels in your body. You could wrap your blood vessels around the equator **TWICE!**.*

Reading

The Cardiovascular System

Blood circulates throughout the body in the **cardiovascular system,** which consists of the heart and the blood vessels. This system forms a continuous circuit that delivers oxygen and nutrients to all cells and carries away waste products.

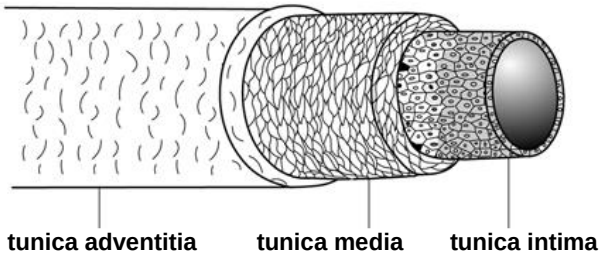
1.

When the blood leaves the heart it flows smoothly in tubes called **blood vessels**. First, the blood flows into tubes called **arteries**. The arteries leaving the heart are thick tubes. The largest artery of the body is **aorta** which is 2.54 cm wide. But the arteries soon branch again and again to form smaller and smaller tubes. The smallest blood vessels, called **capillaries**, form a fine **network** of tiny vessels throughout the body. As the blood flows through the capillaries, it delivers oxygen to nearby cells and also collects carbon dioxide waste from the body cells. The capillaries join together to form small **veins**. The veins, in turn, unite with each other to form larger veins The two largest veins are the **superior vena cava**, which receives blood from the upper body, and the **inferior vena cava**, which receives blood from the lower body region. Then both venae cavae empty the blood into the heart.
So the blood vessels of the body carry blood in a circle: moving away from the heart in arteries, travelling to various parts of the body in capillaries, and going back to the heart in veins.

2.

Arteries and veins are made of three layers of tissue (See the picture on the right). These tissue layers provide strength and **flexibility**. They are:

- The **tunica intima** is the innermost layer. It consists of endothelial tissue that lines the blood vessel.
- The **tunica media** is the middle layer. It is made up of smooth muscle cells and elastic tissue. This is the thickest layer in arteries.
- The **tunica adventitia** is the outermost layer made up of fibrous connective tissue, which adds strength and support to vessels.



3.

The human circulatory system is really a two-part system. Its purpose is to bring oxygen-bearing blood to all the tissues of the body. When the heart contracts it pushes the blood out into two major loops or cycles. In the **systemic loop** (or **systemic circulation**), the blood circulates into the body's systems, bringing oxygen to all its organs, structures and tissues and collecting carbon dioxide waste. In the **pulmonary loop** (or **pulmonary circulation**), the blood circulates to and from the lungs, to release the carbon dioxide and pick up new oxygen. The systemic cycle is controlled by the left side of the heart, the pulmonary cycle by the right side of the heart.

4.

The **systemic** circulation can be divided into three subsystems:

- **coronary circulation** - supplies blood to the heart.
- **renal circulation** - supplies blood to the kidneys. Nearly one-forth of the blood that is pumped into the aorta by the left ventricle flows to the kidneys. The kidneys filter waste from the blood.
- **hepatic portal circulation.** Nutrients are picked up by capillaries in the small intestines and are transported to the liver. Excess nutrients are stored in the liver for future needs. The liver receives oxygenated blood from a large artery that branches off the aorta.

Since all the body's systems are **interconnected** and depend on one another, it is not surprising that organs from other systems rely on the blood and circular system to function well.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Соотнесите термины с их определениями:

1. aorta	**a.** A vessel that carries blood low in oxygen back to the heart.
2. artery	**b.** A microscopic blood vessel through which materials are exchanged between the blood and the tissues
3. capillary	**c.** A vessel that carries blood away from the heart
4. cardio-vascular system	**d.** The system of vessels that carries blood from the right side of the heart to the lungs to be oxygenated and then back to the left side of the heart
5. pulmonary circulation	**e.** The system of vessels that carries oxygenated blood from the left side of the heart to all tissues except the lungs and returns deoxygenated blood to the right side of the heart
6. systemic circulation	**f.** The heart and blood vessels considered as a whole.
7. vein	**g.** The largest artery

3. Заполните пробелы, используя активную лексику урока.

Blood travels round the body in blood _____ 1. The _____2 carry blood from the heart to all parts of the body while blood returns to the heart in _____3.

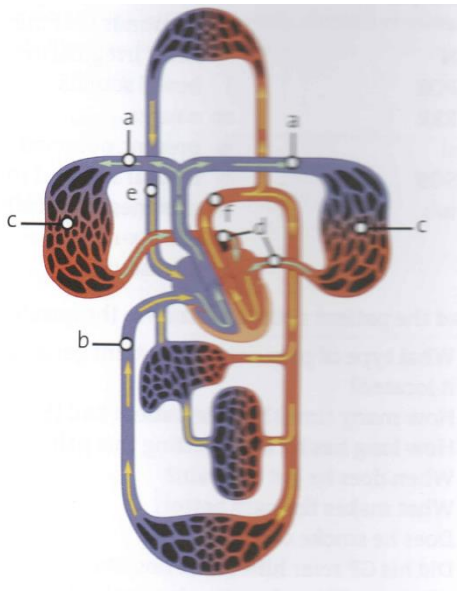
The largest artery is the _____4. The microscopic vessels through which materials are exchanged between the blood and the tissues are the _____5.

The pulmonary artery carries blood from the heart to the _____6 while the aorta carries blood to all parts of the body from the _____7 .

Blood carried in the systemic arteries is _____ _____8 but in the pulmonary artery it is not.

4. Завершите описания 1-6, используя слова в таблице, и соотнесите их с буквами a-f на рисунке.

deoxygenated	oxygen	oxygenated



1. The aorta carries _____ blood from the heart to all parts of the body. ____

2. The pulmonary veins carry _____-rich blood from the lungs to the left side of the heart. They are the only veins that carry _____ blood. ____

3. The pulmonary arteries carry blood to the lungs. They are the only arteries that carry _____ blood. ____

4. The superior vena cava returns _____ blood from the upper part of the body to the heart. ____

5. The inferior vena cava returns _____ blood from the lower part of the body to the heart. ____

6. The network of vessels in the lungs lose carbon dioxide and absorb _____

5. Образуйте прилагательные от следующих существительных.

vessel -
vein -
artery -
aorta -
circulation -

6. Прочитайте информацию о почечной циркуляции, подберите синонимы к словам, выделенным жирным шрифтом.

The renal circulation is the flow of blood to and through the kidneys to allow them to **filter** it before returning it to the rest of the cardiovascular system. 20% of the **heart's output** of blood **reaches** the kidneys, far more than these organs need to **sustain** themselves. The extra blood travels through the filtration systems inside these organs to **remove** waste products and **adjust** the balance of the blood chemistry. Problems with renal circulation can lead to health conditions like high blood pressure, hormone imbalances, and **oedema**.

to maintain, to provide enough	
to clean, to remove sth that is not wanted	
swelling	
to adapt, to make more suitable	
to take sth away, to eliminate	
the amount of blood pumped by the heart each minute	
to succeed in achieving	

7. Преобразуйте предложения из действительного залога в страдательный.

1. The blood carries oxygen and nutrients to all cells of the body.

_____

2. The lab had found traces of the drug in the blood samples.

_____

3. A blood clot blocked the artery.

_____

4. The doctor uses a bronchoscope to inspect the inside of the lungs.

_____

5.The heart pumps 5 L of blood through the pulmonary capillaries every minute.

_____

6. You should follow a diet to keep your vessels clean.

_____

7. The doctor has banned him from drinking alcohol.

Language Development

1. Какие предложения верны (T), а где допущены ошибки (F)? Исправьте неверные утверждения.

1. The role of the circulatory system in transport of many substances is, in fact, insignificant. _____
2. The systemic circuit pumps blood to the lungs. _____
3. An artery is a vessel that carries blood back to the heart. _____
4. Blood vessels transport blood with nutrients in one direction only, *i.e.,* to cells. _____
5. Veins carry oxygen from the tissue cells back to the heart. _____
6. Carbon dioxide is produced in cells . _____
7. Waste products must be excreted from the organism. _____
8. From the lungs deoxygenated blood returns to the left heart. _____

2. Прочитайте информацию о портальном кровообращении печени и составьте 5 вопросов различного типа ко всему тексту.

The veins of the hepatic portal circulation drain the digestive organs, spleen, and pancreas and deliver the blood to the liver via hepatic portal vein. Liver cleans the blood during hepatic portal circulation. The portal venous system is responsible for directing blood from parts of the gastrointestinal tract to the liver. Substances absorbed in the small intestine travel first to the liver for processing before continuing to the heart. Not all of the gastrointestinal tract is part of this system. The system extends from about the lower portion of the esophagus to the upper part of the anal canal. It also includes venous drainage from the spleen and pancreas.

_____

_____

_____

_____

_____

_____

3. Просмотрите текст о сердечнососудистой системе и ответьте на вопросы.

1. What are the main organs of the cardiovascular system?

_____
_____

2. What types of blood vessels do you know?

_____
_____
_____
_____

3. What is the difference between superior vena cava and inferior vena cava?

_____
_____

4. What are arteries and veins made of?

_____
_____

5. What parts does the human circulatory system consist of? How does blood circulate in each cycle (loop)?

_____
_____
_____
_____

6. What subsystems is the **systemic** circulation divided into?

_____
_____

7. What is the role of the circulatory system in the human body?

_____
_____

8. How are the structures of an artery, vein and capillary adapted to their functions?

_____
_____

9. Why does oxygen-rich and oxygen-poor blood never mix in human bodies?

_____
_____

Grammar Point

Past Passive Tenses

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/active_passive.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/active_passive/form_sentences_simple_past.htm

https://www.englisch-hilfen.de/en/exercises/active_passive/passive_tenses_sentences.htm

https://www.englisch-hilfen.de/en/exercises/active_passive/questions2.htm

7. Проект.

Find out which instrumental investigations are used to study the cardiovascular system. Choose one of them and imagine that you should explain to the patient how it is performed. Use verbs in passive voice (not less than 12-15 sentences).

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can talk about the structure of the cardiovascular system
- I know the types and structure of blood vessels and understand how blood circulates around the body
- I can use *Past Passive Tenses*

Key Words

aorta /eɪ`ɔ:tə/ *n*
artery /`ɑ:tərɪ/ *n*
capillary /kə`pɪlərɪ/ *n*
cardiovascular system /,kɑ:dɪəu`væskjulə `sɪstəm/
coronary / `kərənərɪ / *n*
flexibility /,fleksɪ`bɪlɪtɪ/ *n*
inferior /ɪn`fɪərɪə/ *adj*
vena cava /`vi:nə `keɪvə/
interconnected /ɪntəkə`nektɪd/ *adj*
loop /lu:p/ *n*
network /`netwə:k/ *n*
portal circulation /`pɔ:təl .sə:kju`leɪʃən/
pulmonary circulation /`pʌlmənərɪ .sə:kju`leɪʃən/
renal /`ri:nəl/ *adj*
superior /sju`pɪərɪə/ *adj*
systemic circulation /sɪs`temɪk .sə:kju`leɪʃən/
tunica adventitia /`tjunɪkə ,advən`tiʃə/
tunica intima /`tjunɪkə `ɪntɪmə/
tunica media /`tjunɪkə `mi:dɪə/
vein /veɪn/ *n*
vessel /`vesəl/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT V. THE HEART

In this unit

- talking about anatomical structure of the heart
- talking about functions of the heart in the cardiovascular system
- *Future Passive Tenses*

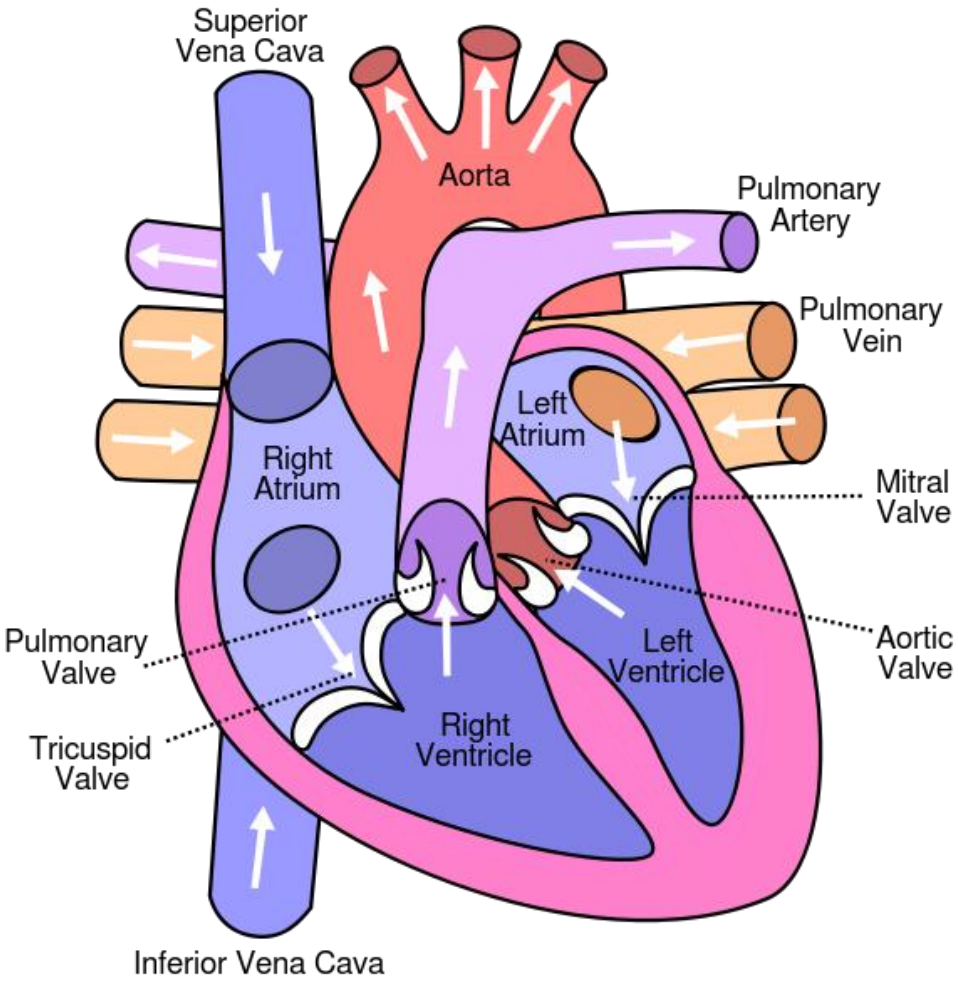
Lead-in

1. Интересные факты

- In the average adult, the heart weighs about 310 grams. In any given person, it's about the size of his or her fist.
- The heart beats an average of 72 times a minute with a typical at rest volume of 75 ml of blood pumped with each beat. Using those figures, a 75-year-old's heart has contracted more than 2.8 billion times and pumped more than 212 million liters of blood in his or her lifetime.
- When a person is resting, the left ventricle pumps about 4–7 liters of blood every minute. In a well-trained athlete who is doing strenuous exercise, that amount can rise to almost 30 liters per minute
- Heart rate changes greatly during child development. The typical heart rate in a newborn is 130 beats per minute (bpm). It drops to 100 bpm by the time the child reaches 3 years old, 90 at 8 years old, and 85 at 12 years old.
- The English physician William Harvey was the first to correctly describe how the heart pumps blood around the body.

2. Прочитайте текст о сердце. Озаглавьте каждую его часть.

1. _____
2. _____
3. _____
4. _____
5. _____.



The Arab physician Ibn Al-Nafis (1213-1288) was the first person to realize that blood passed from the right side to the left side of the heart via the lungs.
*Keep your heart healthy...it's going to have to beat about **3 BILLION times** during your lifetime!*

The Greeks believed that the heart held a person's spirit, the Chinese believed it was the centre of happiness, and the Egyptians thought the emotions and intellect came from the heart.

Reading

The Heart: a Living Pump

The centre of the circulatory system is the **heart**, which is the main pumping mechanism. This organ works constantly over the course of a lifetime, pumping blood to the lungs in the pulmonary circulation and to all other body tissues in the systemic circulation.

1.

The heart is in the middle of the chest located between the two lungs with its point or **apex** directed toward the left. The thick muscle layer of the heart wall is the **myocardium.** The heart is contained within a fibrous sac, the **pericardium.** The heart is held in place by the blood vessels that carry the blood to and from its chambers. There are actually four chambers (spaces) inside the heart. Each top chamber is called an **atrium** (plural: **atria**). The bottom chambers are called **ventricles**. The atria are often referred to as holding chambers, while the ventricles are called pumping chambers. The right and left sides of the heart are separated by a thick wall, known as the **septum.**

2.

Blood is kept moving in a forward direction by one-way **valves.** The valve in the septum between the right atrium and ventricle is the **tricuspid valve**; the valve in the septum between the left atrium and ventricle is the bicuspid valve usually called the **mitral valve**. The valves leading into the pulmonary artery and the aorta are described as **semilunar valves.**

3.

The blood enters the right atrium, one of the upper receiving chambers of the heart. Blood is pumped through the tricuspid valve into the right ventricle. The right and left ventricles are larger than the right and left atria because they are responsible for the pumping action of the heart. The right ventricle pumps de-oxygenated blood away from the heart through the T-shaped pulmonary artery.
By the time blood arrives in the lungs the body has taken out most of the oxygen and made use of it for tissue function. In a healthy heart, the blood flows efficiently through the heart to the lungs, which re-oxygenate the blood and return it to the heart through the pulmonary vein. Oxygenated blood enters the heart through the left atrium and is pumped to the left ventricle. The cardiac cycle relies on the efficiency of four valves between the atria, the ventricles and the pulmonary blood vessels. These valves open to let in sufficient blood flow to fill each heart chamber and then shut to prevent the backflow of blood. Irregularities in blood flow because of blockage in the blood vessels can lead to heart disease.

4.

As the heart functions it produces **heart sounds**. The loudest of these, the familiar lubb and dupp that can be heard through the chest wall, are produced by alternate closing of the valves. The first heart sound (S1) is heard when the valves between the chambers close. The second heart sound (S2) is produced when the valves leading into the aorta and pulmonary artery close. Any sound made as the heart functions normally is termed a **functional murmur.** A **heart murmur** is an abnormal sound of the heart. It is usually an indication of damaged valves.

5.

Each contraction of the heart, termed **systole** , is followed by a relaxation phase, **diastole**, during which the chambers fill. Each time the heart beats, both atria contract (**atrial systole)** and immediately thereafter both ventricles contract (**ventricular systole)**. When the atria are contracting the ventricles are relaxing. This is called **ventricular diastole**. Likewise, when the ventricles are contracting the atria are relaxing. This is called **atrial diastole**.
The wave of increased pressure produced in the **vessels** each time the ventricles contract is the **pulse.** In healthy people the normal (resting) **heart rate** is about 72 beats per minute, but it can go much higher during strenuous exercise.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Соотнесите термины в таблице с их определениями. Первое выражение сделано как образец.

heart, atrium, diastole, septum, ventricle, valve, myocardium, pericardium, blood pressure, systole,

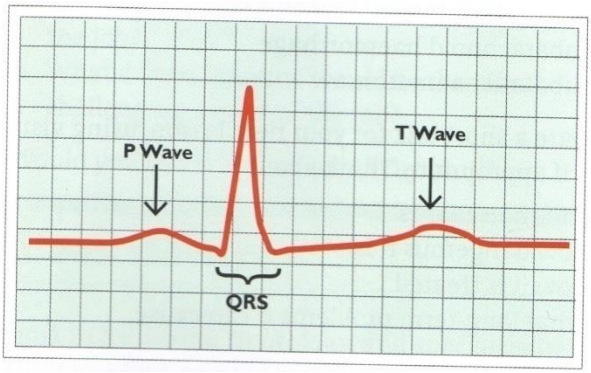
1. *heart* = the muscular organ with four chambers that contracts rhythmically to propel blood through vessels to all parts of the body.
2. _____ = the force exerted by blood against the wall of a vessel.
3. _____ = the thick middle layer of the heart wall composed of cardiac muscle.
4. _____ = one of the two upper receiving chambers of the heart.
5. _____ = the fibrous sac that surrounds the heart.
6. _____ = the relaxation phase of the heartbeat cycle.
7. _____ = a wall dividing two cavities such as the chambers of the heart.
8. _____ = one of the two lower pumping chambers of the heart.
9. _____ = the contraction phase of the heartbeat cycle.
10. _____ = a structure that keeps fluid flowing in a forward direction.

3. Соотнесите глаголы в первой таблице с соответствующими существительными во второй таблице, а затем составьте предложения с полученными словосочетаниями.

contract, pass, dilate, bring, regulate, pump, vary, beat, compose, work, consists of, serve, discharge, receive, enter, act, send, oxygenate

the heart	the blood	the artery

4. a. Посмотрите на ЭКГ. Попытайтесь объяснить, что происходит с сердцем в точках P, QRS, and T.



4 b. Заполните пробелы в тексте, используя глаголы из таблицы. Изменяйте их форму, где это необходимо.

cause	fill	push	relax
contract	force	reach	return

1. A heartbeat has three phases. In the first, diastole, the heart _____ 1 and blood _____ 2 the atria. This appears as a flat line on the ECG.

2. In the second phase, an electrical impulse _____ 3 the atria to _____ 4 and _____ 5 blood into the ventricles. This is point P on the ECG.

3. In the third phase, the electrical impulse _____ 6 the ventricles. These contract _____ 7 blood to the lungs and to the rest of the body. This phase includes points Q, R, and S on the ECG. The heart then _____ 8 to the relaxed state, marked by point T.

5. Задайте все возможные типы вопросов к следующему предложению.

Heart rate changes greatly during child development.

1. _____
2. _____
3. _____
4. _____
5. _____

Language Development

1. Выполните тест. Проверьте правильность ответов у преподавателя.

1. How much does an average adult heart weigh?

a 225 grams **b** 450 grams **c** 900 grams

2. Which heart rate is normal for a resting new born baby?

a 80 bpm **b** 140 bpm **c** 180 bpm

3. How much blood do we have in our bodies?

a 5 litres **b** 7 litres **c** 9 litres

4. How long does it take blood to get round the body?

a 20 seconds **b** 60 seconds **c** 120 seconds

5. What percentage of blood is water?

a 62% **b** 78% **c** 88%

6. What causes the “lub DUB lub DUB”sounds that you hear through the stethoscope?

a blood leaving the ventricles
b electrical impulses
c opening and closing valves

7. What should the maximum heart rate be for a twenty-year-old when exercising?

a 160 bpm **b** 200 bpm **c** 240 bpm

8. Whose hearts beat faster?

a women’s **b** men’s **c** both the same

9. When was the first successful heart transplant carried out?

a 1947 **b** 1967 **c** 1987

10. What percentage of the body’s blood is held in the heart at any moment?

a 7% **b** 17% **c** 70%

2. Просмотрите текст о сердце и ответьте на вопросы.

1. What is the heart and where is it located?

_____
_____

2. What is the structure of the heart?

_____
_____

3. What valves are included into the heart?

_____
_____

4. What are the phases of the heart work?

_____
_____

5. What is the normal heart rate?

_____

6. What is blood pressure? What is the standard blood pressure in a healthy person?

_____
_____

7. What is heart murmur?

_____
_____

8. What parameters of heart function are important for diagnostics?

_____
_____

3. Прочитайте абзац 3 в тексте на стр. 42. В парах обсудите функции частей сердца, указанных в таблице.

the atria	the pulmonary vein
the valves	the pulmonary artery
the aorta	the ventricles

4a. Прочитайте следующую информацию, подготовьтесь к ее обсуждению.

Blood Pressure

Blood pressure is the force exerted by blood against the wall of a blood vessel. It is commonly measured in a large artery in the upper arm with a blood pressure cuff called a **sphygmomanometer.** Both systolic and diastolic pressures are measured and reported as systolic then diastolic separated by a slash, such as 120/80. Standard healthy readings are 80 mm Hg diastolic, 120 mm Hg systolic. Blood pressure higher than 180/110 mm Hg is an emergency. Call 103 immediately.

4b. Прочитайте показания давления крови по образцу, данному ниже. В каком случае следует немедленно позвонить по номеру 103 и вызвать скорую помощь?

e.g. 90/60 – *ninety over sixty* or *ninety on sixty*

110/70	**142/99**
183/113	**86/40**

4c. Посмотрите на таблицу ниже и прочитайте показания давления крови.

Blood pressure category	**Systolic (mm Hg)**	**Diastolic (mm Hg)**
Normal	Less than 120	Less than 80
Prehypertension	120-139	80-89
High. Stage 1	140-159	90-99
High. Stage 2	160 or higher	100 or higher

4d. Ответьте на вопросы.

- Is your blood pressure normal? (according to the chart)?
- How often do you measure your blood pressure?
- How often should one check blood pressure?
- Explain why high blood pressure is called “silent killer.”
- How is the condition of abnormally high blood pressure called?
- Do you know how to fight against hypertension?

5.a. Прочитайте описание того, как обследуют сердечнососудистую систему. Запомните слова, выделенные жирным шрифтом.

Examining the Heart and Circulation

A. Look at the lips, tongue and nails for the blue discoloration of **cyanosis**. Cyanosis may be central or peripheral. Inspect the hands for **clubbing**. Feel the **pulse** at the **wrist** and note the rate (*e.g.,* 70 bpm) and rhythm (**regular** or **irregular**). Measure the blood pressure. Palpate the chest for the **apex beat** – the normal position is the fifth left **intercostal space**, one centimetre medial to the **midclavicular line.** Feel for any **thrills**. Heart size may be measured by percussion. Listen for **murmurs** and other abnormal sounds. Murmurs may be soft or loud.

B. Shortness of breath, or **breathlessness**, is dyspnoea. At first this is caused by **exertion -** physical activity such as climbing the stairs – but in severe cases it may be present even **at rest**. A patient who is breathless when lying flat (orthopnoea), for example in bed, will tend to sleep raised up on two or more pillows.

C. Heart rhythm. The normal **resting heart rate** is 65-75 bpm (**beats per minute**). In athletes it may be as low as 40 bpm. In extreme athletic activity the heart rate can go as high as 200 bpm. The heart rate may be **regular** and **irregular**. In an irregular rhythm (arrhythmia), there may be early beats which interrupt the regular rhythm or it may be completely irregular, as in **fibrillation**. When patients are aware of irregularity, they describe the symptom as **palpitation**.

Case 4
A 22-year-old student was admitted to the hospital with a long history of heart problems. She had been increasingly tired, with shortness of breath on exertion, orthopnoea, and palpitations. A **mitral valve replacement** had been carried out 3 years previously and this had stabilized the symptoms of heart **failure** but was followed by **episodes** (attacks) of atrial **fibrillation,** which had been particularly severe for the 6 months before admission.

5b. Упражнения.

1. Put the steps for examining the heart and circulation in order according to the four-stage system**: inspection – palpation – percussion – auscultation (**See text A).

a. Measure the heart size.
b. Are there any murmurs?
c. Feel the pulse.
d. Look for clubbing.
e. Locate the apex beat.
f. Note any thrills.

2. Make word combinations using a word from each box. Some words can be used twice.

1. at	**a.** beats
2. atrial	**b.** rest
3. heart	**c.** murmurs
4. apex	**d.** exertion
5. on	**e.** fibrillation
	f. sounds

3. Give the definitions to the following terms.

dyspnoea - _____
_____
arrhythmia - _____
_____
orthopnoea - _____
_____
oedema - _____
_____

4. A doctor is presenting the case of a 43-year-old woman at a meeting in the Cardiology Department. Complete the text of her presentation.

Case 43
On examination she was pyrexial with a temperature of 38.5. She was short of breath. Her pulse was variable between 100 and 180 and was irregular in time and _____1. Her blood pressure was 130/80. There was no _____2 or _____3 cyanosis. Her apex _____ 4 was displaced to the anterior axillary line but still in the fifth intercostal _____5 . Her heart sounds were very interesting. When she was initially examined, it was noted that she had _____ 6, heard best at the apex. When she was examined some hours later, there was harsh _____ 7 heard all over the pericardium. Our diagnosis at that time was of mitral stenosis and incompetence with a recent onset of pericarditis and atrial fibrillation

6. a. Прочитайте информацию для пациента. Заполните пробелы словами из таблицы.

left	ankles	diuretics
oxygen	high blood pressure	ACE inhibitors
fluid	irregular	beta blockers
tiredness	echocardiagram	two

Congestive heart failure happens when the heart cannot pump enough blood to the body. The problem usually starts on the _____ 1 side of the heart. This means not only that the body doesn't get enough _____ 2, but also _____ 3 escapes into the body's tissues and lungs. This is why the first sign of heart failure is often extreme _____ 4 and breathlessness, and why the _____ 5 usually become swollen.

Heart failure is often the result of damage to the heart caused by a heart attack, by coronary heart disease, or by _____ 6. These change the shape of the heart and the thickness of its walls, which stops its working well. If your heartbeat is _____ 7, this can also make heart failure more likely eventually. Patients with possible heart failure are sent for examination called an _____ 8. This shows how well the ventricles are working. Patients with heart failure are encouraged to do exercise to improve their breathing, and _____9 are often prescribed to reduce the build-up of fluid. The doctor will also usually prescribe _____ 10, which reduce blood pressure and make the heart's job easier, and _____ 11, which keep the heartbeat strong and steady. A device called a pacemaker may also be fitted, which sends a regular electrical impulse to the heart through _____. 12 wires.

6 b. Прочитайте радиоинтервью с кардиологом и заполните пробелы в информации для пациента, приведенной выше.
Переведите диалог врача и пациента в косвенную речь. Используйте такие глаголы для передачи прямой речи как *said, explained, told the audience, asked, wondered,* и т.д.
P = Presenter, A = Dr Adam Petrou

P First on today's show, we'll be talking *about* congestive heart failure, which affects around one million people in the UK. I have with me

cardiologist Dr Adam Petrou… Adam, what is heart failure?

A Congestive heart failure occurs when the heart's ventricles are unable to pump enough blood to the body - the left one is the first to fail. This leaves the body short of oxygen, and also causes fluid to build up in the body's tissues and in the lungs.

P What are the common symptoms?

A It usually leaves sufferers extremely tired and breathless. The ankles often swell up, too.

P So what causes heart failure?

A Often, the heart has been damaged by a heart attack or by coronary heart *disease, or* simply by high blood pressure. These things can change the shape and thickness of the heart muscle, reducing its efficiency. Also, if the rhythm of the heart is irregular, over time this can cause heart failure.

P How is heart failure diagnosed?

A The best way is by echocardiogram, which is an ultrasound examination that gives us clear image of the chambers of the heart in action.

P And the treatment?

A As with most heart problems, self-help is vital; by following an exercise programme, patients can greatly increase their energy and improve their breathing. Diuretics help reduce the fluid build-up, and make patients more comfortable too. The main drugs that work on the heart are ACE inhibitors and beta-blockers. ACE inhibitors dilate the blood vessels and bring down blood pressure. This reduces the pressure on the heart. ß-blockers have a calming effect on the heart: they keep it beating with an efficient regular rhythm.

P And pacemakers can help with this too, can't they? Can you say a word about them?

A Yes, we do use pacemakers. These are small electrical devices that are implanted under the skin and attached to the heart by *two* wires. They send impulses that make sure the heart keeps a steady rhythm.

P So what's the prognosis for people with heart failure?

A The prognosis is not great – between 10 and 60 per cent of patients will die within a year of being diagnosed, so in many cases the treatment aims to improve the quality of life rather than cure the problem

Grammar Point

Future Passive Tenses

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/active_passive.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/active_passive/sentences_will_future.htm

https://www.englisch-hilfen.de/en/exercises/active_passive/objects_tenses.htm

https://www.englisch-hilfen.de/en/exercises/active_passive/passive_tenses_phrases.htm

6. Проект

Find out how people's understanding of the heart structure, functions and its role in the body has been changing over the time. When relating different beliefs and ideas, remember the rules of reporting statements and questions into indirect speech. You may start like this:

The Egyptians believed that the heart, rather than the brain, was the source of human wisdom, as well as emotions, memory, the soul and the personality itself. Notions of physiology and disease were all connected in concept to the heart…

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can talk about the anatomical structure of the heart
- I know the functions of the heart in the cardiovascular system
- I can explain how to examine the heart and cardiovascular system
- I can use Future Passive Tenses

Key Words

apex /`eɪpəks/ *n*
atrium (pl: atria) /`eɪtrɪəm (`eɪtrɪə)/ *n*
blood pressure /blʌd `preʃə/
breathlessness /`breθlɪsnɪs/ *n* = shortness of breath /`ʃɔːtnɪs əv breθ/
clubbing /`klʌbɪŋ/ *n*
congestive heart failure /kən`ʤestɪv hɑːt `feɪljə/
cyanosis /,saɪə`nəusɪs/ *n*
diastole /daɪ`æstəlɪ/ *n*
episode (attack) /`epɪsəud (ə`tæk)/ *n*
exertion; (on exertion) /ɪg`zəːʃən/ *n*
fibrillation /,fɪbrɪ`leɪʃən/ *n*
heart failure /hɑːt `feɪljə/
heart rate /hɑːt reɪt/
heart rhythm /hɑːt rɪðm/
heart sounds /hɑːt saundz/
intercostal space /,ɪntə`kɔstəl speɪs/
mitral /`maɪtrəl/ *adj*
mitral valve replacement /`maɪtrəl vʌlv rɪ`pleɪsmənt/
murmur /`məːmə/ *n*
myocardium /,maɪəu`kɑːdɪəm/ *n*
palpitation /,pælpɪ`teɪʃən/ *n*
pericardium /,perɪ`kɑːdɪəm/ *n*
pulse /pʌls/ *n*
regular /`regjulə/ *adj*
semilunar /,semi`luːnə/ *adj*
septum /`septəm/ *n*
systole /`sɪstəlɪ/ *n*
thrills /θrɪlz/ *n pl.*
tricuspid /traɪ`kʌspɪd/ *adj*
valve /vælv/ *n*
ventricle /`ventrɪkl/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT VI. MYOCARDIAL INFARCTION

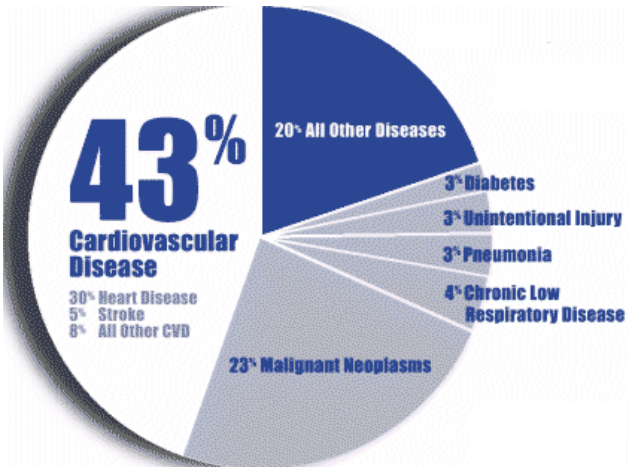
In this unit

- giving the definition of myocardial infarction
- talking about the causes and symptoms of myocardial infarction
- describing the course and treatment of the disease
- *Modal Verbs in the First Meaning*

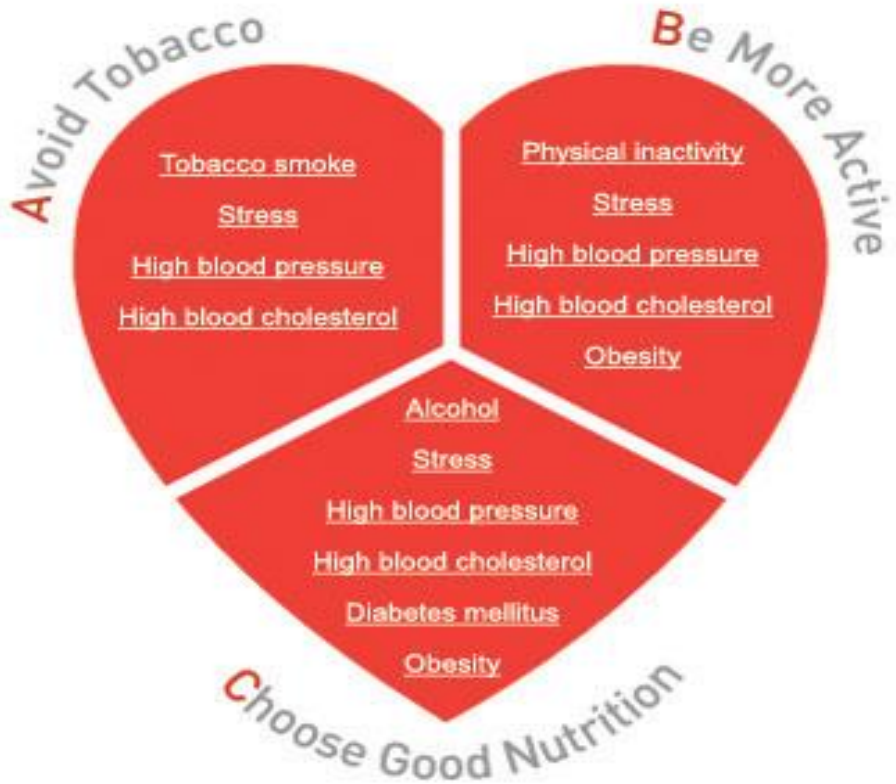
Lead-in

1. Изучите диаграмму (справа) и ответьте на вопросы.

1. What disease is number-one killer in the developed countries?
2. Do most heart attacks occur in young or elderly people? What do you think?
3. Are heart attacks more frequent in men or women?
4. What will you do if heart attack occurs in your relative?
5. What in your opinion are the causes of heart attack?
6. What must one do to prevent heart diseases? What is the ABC of heart disease prevention? (See the diagram below).



2. Прочитайте текст об инфаркте миокарда. Озаглавьте каждую его часть.



In developed countries more people die from coronary heart disease than any other illness. It kills one in four men and one in six women.

Reading

Myocardial Infarction (Heart Attack)

Myocardial infarction (**MI**), commonly known as a **heart attack,** is a serious medical emergency in which the supply of blood to the heart is suddenly blocked, usually by a **blood clot**. Lack of blood to the heart can seriously **damage** the heart muscle.

1.

The typical symptoms of the disease can include:

- chest pain: the chest can feel like it is being pressed or **squeezed** by a heavy object, and pain can **radiate** from the chest to the jaw, neck, arms and back
- **shortness of breath**
- feeling weak and/or **light-headed**/**dizzy**
- overwhelming feeling of **anxiety**

It is important to stress that not everyone experiences **severe** chest pain; often the pain can be mild and mistaken for **indigestion**. It is the combination of symptoms that is important in determining whether a person is having a heart attack, and not the **severity** of chest pain.
Among the diagnostic tests available to detect heart muscle damage are an electrocardiogram (ECG), **echocardiography**, cardiac MRI and various blood tests.

2.

Coronary heart disease (CHD) is the leading cause of heart attacks. CHD is a condition in which coronary arteries (the major blood vessels that supply the heart with blood) get **clogged** up with deposits of cholesterol. These deposits are called **plaques**.
During a heart attack, one of the plaques ruptures (bursts), causing a blood clot to develop at the site of the rupture. The clot may then block the supply of blood running through the coronary artery, **triggering** a heart attack.

3.

The risk-factors of coronary heart disease are related to lifestyle, and sometimes, though not always, linked to a genetic **predisposition** to the disease. They are:

- *high blood cholesterol*. This is acquired through diabetes and kidney disease, poor diet, obesity, and lack of physical activity.
- *smoking*. This raises blood pressure and increases the tendency for blood to clot.
- *high blood pressure*. This thickens the walls of the arteries and makes them narrower.
- *type A personality*. This type of personality is characterized by **impatience**, competitiveness, and aggressiveness.

4.

Treatment for a heart attack will depend on how serious it is. When someone has a heart attack, medical treatment is **urgent**. They are given oxygen through a face mask, nitroglicerine to improve blood flow, morphine to kill the pain, and aspirin to **inhibit** blood clotting. They may then receive an emergency **angioplasty** which is a long thin tube passed into the artery at the tip of which is a balloon which is **inflated** when everything is in place. The balloon opens up the artery, allowing the blood to flow more freely. A small spring-like device called a **stent** is then inserted which holds the artery open.
Most people can return to work after having a heart attack, but how quickly will depend on, your health, the state of your heart and the kind of work you do.

5.

Complications of heart attack can be serious and possibly life-threatening, and include:

- cardiogenic shock – this is where the muscles of the heart are severely damaged, meaning the heart can no longer supply enough blood to maintain many body functions
- heart rupture – is where the heart's muscles, walls or valves split apart (rupture)
- **arrhythmia** – is an **abnormal** heartbeat, such as a ventricular arrhythmia, where the heart begins beating faster and faster before going into a kind of spasm and then stops beating (cardiac **arrest**).

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Соотнесте термины с их определениями:

1. stent	**a.** dizzy and slightly faint
2. shortness of breath	**b.** to prevent smth from happening
3. to radiate	**c.** a device placed inside a duct or blood vessel to relieve an obstruction
4. light-headed	**d.** stopping of the heart
5. cardiac arrest	**e.** a state of irritability or restlessness
6. impatience	**f.** to spread
7. to inhibit	**g.** a feeling of worry, nervousness
8. anxiety	**h.** breathlessness

3. Закончите предложения, употребив подходящие слова из упр. 2.

1. The pain started in the chest and then _____ _____ to the left arm and shoulder.
2. An old woman attended her GP's surgery complaining of _____ on exertion.
3. After overdose of the drug he began to feel _____.
4. On the way to the hospital the patient had a cardiac _____ .
5. During the operation a coronary _____ was inserted into the coronary artery to provide good blood supply.
6. Patients are given aspirin to _____ blood clotting.

4. Образуйте словосочетания, используя слова из таблицы. Каждое слово может быть использовано только один раз.

myocardial	genetic
typical	blood
medical	poor
various	physical
coronary	cardiogenic

1. _____ shock
2. _____ activity
3. _____ diet
4. _____ cholesterol
5. _____ artery
6. _____ blood tests
7. _____ emergency
8. _____ symptom
9. _____ infarction
10. _____ predisposition

5. Заполните пробелы в тексте словами из таблицы.

Arrhythmia, electrocardiogram, angioplasty, clot, plaque, severity, occlusion, radiating, indigestion, severe, squizeening

Myocardial infarction is a destruction of an area of heart muscle as the result of _____1 of a coronary artery. The occlusion may result from the formation of a _____2 that develops suddenly when an atheromatous _____3 ruptures through the sublayers of a blood vessel. The most outstanding symptom of acute myocardial infarction is a sudden painful sensation of pressure, often described as a "crushing pain" in the chest, occasionally _____ _____4 to the arms, throat, and back, and _____5 for hours. In almost all cases of _____6 MI the patient has a sense of impending death, nausea and vomiting, leading to the mistaken impression that the victim is suffering from acute _____7. Typical signs of MI are cardiac _____8, and elevation of the S-T segment and Q wave on the _____9. Patients with evidence of persistent ischemia require angiography and may be candidates for balloon _____10. Minimizing or eliminating avoidable factors such as hypertension, cigarette smoking, and elevated serum lipids can reduce the incidence and _____11 of ischemic heart disease.

6. Следующие предложения могут быть сказаны медсестрой пациенту при выполнении ЭКГ. Соотнесите начало и конец предложений и поставьте их в логической последовательности.

1. We're nearly	**a.** lying comfortably?	
2. I'm just going to clean your chest so that	**b.** try not to move	
3. The machine's just	**c.** the electrodes make good contact	
4. We're going to do an ECG so that we can	**d.** done recording now.	
5. Are you	**e.** look for any abnor-mal heart rhythms.	**1**
6. It's all done, so I'll	**f.** take the electrodes off now.	
7. Now just relax and	**g.** printing out the recording.	

Language Development

1. Просмотрите текст об инфаркте миокарда еще раз и ответьте на вопросы.

1. What kind of disease is myocardial infarction (MI)?

_____
_____

2. What are the causes of MI?

_____
_____
_____
_____

3. What are the typical symptoms of MI?

_____
_____
_____
_____

4. What risk factors of heart diseases can you name?_____
_____

5. What does the treatment for heart attack include?

_____
_____
_____
_____

6. What complications of heart attack do you know?

_____
_____
_____
_____

7. What other heart diseases can you name? Surf the Internet.

_____
_____
_____
_____
_____

2. Обсудите все «за» и «против» использования аббревиатур в истории болезни.

3. Соотнесите аббревиатуры со словами и выражениями.

1. bilet.	a. alcohol (ethyl alcohol)
2. BS	**b.** bilaterally (=on both sides)
3. CV	c. pain on exertion
4. CXR	d. breathing sounds, or bowel sounds
5. DM	e. cardiovascular system
6. EtOH	f. slight, or sublingually
7. GI	g. myocardial infarction
8. HTN	h. diabetes mellitus
9. M/G/R	i. gastrointestinal
10. +	j. hypertension
11. N	k. murmurs, gallops, rubs (sounds indicating heart irregularities)
12. POE	l. chest x-ray
13. RRR	m. nausea
14. sl	n. present, observed
15. SOB	o. regular rate and rhythm
16. u/s	p. shortness of breath
17. MI	q. ultrasound
18. c/o	r. complains of
19. Hx	s. medical history

4. Заполните пробелы в тексте, используя аббревиатуры из упр. 3.

Right, now Mrs. Lee in bed number five. Mrs. Lee was readmitted yesterday because of uncontrolled *HTN* [1]. You'll probably remember her from last week. She went home but couldn't manage her activities of daily living by herself. Her daughter had to come in every morning to give her a shower and help her during a day. She's been quite distressed about it, according to her daughter. She presented to the unit with uncontrolled hypertension, despite the change of medication. She has a past history of _____ [2] this year in June. Um, this morning she _____ [3] chest pain. Her _____ [4] at that time – er, that was 10 am, was two ten over one oh five, and her _____ [4] was one hundred. She had an _____ [5] done and was given nitroglycerine _____ [6]. We gave her some oxygen via the mask and she seemed to settle. She's in for cardiac catheterisation tomorrow to assess the extent of the damage to the heart.

5. Прочитайте историю болезни пациента и ответьте на вопросы.

PATIENT NOTES

Jerry Sting

History

48 y.o.male c/o chest pain. Began last night POE (jogging). Squeezing pain, sl SOB, sl N and sweating. Pains resolves spontaneously after 20 mins. No pain now. 5 similar episodes over past 3-4 mos. Usually POE or after a heavy meal with some relief by antacids. Has Hx of ↑ cholesterol but no follow-up or treatment. Plays tennis weekly. Ex-smoker x 30 yrs.(40 pack/yrs.), EtOH 3 beers/day x 30 yrs. Denies unusual stress. Sister with unknown heart problem. No Hx HTN, DM but has not seen GP x 2 yrs.

Physical Examination

No obvious distress, minimizing symptoms, anxious to leave.
BP of 180/90 noted.
Resp. clear BS bilat. without wheezes or rales.
GI – no tenderness, BS+ , no masses
CV – RRR no M/G/R

Differential Diagnosis

1. myocardial infarction
2. acid reflux
3. muscle strain
4. anxiety reaction

Diagnostic Workup

1. ECG
2. CXR
3. u/s heart
4. upper GI tract radiography

1. What type of pain does the patient get and where is it located?

_____

2. How many times has the patient had this pain?

_____

3. How long has he been getting this pain?

_____

4. When did he get the pain?

_____

5. What makes the pain better?

_____

6. Does he smoke or drink?

_____

7. Did his GP refer him to the hospital?

_____

8. What condition does the doctor think is most likely to be causing the pain?

_____

_____

6a. Вы наблюдаете за физическим обследованием больной с подозрением на проблемы с сердцем. Прочитайте, что врач говорит о ее состоянии. Выберите вариант в предложении, наиболее подходящий по вашему мнению.

Marie Wade is 35. She *has chest pains* / *is short of breath*[1] when she goes *upstairs* / *for a walk* [2]. She finds it easier when she *lies down* / *sits up* [3] . She 's had the problem for *a year* / *two years* [4], and it's been bad for *six* / *two* [5] months.
For the last *three* / *four* [6] weeks, she's had *shooting pains* / *aching* [7] down the *left* / *right* [8] arm. She's *sweating a lot* / *feeling very hot* [9]. She's *lost her appetite* / *got a good appetite* [10]. She takes *no* / *regular* [11] exercise. She weighs *48* / *92* [12] kilos. She drinks about *seven* / *two* [13] glasses of wine a week. She'*s never smoked* / *smokes 20 a day* [14] . Her mother has *diabetes* / *angina* [15] and her father died of *a heart attack* / *lung cancer* [16]. There is no *diabetes* / *heart disease* [17] in her family. Her blood pressure is *160/80* / *120/50* [18] and has always been *low* / *high* [19]. Her *ankles* / *wrists* [20] are swollen. The doctors hears *heart murmurs* / *no heart murmurs*[21], and abnormal lungs sounds *on the left* / *on both sides* [22]. He can hear *bowel sounds* / *no bowel sounds [23].* Mrs. Wade feels *tenderness* / *no tenderness* [24] in her abdomen. There are *masses* / *no masses* [25], but *some* / *no* [26] oedema.

6b. Напишите информацию в виде клинических записей, как показано в упр. 5.

PATIENT NOTES

Marie Wade

History_____

Physical Examination_____

Differential Diagnosis_____

7a. Прочитайте текст и ответьте на вопросы.
A patient with a serious heart disease needs a heart transplant to survive. While waiting for a human donor to supply a heart, doctors might consider implanting a temporary artificial heart in the patient's body. A total artificial heart (TAH) is a device that replaces the two lower chambers of the heart. These chambers are called ventricles. Heart failure is a condition in which the heart can't pump enough blood to meet the body's needs.
The TAH is attached to the heart's upper chambers—the atria. Between the TAH and the atria are mechanical valves that work like the heart's own valves. Valves control the flow of blood in the heart.

b. An artificial heart actually replaces only the ventricles of the human heart. Suggest a reason why replacing the atria is not necessary.

Grammar Point

Modal Verbs in the First Meaning

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/hilfsverben2.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/modals/form.htm

https://www.englisch-hilfen.de/en/exercises/modals/must_not_need_not.htm

https://www.englisch-hilfen.de/en/exercises/modals/must_not.htm

3. Проект.

a. Research one of the relatively new treatments for heart problems below. Explain what problem it treats and how it works.

- ablation
- angioplasty
- statins
- stent grafts

b. You are going to give a short talk to a group of factory workers about how to keep their hearts healthy. In groups, prepare a short presentation on one of the topics below.

- diet
- drinking and smoking

exercise and stress

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can give the definition of myocardial infarction
- I know the the causes and symptoms of myocardial infarction
- I can describe the course and treatment of this disease.
- I can use modal verbs in the first meaning

Key Words

angina pectoris /ən`ʤaınə `pektərıs/ *n*
angioplasty /`ændʒıəu,plestı/ *n*
anxiety /eŋ`zaıətı/ *n*
arrest /ə`rest/ *n, v*
arrhythmia /eı`rıðmıə/ *n*
blood clot /blʌd klɔt/
clog /klɔg/ *v*
clogged /klogd/ *adj*
complication /kɔmplı`keıʃən/ *n*
damage /`dæmıʤ/ *n, v*
dizzy /`dızı/ *n*
echocardiography /,ekəukɑ:dı`ɔgrəfı/ *n*
heart attack /hɑ:t ə`tæk/
impatience /ım`peıʃəns/ *n*
indigestion /,ındı`ʤestʃən/ *n*
inflate /ın`fleıt/ *v*
inhibit /ın`hıbıt/ *v*
light-headed /`laıthedıd/ *adj*
myocardial infarction /,maıəu`kɑ:dıəl ın`fɑ:kʃən/
plaque /plak/ *n*
predisposition /pri:dıspə`zıʃən/ *n*
radiate /`reıdıeıt/ *v*
severe /sı`vıə/ *adj*
squeeze /skwi:z/ *v*
stent /stent/ *n*
trigger /`trıgə/ *n, v*
urgent /`ə:ʤənt/ *adj*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

Self-Assessment (Units I-VI)

1. Закончите предложения, используя активную лексику уроков.

1. An infection which can be treated successfully with antibiotics is_____.
2. Another word for an epidemic is _____.
3. Bacteria and viruses are examples of _____ _____.
4. Someone whose temperature is normal is _____ .
5. The colour of purulent sputum is_____.
6. The medicine which stopped H5N1 spreading was _____ .
7. Another word for *measles* is _____.
8. The abbreviation of a heart attack is _____ .
9. When you carry a pathogen in your body, you are the _____.
10. A _____ is when a disease spreads to many different countries.
11. MRSA stands for_____ _____ .
12. _____ kill microbes on the surfaces.
13. Virus H1N1 was better known as _____ _____ .
14. The machine which helps patients breathe is _____ .
15. The name of the machine that gives electric shocks to restart the heart is _____-

16. The largest artery of the body which is 2.54 cm wide is _____.
17. One of the largest veins, which receives blood from the upper body, is _____ _____ .
18. In _____, the blood circulates into the body's systems, bringing oxygen to all its organs, structures and tissues and collecting carbon dioxide waste.
19. In _____, the blood circulates to and from the lungs, to release the carbon dioxide and pick up new oxygen.
20. _____ is a long thin tube passed into the artery at the tip of which is a balloon which is inflated when everything is in place.
21. A small spring-like device which holds the artery open is called a _____

2. Ниже приведены описания четырех состояний, которые могут вызвать кашель у детей ночью. Заполните пробелы в предложениях, используя слова из таблицы.

coughing up	occurs	are	make
accompanied	sounds	get	
breathe	wheeze	has	

Asthma

Children with asthma cough and _____ 1 when they breathe out. They become very short of breath when an attack _____ 2.

A cold

Sometimes a child _____ 3 a cough and a fever with a cold. A bad cough can _____ 4 a child vomit.

Croup

Children under three years old sometimes _____ 5 croup. They have a sore throat and wheeze when they _____ 6 in. When they cough it often _____ 7 like a dog barking.

Pneumonia

The symptoms of pneumonia _____8 a temperature of over 39º C, fast breathing, sometimes _____ 9 by vomiting and sometimes _____ 10 blood.

3. Выберите правильный ответ.

1. The two upper chambers are called
a. ventricles c. artery
b. atria d. valves
2. Oxygen-rich blood from the lungs enters the heart through the
a. left atrium c. left ventricle
b. right atrium d. right ventricle
3. From the right atrium blood is pumped to the
a. brain c. right ventricle
b. lungs d. capillary network
4. The heart chamber that works hardest is the
a. right atrium c. left atrium
b. right ventricle d. left ventricle
5. The blood vessels that carry blood back to the heart are the
a. arteries c. capillaries
b. veins d. ventricles

6. The cells that contain haemoglobin are the
a. plasma c. white blood cells
b. platelets d. red blood cells
7. Red blood cells are produced in the
a. heart c. spleen
b. liver d. bone marrow
8. Platelets help the body to
a. control bleeding c. carry oxygen
b. fight infection d. do all of this
9. General signs and symptoms common to many infectious diseases **do not** include:
a. loss of appetite c. fatigue
b. muscle aches d. dyspnoea
10. Which of the following diseases is **not** contagious?
a. the flu c. mumps
b. stroke d. chickenpox

4. Напишите ответы на вопросы, используя Perfect Simple или Perfect Continuous.

e.g. Have you given out the medication? (not yet)
I haven't given out the medication yet.

1. How long have you been having problems? (two years)
_____

2. Have I been given a different bed? (no)
_____

3. How many tablets have you taken? (only a handful)
_____

4. Where has the patient been sent? (to Outpatients for tests)
_____

5. What has she been doing all morning? (take tests)
_____

5. Задайте все возможные типы вопросов к следующему предложению.

Mr Jenkins now takes an aspirin every day to prevent blood clots.
1. _____
_____.
2. _____
_____.
3. _____
_____.
4. _____
_____.
5. _____
_____.

6. Закончите данные разделительные вопросы.

1. He has myocardial infraction, _____?
2. You have a new uniform, _____?
3. Please take the temperature in this patient, _____?
4. Professor Milton always tells jokes at the end of his lectures, _____?
5. There isn't much work today, _____?
6. Let's prepare a presentation on contagious diseases, _____?
7. Don't drink too much at the party, _____?
8. I'm right, _____?

7. Поставьте глаголы в скобках в Present или Past Continuous Passive или Active.

1. What did the lecturer say? – Sorry, I don't know. I _____ (not listen).
2. The ward _____ (clean) while I was there.
3. Your friend can't speak with you now. He ___ _____ (examine) by the surgeon.
4. Attention, please! The catheter _____ _____ (insert).
5. What _____ you _____ (do) when I called you yesterday?
6. While I _____ (sleep), my friend _____ (learn) Latin.
7. Our new professor is only 26! He _____ _____ (discuss) all over the country.
8. While an x-ray_____ (take) no one was allowed into the room.

8. Трансформируйте следующие предложения в косвенную речь.

1. 'I can diagnose cardiac diseases.' – My friend boasted (that) _____
_____.
2. 'How long have you had this pain?' She asked me _____ _____
_____.
3. 'You'll be allowed to go for a walk tomorrow.' – My doctor promised that _____
_____.
4. 'Do you smoke or drink alcohol?' I asked her
_____.
5.. 'Who usually examines patients at night?' I asked him _____.
6. 'You follow all my recommendations, don't you?' She asked me _____
_____.
7. 'It would be better to get vaccinated against flu,' said Dr Black. Dr. Black_____
_____.
8. 'Remember to take your beta-blockers in time', the doctor told Kate.
The doctor_____

UNIT VII. THE GASTROINTESTINAL SYSTEM

In this unit

- talking about the structure of the gastrointestinal system
- describing the functions of the gastrointestinal system
- *Indirect Speech*

Lead-in

1. Интересные факты.

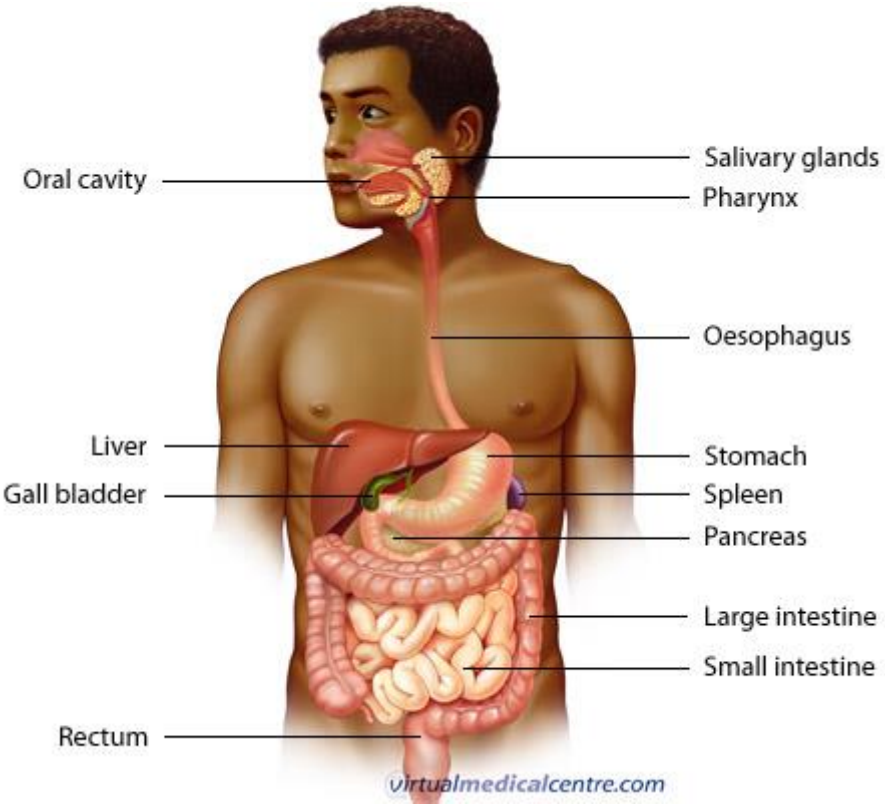
- The average male will eat about 50 tons of food during his lifetime.
- The salivary glands can produce up to 1,500 millilitres of saliva daily.
- Food remains in the oesophagus for as little as five seconds before entering the stomach.
- Muscles contract in waves to move the food down the oesophagus. This means that food would get to a person's stomach, even if he were standing on the head.
- The small intestine in an adult can reach 3 meters in length, while the large intestine is only about 1.5 meters long.
- Food remains in the small intestine for three to five hours on average, during which most nutrients are removed.
- Within the colon, a typical person harbours more than 400 distinct species of bacteria.
- Every square millimetre of the small intestine can contain 40 villi and 200 million microvilli.

2. Прочитайте текст о пищеварительной системе. Подготовьте пересказ текста по плану.

1. The function of the digestive system.
2. How does the digestive system work?
3. The accessory organs.
4. The large intestine.

3. Рассмотрите рисунок и опишите процесс пищеварения в организме человека.

Human Gastrointestinal Tract



"A good eater must be a good man; for a good eater must have a good digestion, and a good digestion depends upon a good conscience."

Benjamin Disraeli, 'The Young Duke' (1831)

Digestion, of all the bodily functions, is the one which exercises the greatest influence on the mental state of an individual.

Jean-Anthelme Brillat-Savarin (1755-1826)

Reading

The Gastrointestinal System

1. The function of the digestive system

The function of the **digestive system** is to prepare food for intake by body cells. Nutrients must be broken down by mechanical and chemical processes into molecules that are small enough to be absorbed into the circulation. Within cells, the nutrients are used for energy and for rebuilding vital cell components. Digestion takes place within a tube called the digestive tract or the **alimentary canal,** or **gastrointestinal** (GI) tract. It is about 6.5 metres long. Thus, the functions of the digestive system are to **ingest** food, digest it to nutrients, absorb nutrients, and eliminate indigestible remains.

2. How does the digestive system work?

Digestion begins in the mouth where food is chewed into small bits by the teeth. Then the food is mixed with **saliva,** a secretion that moistens the food and begins the digestion of starch. The moistened food is then passed into the **pharynx** and through the **oesophagus** into the **stomach**. Here the food is mixed with the enzyme pepsin and with powerful hydrochloric acid (HCl), both of which break down proteins.

From the stomach the partially digested food passes into the first part of the **small intestine**, the **duodenum**. As the food continues through the **jejunum** and **ileum**, the remaining sections of the small intestine, digestion is completed. The substances active in digestion in the small intestine include enzymes from the intestine itself and secretions from the accessory organs of digestion. The digested nutrients, as well as water, minerals, and vitamins, are absorbed into the circulation, aided by small projections in the **lining** of the small intestine called **villi**.

3. The accessory organs

The accessory organs of digestion include the salivary glands, the **liver,** the **gall bladder** and the **pancreas. Salivation** occurs due to nerve signals that tell the salivary glands to secrete saliva to prepare and moisten the mouth. The liver acts as a mechanical filter by filtering blood that travels from the intestinal system. It detoxifies several metabolites. Its main roles in digestion are in the production of **bile** and metabolism of nutrients. The main functions of the gall bladder are storage and concentration of bile. Bile is a thick fluid that contains enzymes to help dissolve fat in the intestines. The pancreas is a lobular organ that lies behind the stomach. It has both exocrine and endocrine functions.

4. The large intestine

Undigested food, water, and digestive juices pass into the **large intestine**. Its length is approximately 1.5 m. This part of the digestive tract begins in the lower right region of the abdomen with a small pouch, the **caecum**, to which the **appendix** is attached.

The large intestine continues as the **colon**, a name that is often used to mean the large intestine because the colon constitutes such a large portion of that organ.

As food is pushed through the colon, water is reabsorbed and stool or **faeces** is formed. This waste material passes into the S-shaped **sigmoid colon** and is stored in the **rectum** until eliminated through the **anus**.

Food is moved through the digestive tract by **peristalsis**, wavelike contractions of the organ walls. Peristalsis also moves undigested waste material out of the body.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Соотнесите термины с их определениями:

1. stomach	**a.** glands located in the mouth that produce saliva.
2. rectum	**b.** a large organ that filters toxins from the blood, and makes bile.
3. salivary glands	**c.** the part of the alimentary canal located between the stomach and the anus.
4. mouth	**d.** the lower part of the large intestine, where faeces are stored before they are excreted.
5. liver	**e.** the long tube between the mouth and the stomach.
6. intestine	**f.** an enzyme-producing gland located below the stomach and above the intestines.
7. oesophagus	**g.** the first part of the digestive system, where food enters the body.
8. pancreas	**h.** a sack-like, muscular organ that is attached to the oesophagus.
9. anus	**i.** the opening at the end of the digestive system from which faeces exits the body.

3. Дополните таблицу словами, обозначающими процессы, происходящие в организме.

Noun	**Verb**
absorption	*absorb*
consumption	1 _____
contraction	2 _____
conversion	3 _____
detoxification	4 _____
elimination	5 _____
expansion	6 _____
ingestion	7 _____
secretion	8 _____
stimulation	9 _____

4. Заполните пробелы словами из упр. 3.

1. The sight, smell, and taste of food _____ glands to produce saliva.
2. A major role of the digestion process is the _____ of waste from the body.
3. Food is _____ through the mouth.
4. The pancreas is involved in the _____ of enzymes that break down food molecules.
5. Nutrition is when the body _____ food substances into energy.
6. The digestive system breaks down food and transports it for _____ and defecation.
7. The muscles in the oesophagus make wave-like _____ which push the food along.
8. Too much _____ of certain foods can overload the digestive system.
9. The stomach can _____ as it fills with undigested food.
10. Digested products travel to the liver, which _____ blood of harmful substances.

5. Выберите правильный ответ.

1. The nutrients that are used to build and repair body parts are
   a. proteins **c.** carbohydrates
   b. minerals **d.** vitamins

2. Which is not found in the mouth?
   a. pepsin **c.** ptyalin
   b. saliva **d.** taste buds

3. The tube that connects the mouth and the stomach is the
   a. small intestine **c.** oesophagus
   b. pancreas **d.** epiglottis

4. Gastric juice contains the enzyme
   a. bile **c.** ptyalin
   b. pepsin **d.** mucus

5. The digestion of proteins begins in the
   a. mouth **c.** small intestine
   b. liver **d.** stomach

6. In the digestive system, proteins are broken down into

a. fatty acids **c.** simple sugars.
b. glycerol **d.** amino acids

7. The liver produces

a. pepsin **c.** hydrochloric acid
b. bile **d.** ptyalin

5. Работа в парах. «Как это называется?» Изучите перечень процедур и процессов, и задайте вопросы, ответами на которые послужат слова, выделенные жирным шрифтом. Первый вопрос дан в виде образца.

e.g. **Biopsy** (taking a tissue sample from a patient)
What is the name of the procedure for taking a tissue sample from a patient?

e.g. **Absorption** (the process by which a drug finds its way into the body)
What do you call the process by which a drug finds its way into the body?

PROCEDURES

Appendectomy (performed to remove the appendix)
Enema (insertion of a liquid into the rectum)
Catheterization (using a tube to inject or remove fluid)
Radiotherapy (x-rays are used to kill cancer cells)
A **colostomy** (rerouting faeces to be collected in a bag)

PROCESSES

Digestion (conversion of food into substances that can be used in the body)
Elimination (the process by which we expel material from the body)
Secretion (body generates substances like saliva and hormones)
Detoxification (toxic substances are removed from the body)
Conversion (changing one substance into another)
Metabolism (conversion of fuel into energy by all the cells in the body)

Language Development

1. Просмотрите текст о пищеварительной системе и ответьте на вопросы.

1. What does the gastrointestinal tract consist of?

_____

_____

2. What are the main functions of the digestive system?

_____

_____

3. Where does digestion begin?

_____

4. What processes take place in the oral cavity?

_____

_____

5. Where is the oesophagus located and what is its function?

_____

_____

6. What are the main functions of the stomach?

_____

_____

7. What is the small intestine composed of?

_____

_____

8. What does the large intestine consist of?

_____

_____

9. How are undigested materials and secreted waste products excreted from the body?

_____

_____

10. What are the accessory organs?

_____

_____

11. What functions do accessory organs have in the digestive system?

_____

_____

12. What is the main function of liver?

_____

_____

_____

_____

2. Определите этапы в процессе пищеварения, обозначив их цифрами 1-7. Затем опишите весь процесс пищеварения, происходящий в ЖКТ.

a. Salivary glands in the mouth produce enzymes. __1__
b. Food in the stomach is attacked by digestive juices which include a powerful acid. _____
c. When the food **is** in the **small** intestine, juices from **the pancreas** and bile from the gall bladder dissolve undigested fat. ____
d. Food in a liquid paste form enters the colon where water is removed. _____
e. Faeces are expelled by a bowel movement. __
f. The first swallow starts the muscle action and pushes food through the oesophagus. ____
g. The food, now in a semi-solid state, slowly empties into the small intestine. ____

3. Объяснение цели и причины.
a. Прочитайте следующие два предложения и скажите, какое выражает цель (намерение что-либо сделать) и какое выражает причину (почему что-либо происходит).
1. Your weight loss shows you are not absorbing nutrients, **so** we're going to have a look at your intestine.

2. We will not give the patient laxatives **because** she may have an internal obstruction.

b. Закончите предложения 1-8, используя фразы a-h. Скажите, какие предложения выражают цель, а какие – причину.

1. He has a bowel problem,
2. The whiteness of your fingernails
3. We are going to do a colonoscopy
4. Cut down on heavy or spicy food,
5. You mustn't eat for four hours before the ultrasound.
6. As **a result of** the stool test
7. Do not give the patient aspirin,
8. The cause of ulcers

a. in order to find the cause of the bleeding.
b. we have decided surgery is the best option.
c. is **due to** the liver damage.
d. resulting in weight loss.
e. so that your gall bladder can be seen in the scan.
f. as it would make the bleeding worse.
g. is a bacterium called H. pylori.
h. to allow your stomach to recover.

c. Закончите диалог между участковой медсестрой и матерью, используя слова, выделенные жирным шрифтом в упр. 3a и 3 b. (Несколько вариантов возможно). Приготовьтесь воспроизвести диалог.

Nurse What's the problem?

Mother My little boy's got a stomach upset. He's got diarrhoea and a high temperature, and he was vomiting a lot until yesterday. I'm worried _____ 1 he's not eating much.

Nurse These symptoms are _____ 2 gastroenteritis. Lots of children at the school have got it.

Mother What's gastroenteritis?

Nurse Gastroenteritis is _____3 an infection, which makes the stomach and intestines inflamed. There's a virus going round at the moment.

Mother Will you give him antibiotics?
Nurse _____ 4 the infection is viral, not bacterial, antibiotics would have no effect. It will clear up on its own within a couple of days, _____ _____ 5 I don't think you need to worry.
Mother Is there anything I can give him?
Nurse Not really. Make sure he drinks plenty of fluids _____ 6 he doesn't become dehydrated.
Mother Just water?
Nurse Water's fine. And you could give him a glucose drink _____ 7 keep his energy up. But keep him off school until he's completely better, so this will avoid spreading the virus.

Grammar Point

Indirect Speech

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/reported.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/reported_speech/time_phrases.htm

https://www.englisch-hilfen.de/en/exercises/reported_speech/statements.htm

https://www.englisch-hilfen.de/en/exercises/reported_speech/sentences.htm

3. Проект.

Choose one of the organs of the digestive system. Now imagine that you should make a talk about this organ to a group of 10-year-old schoolchildren. Be ready to speak about the structure, functions and diseases of this organ. Do not forget that children will not listen to you if you are boring! Good luck!

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I know the structure and functions of the gastrointestinal tract
- I can describe the process of digestion and other processes taking place in the GIT
- I can explain the purpose and cause of different processes
- I can use Indirect Speech

Key Words

alimentary canal /elɪ`mentərɪ `kænəl/
anus /`eɪnəs/ *n*
appendix /ə`pendɪks/ *n*
bile /baɪl/ *n*
caecum /`si:kəm/ *n*
colon /`kəulən/ *n*
digestion /d(a)ɪ`ʤestʃən/ *n*
digestive system /d(a)ɪ`ʤestɪv `sɪstəm/
duodenum /,dju:ə`di:nəm/ *n*
oesophagus /ɪ`sɔfəgəs/ *n*
faeces /`fi:si:z/ *n*
gall bladder /`gɔlbledə/ *n*
gastrointestinal tract /,gæstrəuɪn`testɪnəl trækt/
ileum /`ɪlɪəm/ *n*
ingest /ɪn`ʤest/ *v*
jejunum /ʤɪ`ʤu:nəm/ *n*
large intestine /lɑ:ʤ ɪn`testɪn/
lining /`laɪnɪŋ/ *n*
liver /`lɪvə/ *n*
pancreas /`pæŋkrɪəs/ *n*
peristalsis /,perɪ`stælsɪs/ *n*
pharynx /`færɪŋks/ *n*
rectum /`rektəm/ *n*
saliva /sə`laɪvə/ *n*
salivation /,sælɪ`veɪʃən/ *n*
sigmoid colon /`sɪgmɔɪd `kəulən/
small intestine /smɔl ɪn`testɪn/
stomach /`stʌmək/ *n*
villus, *pl.* villi /`vɪləs (`vɪlai)/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT VIII. GASTRITIS

In this unit

- describing the causes and symptoms of gastritis
- talking about the treatment and prognosis of gastritis
- *Sequence of Tenses*

Lead-in

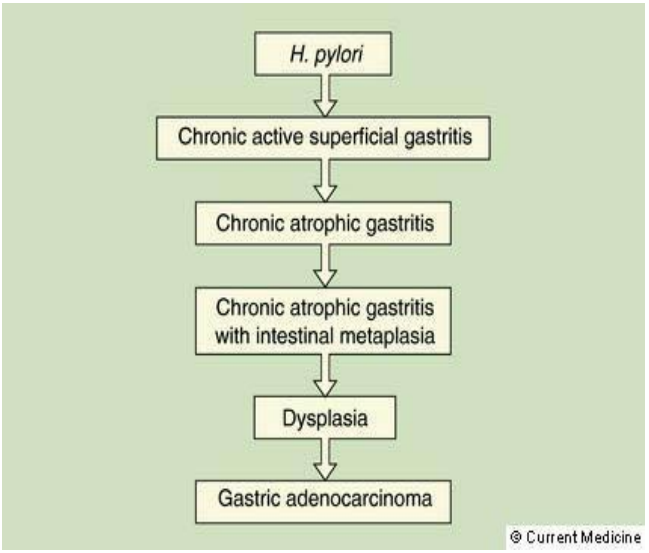
1. Прочитайте некотрые из рекомендаций *Gastritis Diet Guidelines* для профилактики или лечения гастрита. Каким из них вам было бы сложней всего следовать?.

- Try to avoid very hot food.
- Colas and sodas should not be used.
- Smoking should be avoided altogether.
- Do not eat chocolates.
- Use low fat dairy products.
- Avoid drinking coffee.
- Use fresh fruits and vegetables.
- Try to avoid food which produces gas in your stomach such as broccoli, cabbage, and onions.
- Drink fruit juices as they are very low in acidity.
- Take mild herbal teas as they are free of caffeine.
- Cottage cheese and butter can be used by gastritis patients.
- The consumption of alcohol should be minimized.
- Over dose of antibiotic medicines should be avoided.
- Increase your milk intake as it will control the acidity of the stomach.
- Avoid spicy foods as in addition to gastritis, they may also cause ulcers.

2. Прочитайте текст о гастрите. Выберите из списка утверждений A-F те, что лучше всего отражают содержание каждой части (1-5) текста. Здесь есть одно лишнее утверждение, которое вам не понадобится.

A. Causes of gastritis.
B. Prognosis for gastritis.
C. Treatment for gastritis.
D. Diagnosis of gastritis.
E. Symptoms of gastritis.
F. Symptoms of erosive gastritis.

Acute gastritis with superficial erosions



Relationship of Helicobacter pylori to gastric cancer

In the evaluation of chronic gastrointestinal complaints, a careful analysis and description of the symptoms, how they developed, the order in which they appeared and changed, are usually far more informative than the physical examination. Horward M. Spiro (1924 -)

Illness isn't the only thing that spoils the appetite.
Ivan Turgenev (1818 – 1883)

Reading

Gastritis

Gastritis is an inflammation, **irritation**, or **erosion** of the lining of the stomach. Gastritis is classified as erosive and nonerosive, acute and chronic. Chronic gastritis implies some degree of atrophy.

1.

Gastritis can be caused by irritation due to **excessive** alcohol use, chronic vomiting, stress, or the use of certain medications such as aspirin or other anti-inflammatory drugs. It may also be caused by any of the following:

- **Helicobacter pylori**: bacteria that live in the mucous lining of the stomach. Without treatment the infection can lead to ulcer, and in some people, stomach cancer.
- Bile reflux: a backflow of bile into the stomach from the bile tract.
- Infections caused by bacteria and viruses.

If gastritis is left untreated, it can lead to a severe loss in blood and may increase the risk of developing stomach cancer.

2.

Symptoms of gastritis vary among individuals, and in many people there are no symptoms. However, the most common symptoms include: nausea, or **recurrent upset** stomach, abdominal **bloating**, abdominal pain, vomiting, **indigestion**, **burning** or **gnawing** feeling in the stomach between meals or at night, **hiccups**, loss of appetite.

3.

To diagnose gastritis, a doctor reviews a personal and family medical history, performs a thorough physical evaluation, and may recommend any of the following tests.

Upper endoscopy. An endoscope, a thin tube containing a tiny camera, is inserted through the mouth and down into the stomach to look at the stomach lining. A doctor checks for inflammation and may perform a biopsy, a procedure in which a tiny sample of tissue is removed and then sent to a laboratory for analysis.

Blood tests. The doctor performs various blood tests to determine whether a patient has anaemia. He can also screen for H. pylori infection and **pernicious** anaemia with blood tests.

Faecal occult blood test (stool test). This test checks for the presence of blood in your stool, a possible sign of gastritis.

4.

Treatment for gastritis usually involves:

- Taking **antacids** and other drugs to reduce stomach acid, which causes further irritation to **inflamed** area; avoiding hot and spicy foods.
- For gastritis caused by H. pylori infection, a doctor will prescribe a regimen of several antibiotics plus an acid blocking drug.
- If the gastritis is caused by pernicious anaemia, B_{12} vitamin shots will be given.
- Eliminating irritating foods from the diet such as lactose from dairy or gluten from wheat.

Once the **underlying problem** disappears, the gastritis usually does, too. A patient should talk to the doctor before stopping any medicine or starting any gastritis treatment on his own.

Most people with gastritis improve quickly once treatment has begun. As soon as a doctor identifies the cause of gastritis and begins treatment, the prognosis for a full recovery is very good.

Vocabulary Practice

1 Объясните значение выделенных слов из текста на предыдущей странице.

2. Соотнесите термины в таблице с их определениями. Первое выражение сделано как образец.

involve, recurrent, irritation, excessive, bloated, nausea, pernicious, indigestion, hiccup

1. *burning pain* - an intense, extreme pain
2. _____ - greater than what is normal
3. _____ - happening often or regularly
4. _____ - swollen with gas or liquid
5. _____ - pain caused by difficulty in digesting
6. _____ - include
7. _____ - a sharp, often repeated sound in the throat caused by stop of breathing
8. _____ - destructive, or fatal unless treated
9. _____ - extreme initial inflammatory reaction of the body tissues to an injury.
10. _____ - an unpleasant sensation referred to the epigastrium and abdomen, with a tendency to vomit.

3. Закончите предложения, используя термины, перечисленные выше.

1. The cause of gastritis may be chronic and the symptoms are _____ .
2. If the patient complains of _____ and vomiting, one must first of all consider a disease of the abdominal cavity.
3. _____ consumption of junk food in our country is horrifying!
4. The patient suffered from _____ and _____ stomach.
5. Often because you have been eating or drinking too quickly, you may have _____.
6. The procedure _____ inserting an endoscope into the stomach through the mouth.

4. Закончите следующие предложения.

1. The causes of gastritis are _____ _____.
2. The symptoms of gastritis are _____ _____.
3. Gastritis can be confirmed by _____ _____.
4. Faecal occult blood test is _____ _____.
5. The treatment of gastritis includes _____ _____.
6. The prognosis for patients with gastritis is ___ _____.

5. a. Закончите письмо, используя выражения из таблицы. Что это за письмо? Что оно описывает? Что последует далее?

did an analysis	is no evidence
discuss treatment options	made an appointment
examine your colon	performed a biopsy
inform you of the results	run a risk
is a benign tumour	show an adenoma

13th February

Dear Mrs Hartmann

I am writing to_____[1] of the colonoscopy done on the 20th of January to_____[2].

During this procedure, the doctor_____[3] _____in which he took a sample from your lower colon for analysis. The sample was a polyp and the pathologist _____[4] of it.

This shows that there_____[5] of cancer; however, the biopsy does _____[6] in your lower colon. An adenoma_____[7]. This means that though you do not have cancer, you _____[8] of it some time in the future. I have_____[9] for you to see Dr Monroe who will answer any questions you have and _____ _____[10].

Yours faithfully Jane Brown

b. Напишите письмо пациенту, объясняя результаты его/ее биопсии, и объясните последующие действия.

Language Development

1. Просмотрите текст о гастрите и ответьте на вопросы.

1. What kind of disease is gastritis?

_____

_____

2. How is gastritis classified?

_____

_____

3. What are the causes of gastritis?

_____

_____

4. What are the most common symptoms of gastritis?

_____

_____

5. What helps the doctor to make the diagnosis of gastritis?

_____

_____

6. What kind of procedure is endoscopy?

_____

_____

7. What does the treatment of gastritis include?

_____

_____

8. How is gastritis caused by Helicobacter pylori treated?

_____

_____

9. What can untreated gastritis lead to?

_____

_____

10. What is prognosis for patients with gastritis?

_____

_____

2a. Обсуждение истории болезни. Прочитайте историю болезни женщины, которая умерла от рака толстой кишки, потому что не получила своевременное лечение.

Mrs Jobarti was an immigrant who spoke very little of the language of the country she lived in. She was a shy woman who was not well-educated and came from a culture and a generation of women who do not communicate easily with men about personal matters.
She was suffering frequent abdominal pains and one day she noticed blood in her stools. However, she was afraid of the 'foreign' doctors at her local clinic and was too embarrassed to talk to them about bowel habits. She visited a local healer from her own country who told Mrs Jobarti that she had a potentially fatal illness, but encouraged her to stay away from 'Western' medicine, gave her herbal preparations, and performed a healing ceremony.
Finally, Mrs Jobarti found the courage to go to a doctor.
The patient and the doctor (a man) did not understand each other and the doctor, who did not use an interpreter, briefly examined her, took a sample of her blood, prescribed laxatives, and recommended a change in diet. The blood test was negative, but Mrs Jobarti's symptoms got worse over the next six months. She was eventually referred to a local hospital. There was a very long waiting list to see a specialist and the hospital did not make her a priority. Mrs Jobarti did not make a fuss, but suffered in silence. Samples of her stools got lost in Pathology. She had to repeat the tests and it was another four months before she was diagnosed with advanced colon cancer. It was too late to do anything and she died within a month.

b. Подумайте о факторах, которые способствовали задержке в своевременном оказании помощи. Кого или что следует обвинять в первую очередь?
Расставьте следующие факторы в порядке их значимости.

the culture she was living in	the patient herself
the doctor	the patient's culture
the healer	the patient's husband
the hospital	

c. Объясните и обсудите причины вашего выбора с партнером, а затем со всей группой.

d. Ответьте на вопросы.

1. What would you have recommended to Mrs Jobarti when she felt abdominal pains for the first time if you had been her friend?
2. What could have been done if Mrs Jobarti's disease had been diagnosed earlier?
3. What measures should be taken in general practice service/the hospital to avoid similar situations in future?

3. Прочитайте информацию, приготовьтесь к ее обсуждению.

a. Endoscopy means *looking inside* and typically refers to looking inside the body for medical reasons using an **endoscope**. A typical **endoscope** is a flexible tube which is **inserted through** one of the natural **orifices – openings –** such as the anus or mouth. **Rigid endoscopes,** which cannot be bent, are also used but inserted through small **incisions** – surgical cuts. The **shaft** contains several channels to transmit light from the outside and images from inside and to allow different instruments to be used.
Endoscopes can be used for the following:

- to provide diagnostic information
- to **excise** – cut out – diseased tissue or growth such as **polyps**
- to clear obstructions
- to take a **biopsy**
- to **cauterize** a site of bleeding by applying heat.

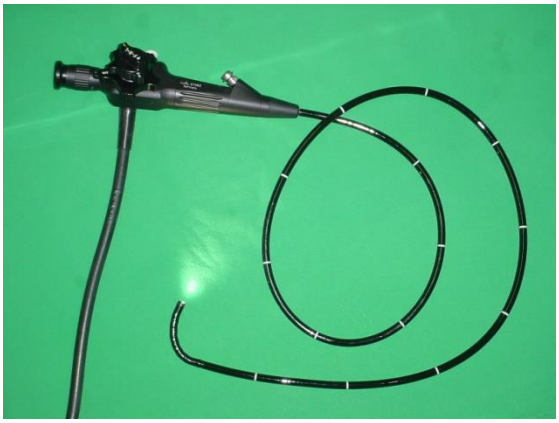
b. Enteroscopy.
Dr. Jardine is talking to her patient through an enteroscopy.

*Now, I'm just **lubricating** the tube with a **jelly** which contains a **local anaesthetic**. It'll help to ensure a smooth passage as it **passes down** and you shouldn't feel much. I'm going to **feed** the tube **through** your nose. This is the most uncomfortable part of the procedure but it's very short. You'll get used to the tube in a few minutes' time. OK, when it hits the back of your throat, take a deliberate swallow. I'll tell you when.*

*Now! Swallow, **swallow**. That's it. Well done.*

c. Report of a diagnostic endoscopy.

Examination
Informed consent was **obtained** from the patient after discussing **risks** and **benefits** of the procedure. The patient was connected to the **pulse oximeter** and placed in the **left lateral position**. Oxygen was provided through a **nasal cannula** and the **premedication administered** as stated. The endoscope was **introduced into** the oesophagus. At the end of the examination the patient was transferred to the **recovery area** to **recuperate**.



d. Заполните таблицу словами из упр. a, b, c.

Verb	**Noun**
consent	
	excision
incise	
	insertion
recover	
swallow	

e. Заполните таблицу словами из упр. a, b, c.

1. to pass (an instrument through an orifice)	
2. a substance used in procedures for lubrication	
3. the flexible part of the endoscope	
4. to stop something bleeding by applying heat	
5. a growth that protrudes from a mucous membrane	
6. to remove diseased tissue	
7. taking a sample of tissue for analysis	
8. not flexible	
9. a drug that numbs a particular part of the body	
10. become accustomed to	

f. Замените подчеркнутые слова и словосочетания синонимичными из упр. 3c.

After connecting the patient to an (1) instrument which measures levels of oxygen in the blood and pulse rate and placing him (2) on his left side, oxygen was provided through a (3) tube in his nose and the (4) drug treatment prior to the procedure administered as stated. Shortly afterwards, the endoscope was (5) inserted into the oesophagus. After the examination, the patient was (6) moved to the recovery area.

Grammar Point

Sequence of Tenses

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/reported.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/reported_speech/backshift.htm

https://www.englisch-hilfen.de/en/exercises/reported_speech/time_phrases.htm

https://www.englisch-hilfen.de/en/exercises/reported_speech/sentences.htm

3. Проект

Study the list of the Nobel Prize laureates in medicine and physiology:
http://www.nobelprize.org/nobel_prizes/medicine/laureates/index.html
Are there any scientists who were prized for their discoveries concerning the digestive system? the stomach? other digestive organ? gastric and intestinal diseases?

Choose one laureate and write about his/her discovery and its significance for the modern medical science.

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I know the structure and of the stomach
- I can describe the functions and other processes taking place in the stomach
- I can explain the purpose and cause of different processes
- I can use *Sequence of Tenses*

Key Words

bowel sounds /bauəl saundz/
breakdown /`breɪkdaun/ *n*
chyme /kaɪm/ *n*
confirm /kən`fə:m/ *v*
constipation /kɔnstɪ`peɪʃən/ *n*
diarrhoea /,daɪə`rɪə/ *n*
dilated /d(a)ɪ`leɪtɪd/ *adj*
distend /dɪ`stend/ *v*
emesis /`emɪsɪs/ *n* = vomiting /`vɔmɪtɪŋ/ *n*
feacal occult blood /`fi:kəl ɔ`kʌlt blʌd/
gastritis /gæ`straɪtɪs/ *n*
gastroenteritis /,gæstrəuentə`raɪtɪs/ *n*
guarding /`gɑ:dɪŋ/ *n*
masses /`mæsɪz/ *n pl.*
masticate /`mæstɪkeɪt/ *v*
nausea /`nɔsɪə/ *n*
peptic ulcer /`peptic `ʌlsə/
release /rɪ`li:s/ *v*
rigidity /rɪ`ʤɪdɪtɪ/ *n*
shifting dullness /`ʃɪftɪŋ `dʌlnɪs/
sphincter /`sfɪŋktə/ *n*
stomach cancer /`stʌmək `kænsə/
stool /stu:l/ *n*
swallow /`swɔləu/ *v*
tenderness /`tendənɪs/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

Self-Assessment (Units VII-VIII)

1.Закончите следующие предложения, используя активную лексику урока.

1. The organ where bile is stored is the _____ .
2. The major portion of the large intestine extending from the caecum to the rectum is _____.
3. The most common cause of ulcers is _____.
4. The procedure of using an enteroscope for the direct visualization of small intestine is _____.
5. An _____ is used for examining parts of the body which are not visible from outside.
6. A painful sensation when touched is _____. _____ .
7. The process of passing faeces is known as _____ .
8. GIT stands for _____ .
9. What part of the body does cirrhosis affect? _____ .
10. Stool is another word for _____ .
11. The name of the procedure when the appendix is removed is _____ .
12. Gastritis usually affects _____ .
13. Extreme tiredness resulting from mental or physical exertion or illness is known as _____.
14. The contents of the intestines are pushed forward thanks to the involuntary constriction and relaxation of the muscles which are called _____ _____.
15. The organ in the body that stores iron and vitamins is _____.
16. To _____ from alcohol means not to drink alcohol at all.
17. The first portion of the small intestine is _____.
18. Liver diseases are often accompanied by _____ caused by obstruction of the bile duct.
19. _____ is an abnormal enlargement of a part of the body, typically as a result of an accumulation of fluid.
20. Food is enclosed in your stomach by two circular muscles, known as _____

2. Текст описывает абсорбцию и метаболизм аторвастатина. Заполните пробелы в предложениях, используя слова из таблицы.

metabolised	inhibiting	leads to	
passes into	goes into	enters	via
released into	causes	mixes with	

After you swallow the tablet, it _____ 1 the GIT. It _____ _____ 2 the oesophagus, the tube which _____ 3 the stomach. The tablet passes into your stomach, where it is absorbed. It _____ _____ 4 the liquids there so it can pass into your bloodstream. It then _____ _____5 the liver _____ 6 the small intestine, the part under the stomach. The drug is _____ 7, or chemically changed, in the liver. The liver stops the production of an enzyme which _____ 8 the body to produce a harmful type of cholesterol.
By _____ 9 this enzyme, the amount of “bad cholesterol” which is _____ _____10 the blood is reduced.

3. Заполните таблицу. Дополните каждую колонку своими собственными словами и выражениями.

cirrhosis, hepatitis, itching, jaundice, dizziness, kidney failure, swelling, nausea, constipation, diarrhoea, emesis, FOB, abdominal discomfort, guarding, peptic ulcer, shifting dullness, stomach ulcer, pernicious anaemia, hiccups, appendicitis, tenderness, loss of appetite, stroke

Diseases	Signs	Symptoms
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	
	_____	
	_____	
_____	_____	_____
_____	_____	_____
_____	_____	_____

4. Тест.

а. Выберите ответ «правильно» или «неправильно»

1. The job of the digestive system is to break food down so that our bodies can use it as fuel or energy.
a. true **b.** false
2. Your stomach is located right behind your belly button.
a. true **b.** false
3. Your small intestine is approximately 90–100 cm long.
a. true **b.** false
4. The large Intestine is responsible for removing water from the undigested food, turning it from a liquid paste into solid waste.
a. true **b.** false
5. The esophagus is a muscular tube that carries food from our mouth to our stomach.
a. true **b.** false
6. Everything we eat is completely digested and used by our bodies.
a. true **b.** false

в. Выберите правильный ответ.

7. What is inside your stomach that helps break food down into a thick liquid paste?
a. water **b.** acids and enzymes
c. villi **d.** proteins and fats
8. What are the tiny finger-like projections called that are inside the small intestine? These tiny finger-like projections absorb the nutrients form the food and send the vitamins, minerals, proteins, carbohydrates and fats into our bloodstream.
a. capillaries **b.** hair
c. villi **d.** lashes
9. After the food leaves our stomach it heads into which part of the digestive system?
a. esophagus **b.** pancreas
c. large intestine **d.** small intestine
10. What is removed from the undigested food when it is in the Large Intestine?
a. water **b.** nutrients
c. enzymes **d.** sugar
11. Which of these is a disease of the liver?
a. cyanosis **b.** cirrhosis
c. stenosis **d.** psychosis
12. Which procedure **cannot** endoscopes be used for?
a. diagnosis **b.** biopsy
c. blood test **d.** excision of polyps

5. Выберите правильный ответ.

1. The patient will be allowed to go home if his temperature _____ normal.
a. will be **b.** would be
c. is **d.** were
2. It wouldn't surprise me if she _____ the answer.
a. wouldn't know **b.** didn't know
c. doesn't know **d.** wouldn't have known
3. If I _____ cleverer, I'd help you with this test.
a. am **b.** is
c. were **d.** would be
4. If I hadn't studied, I _____ the exam.
a. hadn't passed **b.** wouldn't have passed
c. wouldn't pass **d.** didn't pass
5. Don't hesitate to call me if you _____ any problems.
a. have **b.** had
c. will have **d.** would have
6. If endoscopy _____, I wouldn't have made a correct diagnosis.
a. wasn't performed **b.** hadn't been performed
c. didn't perform **d.** hadn't performed
7. If fluid is present, the dull note _____ on percussion moves.
a. will hear **b.** would be heard
c. would hear **d.** will be heard
8. If the patient _____ to hospital yesterday, he might have survived.
a. had taken **b.** would have been taken
c. had been taken **d.** would have taken
9. If I _____ you, I would take part in the conference.
a. were **b.** am
c. is **d.** would be
10. Please tell me at once if you _____ any discomfort.
a. felt **b.** would feel
c. will feel **d.** feel
11. The physician would have recommended biopsy if she _____ stomach cancer.
a. suspected **b.** had suspected
c. would suspect **d.** hadn't suspected
12. What _____ you _____ if the patient had internal bleeding?
a. would …do **b.** will … do
c. do … do **d.** had … done
13. I _____ a bad mistake if I hadn't read the instructions.
a. would make **b.** will make
c. would have made **d.** had made

UNIT IX. THE IMMUNE SYSTEM

In this unit

- talking about types of immunity
- describing different types of vaccines
- *Equivalents of modals to express past and future*

A child being immunized against polio

Lead-in

1. Интересные факты.

- The average macrophage can engulf 100 bacteria a second.
- A plasma cell (B cell) can produce over 2,000 antibodies per second.
- The thymus gland, the site of T cell maturation, reaches its maximum size when a person is age 12, then decreases in size with age.
- Vaccinations against smallpox have been in use since the time of the ancient Chinese civilizations.
- The vaccine mechanism was invented by **Edward Jenner**, a British physician, in 1797, when he found that patients could become immune to the devastating effects of the smallpox disease (which had a mortality rate of 40 per cent) through exposing or inoculating patients with small amounts of the cowpox disease, which is a weaker form of the smallpox disease.

2. Ответьте на следующие вопросы:

- Which of the following diseases can be prevented with the help of immunization?

polio	tetanus	diphtheria
gastritis	bronchitis	tuberculosis
mumps	rubella	hepatitis
AIDS	pertussis	measles

- Have you ever been immunized? Against what diseases?
- Which immunizations are obligatory in Russia?
- Why are many parents refusing vaccination for their children nowadays?
- Why is there a new flu vaccine every year?

3. Прочитайте текст об иммунной системе и подготовьтесь к его обсуждению:

- What is immunity?
- Types of immunity
- What is vaccination?
- Types of vaccines
- Should vaccination be obligatory? Why? Why not?

Nurse giving an intramuscular immunization

The immune system is amazingly complex. It can recognize and remember millions of different enemies, and it can produce secretions (release of fluids) and cells to match up with and wipe out nearly all of them.

Reading

The Immune System

The **immune system** is a network of cells, tissues, and organs that work together to defend the body against attacks by "foreign" **invaders,** called **antigens**.
Bacteria, viruses and other microbes **threaten** your body every day. But when a disease-causing microorganism enters your body, your immune system makes a **defense**, producing proteins called **antibodies** to fight off antigens. The **goal** of your immune system is to prevent illness by destroying antigens or making them harmless.

Immunity: Natural and Artificial

Long ago, physicians realized that people who had recovered from the plague would never get it again - they had **acquired** immunity.
Immunity is the specific **resistance** to disease, and all of the cells and tissues involved with the production of immunity are sometimes considered to be part of the immune system. The immune system is a physiologic system that includes not only the lymphatic system but components of **integumentary**, cardiovascular, respiratory, digestive and other systems.
Your body can become immune to bacteria**,** viruses and other microbes in two ways:

- By getting a disease (natural **immunity**)
- Through **vaccines** (artificial (vaccine-induced) immunity)

In either case as soon as you have immunity to a disease-causing organism, you're better protected from becoming ill.

Natural immunity

Natural immunity develops after you've been ill with a certain disease. Your immune system makes a set of defenses to prevent you from getting sick again from that particular type of virus or bacterium. As soon as the antigen enters your body again antibodies **react** immediately and **attack** the microorganism before the disease can develop. Your immune system can effectively **destroy** thousands of different organisms.

Artificial (Vaccine-Induced) Immunity

Vaccine-induced immunity results after you receive a vaccine. The vaccine makes your body think that it's being invaded by a specific organism, and your immune system goes to work to destroy the antigen and prevent it from infecting you again. If you become ill with a disease for which you've been vaccinated, the invading microbes are met by antibodies that will destroy them. The immunity you develop after vaccination is similar to the immunity acquired from natural infection. The vaccines are usually given by injections, orally or as a nasal spray.

Immunization. Types of Vaccines

Immunization is a way to improve your immune system and prevent serious, life-threatening diseases. **Immunization** is done through various techniques, most commonly **vaccination**.
For many years, healthcare providers have used vaccination to help the body's immune system prepare for future attacks. Vaccines consist of killed or modified microbes, parts of microbes, or microbial DNA that trick the body into thinking an infection has occurred.
A vaccinated person's immune system attacks the harmless vaccine and prepares for invasions against the kind of microbe the vaccine contained. In this way, the person becomes immunized against the microbe. Though many parents are worried that some vaccines are not safe and may harm their baby or young child, vaccination remains one of the best ways to prevent infectious diseases, and vaccines have an excellent safety record. Previously devastating diseases such as smallpox, polio, and whooping cough (pertussis) have been greatly controlled or eliminated through worldwide vaccination programs.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Словообразование.

Verb	Noun
to resist	
to defend	
to react	
to immunize	
to vaccinate	
to produce	
to attack	
to invade	
to threaten	
to destroy	
to spread	

3. Составьте словосочетания, используя слова из таблицы. Используйте каждое слово только один раз.

microorganisms, disease-causing, immune, a vaccine, foreign, nasal, the invader, natural, a defense, protein

1. _____ microorganisms
2. _____ immunity
3. _____ system
4. _____ invaders
5. _____ spray
6. to make _____
7. to fight off _____
8. to produce _____
9. to receive _____
10. to destroy _____

4. Вставьте правильный предлог, затем составьте предложения с несколькими словосочетаниями.

1 to prevent smb ____ getting sick; **2** to fight ____ the invader; **3** to be met _____ antibodies; **4** the immunity acquired _____ natural infection; **5** thousands _____ different microorganisms; **6** to go ____ work; **7** the goal _____ the immune system; **8** to be ill _____ a disease; **9** to become immune _____ viruses; **10** to be protected ____ becoming ill; **11.** to immunize _____ disease.

_____
_____
_____

5. Заполните пробелы словами и словосочетаниями из упр. 2-4.

1. In the world measles is a disease of children because most adults possess _____.
2. Mortality from measles depends on _____ of population to bacterial pathogens
3. BCG is an intradermal _____ against tuberculosis used around the world for more than 40 years.
4. Mucus is a thick liquid _____ inside the nose and mouth to protect them against foreign _____.
5. Many people _____ badly to penicillin.
6. Immunotherapy refers to types of treatment that stimulate, enhance and suppress the body's own _____ system.
7. It is very important to stop the _____ of the disease immediately.
8. Many devastating diseases can now be prevented through aggressive _____ programs.
9. Cancer is not the only _____ condition among diseases nowadays.
10. Contagious diseases _____ from one person or organism to another by direct or indirect contact.
11. Many people on our planet are concerned about the _____ of the rainforests.

6. Выберите правильный вариант ответа.

1. The immune system produces antibodies
- **a** when invaders threaten your body
- **b** when you get infected
- **c** when bacteria become harmless

2. The vaccine is effective because if you get vaccinated your immune system
- **a** will produce necessary antibodies
- **b** will attack your organism
- **c** will threaten your body

3. Natural immunity will develop
- **a** after your have received a vaccine
- **b** after the illness has been prevented
- **c** after you have been ill

4. Natural immunity and vaccine-induced one are
- **a** very different
- **b** almost the same
- **c** develop in different people

5. The vaccines are usually given
- **a** by injections and orally
- **b** orally and nasally
- **c** all the above mentioned

Language Development

1. Просмотрите текст об иммунной системе еще раз и ответьте на вопросы.

1. What does the immune system consist of? What is its role in the organism?

_____
_____

2. What is immunity?

_____

3. What types of immunity are there? How does each type develop?

_____

4. What is immunization? What is the role of immunization?

_____

5. What types of vaccines do you know? How do vaccines work?

_____
_____

6. How are vaccines usually given?

_____

2. Какое из утверждений указывает на положительный/отрицательный эффект иммунизации? Отметьте каждое утверждение соответственно буквами *P* или *N*.

- Immunization has decreased the incidence of several serious illnesses — including diphtheria, tetanus, measles and polio — by more than 95 per cent since the beginning of the 20th century. _____
- Vaccines rarely put people at risk of the serious complications of infection. _____
- Vaccines can cause serious damage to the health of a child. _____
- Vaccines aren't 100 per cent protective. Most childhood vaccines are effective for 85 percent to 95 percent. _____
- During a disease epidemic, some vaccinated people will catch the disease. However, those who were immunized usually have a less serious illness, while those not vaccinated are in a greater danger. _____
- Manipulating the immune system with 33 doses of 10 different vaccines before the age of five (in the USA) weakens immunity, leaving the child vulnerable to other infectious diseases. _____

3. Ознакомьтесь со следующей информацией, приготовьтесь ответить на вопросы:

- What types of vaccines are there?
- What diseases are different types of vaccines given against?

Different Types of Vaccines

Preparation of measles vaccine

The first human vaccines against viruses were based on using weaker or **attenuated** viruses to generate immunity. The smallpox vaccine used cowpox, a poxvirus that was similar enough to smallpox to protect against it but not to cause a serious illness. Rabies was the first virus attenuated in a lab to create a vaccine for humans.

Four different types of vaccines are currently available:

- **Live virus vaccines** use the weakened (or attenuated) form of the virus. The measles, mumps, and rubella (MMR) vaccine and the varicella (chickenpox) vaccine are examples of this type.
- **Killed (inactivated) vaccines** are made from a protein or other small pieces taken from a virus or bacteria. Influenza shots are an example of this type of vaccine.
- **Toxoid vaccines** contain a toxin or chemical made by the bacteria or virus. They make you immune to the harmful effects of the infection, instead of to the infection itself. Examples are the diphtheria and tetanus vaccines.
- **Biosynthetic vaccines** contain human-made substances that are very similar to pieces of the virus or bacteria. The Hib (*Haemophilus influenzae* type B) conjugate vaccine is one example.

Grammar Point

Equivalents of Modals to Express Past and Future

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/hilfsverben2.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/modals/substitute_forms_tenses.htm

https://www.englisch-hilfen.de/en/exercises/modals/substitute_forms_tenses_2.htm

https://www.englisch-hilfen.de/en/exercises/modals/substitute_forms.htm

3. Проект.
Search the web to answer the following questions:

Top 10 Questions about Vaccination

1. Why aren't all vaccines 100% effective?
2. Why are there so many vaccines?
3. Is natural immunity better than artificial immunity?
4. Can babies' immune systems handle so many vaccines?
5. Can you get a disease from the vaccine that's supposed to prevent it? And why do some vaccines have live pathogens but others have killed pathogens?
6. Why is allergy to eggs a contraindication to getting some vaccines?
7. People say that vaccines are linked to long-term health problems such as multiple sclerosis, diabetes, and autism. Is that true?
8. Do we do enough safety testing with vaccines?
9. Why can't we eradicate other diseases, as we did with smallpox?
10. Is the polio vaccine linked to HIV? cancer?

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can talk about about types of immunity
- I know different types of vaccines and what diseases they are used against
- I can use equivalents of modals to express past and future

Key Words

acquired /ə`kwaɪəd/ *adj*
antibody /`æntɪbɔdɪ/ *n*
antigen /`æntɪʤən/ *n*
attack /ə`tæk/ *v, n*
attenuated /ə`tenjueɪtɪd/ *adj*
defend /dɪ`fend/ *v*
defense /dɪ`fens/ *n*
destroy /dɪ`strɔɪ/ *v*
goal /gəul/ *n*
immune system /ɪ`mjuːn `sɪstəm/
immunity /ɪ`mjuːnɪtɪ/ *n*
immunization /ɪˌmjunaɪ`zeɪʃən/ *n*
integumentary /ɪn`tegju`mentərɪ/ *adj*
invader /ɪn`veɪdə/ *n*
react /rɪ`ækt/ *v*
resistance /rɪ`zɪstəns/ *n*
threaten /`θretən/ *v*
toxoid /`tɔksɔɪd/ *n*
vaccination /ˌvæksɪ`neɪʃən/ *n*
vulnerable /`vʌlnərəbl/ *adj*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT X. ALLERGY

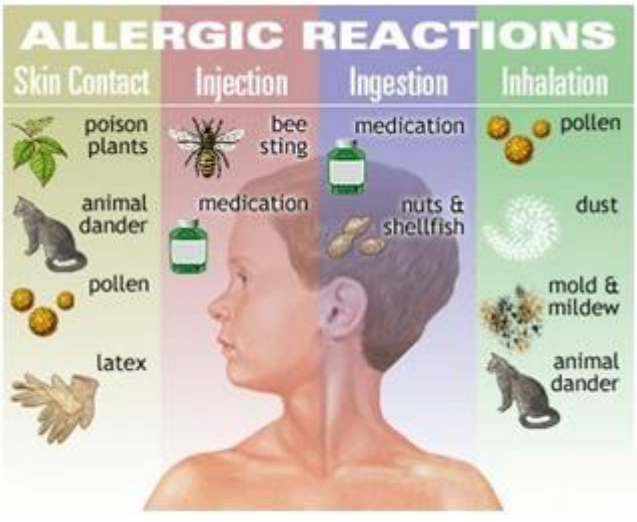
In this unit

- talking about different types of allergy
- describing aetiology of allergy
- describing symptoms of allergy
- *Modal Verbs in the Second Meaning*

Lead-in

1. Интересные факты.

- Allergy is a very common disorder. At the end of the XX century more than 300 million people in the world were registered to have bronchial asthma.
- Nowadays in Russia 20-30% of people suffer from allergic diseases, and the number increases with each year.
- The term and concept of "*allergy*" was coined by a Viennese pediatrician named Clemens von Pirquet in 1906. He observed that the symptoms of some of his patients might have been a response to outside allergens such as dust, pollen, or certain foods.



2. Попробуйте угадать значение выделенных слов из контекста.

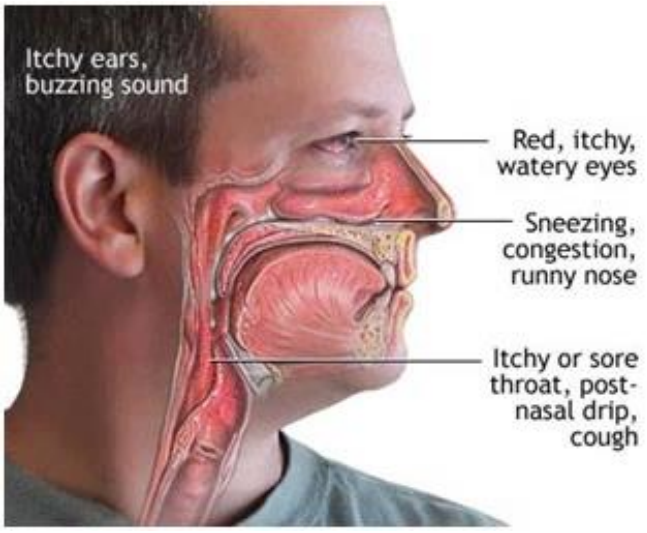
1. **Pollen** of the flowers is transferred with the help of bees.
2. Look! There's a lot of **dust** on the table and computer, and on the floor. Could you clean up the room?
3. Many people do not have animals at home because they are allergic to their **dander**.
4. **Rash** on the skin is a symptom of measles, chickenpox and other infectious diseases.
5. Mosquito bites are quite **itchy**.

3. Посмотрите на рисунки и ответьте на вопросы.

- What substances can cause allergy?
- What are the most common symptoms of allergy?
- Have you ever had allergy?
- Do you know any treatment for allergy?
- Is allergy inherited?

4. Прочитайте текст об аллергии и подготовьтесь к его обсуждению, используя подзаголовки в качестве плана.

Symptoms of Allergy



I've developed an allergic reaction to lazy people. Symptoms of this allergy include headaches, nausea, and a sudden urgent desire to kill someone.

Reading

Allergy

What is allergy?

Medical scientists are becoming more and more interested in allergies. An **allergy** is a condition caused by an excessive reaction of the immune system (**hypersensitivity**) to a substance or substances which would not normally cause a disease. In fact, some researchers do not classify allergies as diseases, although they can be just as troublesome. Severe reactions can even result in death.

Allergens

Substances that cause allergies are called **allergens**. The most common natural allergens are dust and **pollen,** animal **dander**, drugs and foods, mold and insect venom. Some plants and flowers give out pollen to the atmosphere during spring and early summer. Many people develop symptoms like those of the common cold such as **watery** eyes and nose, sneezing and a slight rise in temperature. This is commonly called **hay fever**. Allergic reactions can also be caused by food. Milk and eggs are known to be allergenic for some people. However, almost anything eaten, drunk, inhaled or touched can cause a reaction.

Drugs, even the common ones like aspirin, can result in **distressing** symptoms. Some are dangerous. When penicillin was first manufactured on a large scale, it proved to be effective against many pathogens. But it had a tendency to cause reactions so strong that patients sometimes died. The sulpha drugs were also quite dangerous, although **they** did not kill as many people as penicillin did. We now have better **antibiotics**, but they must be taken with great care.

Symptoms

Typical allergic reactions involve irritation and inflammation (swelling) in the body. Symptoms may include:

- sneezing
- **wheezing**
- sinus pain (pressure or pain high up in the nose, around the eyes and at the front of the skull)
- runny nose
- coughing
- **nettle rash** (hives)
- swelling
- **itchy** eyes, ears, lips, throat and palate
- shortness of breath
- sickness, vomiting and diarrhoea

It is important to remember that these symptoms can also be caused by other conditions, so see your GP for advice if you're not sure what's causing your symptoms.

Anaphylaxis

In very rare cases, an allergy can lead to a severe allergic reaction called anaphylactic shock, which can be fatal.

Most allergic reactions occur locally in a particular part of the body, such as the nose, eyes or skin. In anaphylaxis, the allergic reaction **involves** the whole body and usually happens within minutes of coming into contact with a particular allergen. The symptoms of anaphylactic shock can include any or all of the following:

- swelling of the throat and mouth
- difficulty swallowing or speaking
- difficulty breathing
- a **rash** anywhere on the body
- flushing and itching of the skin
- stomach **cramps**, nausea and vomiting
- a sudden feeling of weakness due to a fall in blood pressure
- **collapse** and **unconsciousness**

If you have anaphylactic shock, you will require emergency treatment, usually with an injection of a medicine called adrenalin.

Treatment

There is no sure remedy for allergies. Sometimes the body cures itself. Treatment might consist of giving drugs either to reduce the symptoms or to **suppress** the reaction. Drugs of the second type are called **antihistamines**. They are not always effective, and they tend to make the patient sleepy. Some doctors think it is better to identify and avoid the allergen, but this in not always possible.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Заполните пробелы словами из таблицы. Используйте каждое слово только один раз.

swelling, rash, sinus, watery, runny, breathing, anaphylactic, allergic, hay, cramps,

1. _____ eyes
2. _____ reaction
3. difficulty _____
4. _____ nose
5. _____ pain
6. _____ fever
7. itchy _____
8. stomach _____
9. _____ of the mouth
10. _____ shock

3. Заполните пробелы словами *hurt(s)* или *sore*. Обратите внимание на использование этих слов.

NB! Hurt is a verb: *e.g. My foot **hurts**.* **Sore** is an adjective: *e.g. I have a **sore** foot.* *My foot is **sore.***

1. It _____ the eyes to look at the sun.
2. Take care! My arm is so _____ .
3. If I had a _____ throat when a child I didn't go to school.
4. His chest _____ when he coughs.
5. If your eyes are _____ when you are around animals go to see an allergist.

4. Заполните пробелы предлогами.

Signs and Symptoms of Allergy

Allergy is characterised _____ **1** a local or systemic inflammatory response to allergens.
Local symptoms are those affecting different parts _____ **2** the body:
Nose: swelling of the nasal mucosa (allergic rhinitis)
Eyes: redness and itching of the conjunctiva (allergic conjunctivitis)
Airways: bronchoconstriction, wheezing and dyspnoea, sometimes attacks of asthma
Ears: feeling of fullness, possibly pain, and impaired hearing due _____(**3**) the lack of eustachian tube drainage.
Skin: various rashes, such _____(**4**) eczema, hives (urticaria) and contact dermatitis.
Head: while not as common, headaches are seen in some with environmental or chemical allergies.
Systemic allergic response is also called anaphylaxis. Depending _____ **5** the rate of severity, it can cause cutaneous reactions, bronchoconstriction, oedema, hypotension, coma and/or even death.
Hay fever is one example of an exceedingly common minor allergy - large percentages of the population suffer _____ **6** hay fever symptoms _____ **7** response to airborne pollen. Asthmatics are often allergic _____ **8** dust mites. Apart _____ **9** surrounding allergens, allergic reactions can be caused _____ **10** medications.

5. Заполните пробелы словами из таблицы.

allergic, injected, known, marked, reduce, performing, sensitive, suspected, testing, within

Diagnosis of Allergy

There are several methods for the diagnosis and assessment of allergies.
Skin test
The typical and most simple method of diagnosis and monitoring of allergies is by skin testing, also _____(**1**) as prick testing due to the series of pricks made into the patient's skin. Small amounts of _____(**2**) allergens and/or their extracts (pollen, grass, mite proteins, peanut extract, etc.) are introduced to sites on the skin _____(**3**) with pen or dye (the ink/dye should be carefully selected, lest it cause an allergic response itself). The allergens are either _____(**4**) intradermally or into small scratchings made into the patient's skin, often with a lancet. Common areas for _____(**5**) include the inside forearm and back. If the patient is _____(**6**) to the substance, then a visible inflammatory reaction will usually occur _____(**7**) 30 minutes. This response will range from slight reddening of the skin to full-blown hives in extremely _____(**8**) patients. After _____(**9**) the skin test and receiving results, the doctor may apply a steroid cream to the test area to _____(**10**) discomfort (such as itching and inflammation).

Language Development

1. Укажите, какие утверждения верны (T), а какие ошибочны (F).

1. _____ A substance causing an allergy can easily be avoided.
2. _____ Some scientists do not think allergies are diseases.
3. _____ Early antibiotics were quite dangerous.
4. _____ Penicillin is an effective antihistamine.
5. _____ The common cold is also known as hay fever.
6. _____ Dust and pollen are the rarest allergens in nature.
7. _____ There is no definite treatment for allergies.
8. _____ Antibiotics are given to patients to reduce the symptoms.
9. _____ People should avoid milk and eggs to prevent allergies.

2. Просмотрите текст об аллергии и выполните следующий тест.

1. Sulpha drugs were _____ than penicillin.
a less dangerous **c** more common
b more dangerous **d** less common

2. The word '**they**' in the text refers to _____
a drugs **c** penicillin drugs
b sulpha drugs **d** better antibiotics

3. The word '**antibiotics**' in the text means
a chemicals that work with life
b chemicals that work for life
c drugs that work against allergies
d drugs that work against life

4. From the last paragraph of the text you can conclude that **antihistamines** are
a allergy causing substances.
b disease causing agents.
c drugs to suppress allergic reactions.
d drugs to reduce the severity of the symptoms.

3. Соедините следующие предложения, используя сложные союзы *both… and…, either… or…, neither… nor…*

e.g. I do not like bananas. I do not like grapefruits.

I do not like ***either*** *bananas* ***or*** *grapefruits. I like* ***neither*** *bananas* ***nor*** *grapefruits.*

1. The patient suffers eye allergy. The patient suffers cold.

_____

_____

2. There are no vaccines against HIV. There are no vaccines against AIDS.

_____

_____

3. The child has had measles. The child has had smallpox.

_____

_____

4. You may see an allergist. You may see your family doctor.

_____

_____

5. Your allergy is not caused by pollen. Your allergy is not caused by dander.

_____

_____

4. Составьте предложения о себе, используя союзы *both… and…, either… or…, neither… nor…*

e.g. be allergic/dust/cigarette smoke

I am allergic to ***neither*** *dust* ***nor*** *cigarette smoke.* (*i.e.,* I do not have allergy)

I am allergic to ***both*** *dust* ***and*** *cigarette smoke.* (*i.e.,* I have allergy)

Иногда вам может понадобиться другая структура:

I am allergic to dust ***but*** *I am not allergic to cigarette smoke.*

1) have/allergic rhinitis/allergic conjunctivitis

_____

_____

2) in spring/eyes/watery/itchy

_____

_____

3) when/around the animals/nose/blocked/itchy

_____

_____

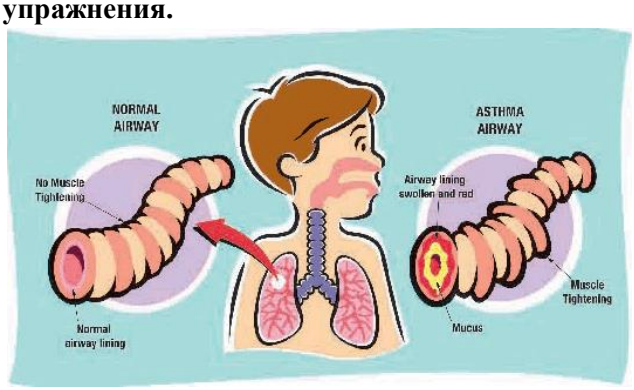
4) suffer/breathlessness/tightness of the chest

_____

5) in case of itchy eyes/try over-the-counter eye drops/see a physician

_____

5. a. Прочитайте текст об астме, выполните упражнения.



On the left: Normal airway. On the right: Asthma airway

ASTHMA

Asthma is a disease of the lungs that causes wheezing, coughing, chest tightness and difficulty breathing. It can be very **scary** for the patient. Luckily, asthma and its effects are **reversible** with medication.

Asthma attacks are the periods when symptoms suddenly become worse. Some common **triggers** for these attacks are exercise, infections, dust, tobacco smoke, allergens, cold air and nervousness.

Limiting **exposure** to these triggers may help improve quality of life. When an asthma attack occurs, take your medication according to your asthma action plan, and wait 10 to 15 minutes. If symptoms worsen or don't improve immediate medical attention may be necessary. Some danger signs are severe wheezing or coughing, **trouble walking**, and blue lips or fingernails. If any of these danger signs occur go to the emergency room or call 103.

Asthma is a lifelong disease. The effects of asthma attacks on the lungs can cause serious problems later in life. Proper management of asthma is very important.

b. Найдите слова и фразы в тексте, имеющие следующее значение.

a. causing fear or alarm
_____

b. a state of being subjected to some influence
_____

c. being contrary or opposite to what has just been _____

d. an immediate cause of some reaction
_____

e. difficulty walking
_____

c. Тест

1. How many triggers for asthma attacks are mentioned?

a 4 **b** 5 **c** 6 **d** 7

2. What can be seen in an asthma patient during his/her asthma attack?

a wheezing **c** chest tightness
b difficulty breathing **d** all of these

3. Which of the following about asthma is NOT true?

a It is a respiratory disease **c** It cannot be treated
b It is a scary disease **d** It has typical attacks

4. What are some danger signs associated with asthma attacks?

a severe wheezing **c** blue skin
b trouble speaking **d** all of these

5. What should a patient do if any danger signs occur?

a Wait 10 to 15 min **c** Go to the hospital
b Take medication **d** Send for a doctor

d. Составьте план к тексту и перескажите текст по плану.

6. Просмотрите текст об аллергии и ответьте на вопросы.

1. What is allergy? Is it a disease or not?
_____
_____

2. What allergens are there?
_____

3. What are the most common symptoms of allergy?
_____

4. What are the most widespread allergic diseases?
_____

5. What is anaphylactic shock? What are its symptoms?
_____

6. Is there any treatment for allergy?
_____

7. Фактически, все аллергические болезни вызываются одними и теми же аллергенами, инородными веществами, вызывающими аллергии. Однако, проявления болезней могут отличаться у разных людей. Заполните таблицу словами, данными ниже. Первое слово выполнено для вас в качестве примера:

~~sneezing~~, coughing, itchy eyes, a watery discharge from the nose ('runny nose'), red skin, wheezing, an itchy nose, tightness of the chest, sore eyes, itchy rash, watery eyes, breathlessness, a blocked nose, red and swollen eyes, sneezing, blue lips and fingernails.

disease	system (or organ) involved	allergen	symptoms
Asthma	…….	dust, pollen, cigarette smoke, dander, certain medicines, chemicals or foods	…….
Allergic rhinitis	…….		sneezing, …….
Urticaria (hives)	skin		…….
Allergic conjunctivitis	…….		…….

8. Составьте предложения о болезнях, указанных в упражнении 7, используя следующие структуры:
***…** is a disease of ….*
It may be caused by ….
A patient with … usually complains of … .

*e.g. **Tracheitis** is a disease of the **respiratory system**. It may be caused by **pneumococci or staphylococci**. A patient with **tracheitis** usually complains of **coughing, sore throat** and **headache.***

9. Если вы хотите прямо сейчас узнать, есть ли у вас аллергический коньюктивит, выполните следующий тест.

a. How do you know if you have an eye allergy? The only way to know for sure is to see a physician for a diagnosis. But this **self-quiz** (look on the right) might help you determine whether you need to talk to your physician or see an allergy specialist.

b. If you answered YES to one or more of these questions, you may have eye allergies. An allergist can help you. Take this quiz to your allergist or personal physician to **discuss** your symptoms.
Ask your allergist or personal physician about effective eye allergy treatment.
You don't have to suffer eye allergies.
Effective treatment is available!

1. Are your eyes itchy?	□ Yes □ No
2. Do you have watery eyes?	□ Yes □ No
3. Are your eyes red?	□ Yes □ No
4. Are your eyelids swollen?	□ Yes □ No
5. Are your eyes sensitive to light?	□ Yes □ No
6. Do your eyes hurt?	□ Yes □ No
7. Do you often feel like you have something in your eye?	□ Yes □ No
8. Are your eye symptoms worse outdoors or during some season?	□ Yes □ No
9. Are your eye symptoms worse when you are around animals?	□ Yes □ No
10. Do your eye symptoms persist even after using over-the-counter eye drops?	□ Yes □ No

Grammar Point

Modal Verbs in the Second Meaning

1. Повторите грамматический материал по теме занятия:

https://test-english.com/explanation/b1/modal-verbs-deduction-must-might-cant/

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.eltbase.com/quiz/200_02.htm

https://www.ecenglish.com/learnenglish/lessons/modal-verb-have-past-participle

https://web2.uvcs.uvic.ca/courses/elc/studyzone/410/grammar/410-modals-of-possibility-and-probability-for-past-situations1.htm

3. Проект.

Surf the net and be ready to talk about how to prevent allergy and what may be done to reduce the risk of its developing in your home.

Study what is done by the *Allergy.UK:*
http://www.allergyuk.org
How can people with allergy benefit from:

- **Support Contact Network?**
- **Allergy UK Helpline?**
- **Translation cards?**

other resources?

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can talk about different types of allergy
- I know the aetiology of allergy
- I can describe symptoms of allergy
- I can use modal verbs in the second meaning

Key Words

allergen /ˋælədʒən/ *n*
allergy /ˋælədʒɪ/ *n*
anaphylaxis /ˌænəfɪˋlæksɪs/ *n*
antihistamine /ˌæntɪˋhɪstəmɪn/ *n*
asthma /ˋæsmə/ *n*
collapse /kəˋlæps/ *n*
conjunctivitis /kənˌʤʌnktɪˋvaɪtɪs/ *n*
cramp /kræmp/ *n*
dander /ˋdændə/ *n*
distress /dɪˋstres/ *n*
hay fever /heɪ ˋfiːvə/
hives /haɪvz/ *n*
hypersensitivity /ˋhaɪpəˌsensɪˋtɪvɪtɪ/ *n*
itchy /ˋɪʧɪ/ *n*
nettle rash /ˋnetlræʃ/ *n*
pollen /ˋpɔlən/ *n*
rash /ræʃ/ *n*
rhinitis /raɪˋnaɪtɪs/ *n*
suppress /səˋpres/ *v*
tightness /ˋtaɪtnəs/ *n*
unconsciousness /ʌnˋkɔnʃəsnəs/ *n*
urticaria /ɜːtɪˋkɜriə/ *n*
watery eyes /ˋwɔtərɪaɪz/
wheezing /ˋwiːzɪŋ/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT XI. THE ENDOCRINE SYSTEM

In this unit

- talking about the basic structures of the endocrine system
- describing the main functions of endocrine system and its disorders
- *Conditional Sentences: Type I*

Lead-in

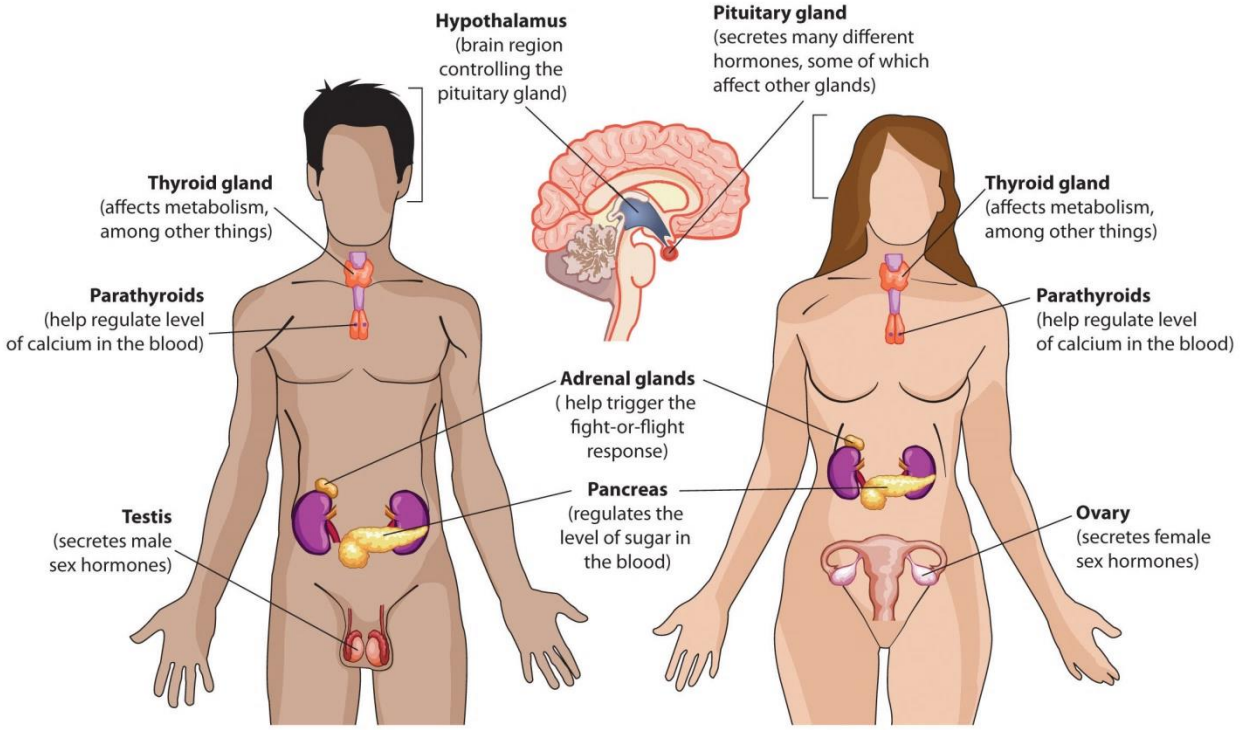
1. Интересные факты

- The word ***endocrine*** derives from the Greek words "endo," meaning *within*, and "crinis," meaning *secrete.*
- The endocrine system has no ducts. Therefore, the hormones it produces are released directly into the bloodstream. The blood then carries them to the various parts.
- The hypothalamus is the gland that makes you feel hunger and thirst
- The human behavior is also controlled by the endocrine system when it affects the nervous system.
- We must be thankful to the pineal gland for our sweet sleep. It secretes melatonin which regulates our sleep. It is also the smallest gland of the endocrine system.
- The rush of adrenaline one gets when facing adventure or fear is the result of the adrenal glands production of epinephrine hormone, or adrenaline as we otherwise know it
- In 1923, Frederick Banting and John Macleod won the Nobel Prize in Physiology or Medicine for discovering insulin, a hormone that regulates blood sugar levels.
- The gland producing insulin is the pancreas, the largest gland of the endocrine system.

2. Рассмотрите рисунок и назовите части эндокринной системы.

3. Прочитайте текст об эндокринной системе. Выберите из списка утверждений A-E те, что лучше всего отражают содержание каждой части (1-4) текста. Здесь есть одно лишнее утверждение, которое вам не понадобится. В начале текста приведен пример (1).

A. Definition of the endocrine system.
B. Anatomy of the endocrine system.
C. The functions of the endocrine glands.
D. Problems with the endocrine system.
E. The primary glands that compose the system.



"If you skew the endocrine system, you lose the pathways to self. When endocrine patterns change, it alters the way you think and feel. One shift in the pattern tends to trip another." *Hilary Mantel*

Reading
THE ENDOCRINE SYSTEM

1. A

The **endocrine system** is a widespread group of glands and organs that acts as the body's control system for producing, storing, and secreting chemical substances called hormones.
Hormones are compounds produced by the endocrine glands. They generally regulate metabolism, growth and development, tissue function, sexual function, sleep and mood, the electrolyte composition of body fluids and reproduction. The specific functions of the endocrine glands and pancreas are unique.

2.

The primary glands that compose the endocrine system are the **hypothalamus**, **pituitary**, **thyroid**, **parathyroid**, **adrenal**, **pineal**, **ovary**, and **testes**. The pancreas, considered both an organ and a gland, is also part of the system. The **thymus** is sometimes considered an endocrine-system organ. Although not part of the endocrine system, other organs that secrete hormones are the heart, brain, lungs, kidneys, liver, skin, and placenta.

3.

The **hypothalamus** is a part of the brain located superior and anterior to the brain stem and inferior to the thalamus. It serves many different functions in the nervous system, and is responsible for the direct control of the endocrine system through the pituitary gland.
The **pituitary gland** is a small pea-sized lump of tissue connected to the inferior portion of the hypothalamus of the brain. The pituitary gland secretes **endorphins**, chemicals that act on the nervous system to reduce sensitivity to pain. If the pituitary gland produces too much growth hormone, a child may grow excessively tall. If it produces too little, a child may be abnormally short. In addition, the pituitary secretes hormones that signal the ovaries and testes to make sex hormones.
The **pineal gland** is a small pinecone-shaped mass of glandular tissue found just posterior to the thalamus of the brain. The pineal gland produces the hormone **melatonin** that helps to regulate the human sleep-wake cycle.
The **thyroid gland** is a butterfly-shaped gland located at the base of the neck. It produces the thyroid hormones **thyroxine** (T4) and **triiodo-thyronine** (T3). These hormones control the rate of metabolism and play a key role in bone growth and development of the brain and the nervous system.
Attached to the thyroid are four tiny glands that function together called the **parathyroids**. They release parathyroid hormone, which regulates the level of calcium in the blood with the help of **calcitonin**, which is produced in the thyroid.
The body has two triangular adrenal glands, one on top of each kidney. The **adrenal glands** have two parts, each of which produces a set of hormones that regulate salt and water balance in the body, the body's response to stress, metabolism, the immune system, and sexual development and function.
The **reproductive** glands in women (**ovaries**) produce **estrogen**, in men (**testes**) – **testosterone**. These hormones regulate body changes associated with sexual development.

4.

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

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Найдите определения для данных слов и словосочетаний.

1. endocrine system	**a.** substitution, exchange
2. hormone	**b.** more than required
3. thymus	**c.** a group of cells that produces and secretes chemicals
4. excess	**d.** the organ that produces insulin
5. deficiency	**e.** shortage, lack
6. puberty	**f.** the period during which sexual organs develop
7. replacement	**g.** the organ in the neck that produces lymphocytes
8. pancreas	**h.** a chemical substance that influences cell and tissue functions
9. gland	**i.** the collection of glands, each of which secretes different types of hormones

3. Тест: Выберите правильный ответ, чтобы закончить следующие предложения.

1. A group of cells that gives off or secretes chemicals is a (an)
a. artery. **b**. vein. **c**. gland.

2. Bodily chemical messengers that send messages from one set of cells to another, affecting changes are
a. hormones. **b**. nephrons. **c**. alveoli.

3. This links the nervous system to the endocrine system via the pituitary gland.
a. thalamus **b**. hypothalamus **c**. adrenal

4. The master gland that controls many bodily functions is
a. thalamus **b**. hypothalamus **c**. pituitary

5. This controls how quickly the body uses energy, makes proteins and controls how sensitive the body should be to other hormones.
a. adrenal gland **b**. hypothalamus **c**. thyroid

6. These glands control the amount of calcium in the blood and bones.
a. pituitary **b**. parathyroid **c**. thyroid

7. These release hormones in conjunction with stress.
a. adrenal **b**. pituitary **c**. thyroid

8. This affects wake/sleep patterns and seasonal functions.
a. pineal **b**. adrenal **c**. thyroid

4. Закончите предложения, используя слова из упр. 2.

1. The _____ is instrumental in regulating mood, growth and development, tissue function, and metabolism, as well as sexual function and reproductive processes.
2. The foundations of the endocrine system are the _____and glands.
3. A _____ selects and removes materials from the blood, processes them, and secretes the finished chemical product for use somewhere in the body.
4. The _____ is composed of two identical lobes and is located anatomically in the anterior superior mediastinum, in front of the heart.
5. Severe brain injury may also cause growth hormone _____.
6. The _____ growth hormone production is most often caused by a benign tumour of the pituitary gland.
7._____ is the process of physical changes by which a child's body matures into an adult body capable of sexual reproduction to enable fertilization.
8. _____ is responsible for the production of insulin and glucagon. The failure to produce insulin will result in diabetes.

5. Посмотрите на картинку на стр. 93 и
a. опишите расположение следующих желез, используя выражения из таблицы.

above the kidneys	the neck
behind the	the pelvic area
breastbone	abdomen, near stomach
the base of brain	behind thyroid lobes

b. напишите названия гормонов, вырабатываемых следующими железами.

1. Hypothalamus - _____
2. Pituitary - _____
3. Thymus - _____
4. Thyroid - _____
5. Parathyroids - _____
6. Adrenals - _____
7. Pancreas - _____
8. Ovaries - _____
9. Testes - _____

Language Development

1. Просмотрите текст об эндокринной системе и ответьте на вопросы.

1. What system is known as the endocrine system?

_____
_____
_____

2. What are hormones?

_____
_____

3. What is the main function of the hypothalamus?

_____
_____
_____

4. What do the pituitary and pineal glands secrete?

_____
_____

5. Where are the thyroid and parathyroid glands located?

_____
_____

6. What glands regulate the level of calcium in the blood?

_____
_____

7. What is the main source of sex hormones?

_____
_____

8. What hormones do testes and ovaries secrete?

_____
_____
_____

9. What disorders of endocrine system do you know?

_____
_____
_____

10.? What are these disorders characterised by?

_____
_____
_____
_____

2. Прочитайте текст о нарушениях эндокринной системы. Закончите предложения, используя слова из таблицы.

thyroid, underproduction, tumour, imbalance, hormone, dryness, excessive, indication, condition, overproduction

Diseases of the Endocrine System

Hormone levels that are too high or too low are an _____ (1) of a problem with the endocrine system. Hormone diseases also occur if your body does not respond to hormones in the appropriate ways. Stress, infection and changes in the blood's fluid and electrolyte balance can also influence _____ (2) levels. **Adrenal insufficiency** is characterized by decreased function of the adrenal cortex and the consequent _____ (3) of adrenal corticosteroid hormones. The symptoms of adrenal insufficiency may include weakness, fatigue, abdominal pain, nausea, dehydration, and skin changes. Excessive amounts of glucocorticoid hormones can lead to **Cushing syndrome**. If the condition is due to a tumour in the pituitary gland that produces excessive amounts of corticotropin and stimulates the adrenals to _____(4) of corticosteroids. Common signs include a moon face, buffalo hump, increased facial hair, and thinning of the scalp hair. (See the above picture). Other symptoms include _____ (5) sweating, thinning of the skin and its ____(6), particularly on the hands, red striae. **Hypothyroidism** occurs when the thyroid gland does not produce enough _____(7) hormone to meet the body's needs.

A young woman with hyperthyroidism.

Insufficient thyroid hormone can cause many of the body's functions to slow or shut down completely. **Thyroid cancer** begins in the thyroid gland and starts when the cells in the thyroid begin to change, grow uncontrollably and eventually form a_____ (8). In the picture you can see a young woman with hyperthyroidism presented with a mass in the neck and exophthalmos.
Hypoglycemia, also called low blood glucose, occurs when blood glucose drops below normal levels. This typically happens as a result of treatment for _____(9) when too much insulin is taken. A **metabolic disorder** occurs when there is an _____ (10) of substances needed to keep the body functioning — hormone levels may be too high or low. Metabolic disorder is when some organs become diseased or do not function normally.

3. Определите гормон, дисбаланс которого вызывает следующие состояния.

1. an abnormally high level of blood glucose **2.** low blood calcium and muscle spasm **3.** an abnormally small stature for a person's age **4.** an accelerated heart beat and increased blood flow **5.** an abnormal level of metabolism in the body cells **6.** decreased function of the adrenal cortex **7.** destruction of adrenal tissue **8.** changes in the female reproductive system **9.** anxiety and mood disorders **10.** depression, reduced muscle strength, high blood pressure	**a.** parathyroid **b.** thyroxine **c.** insulin **d.** adrenaline **e.** growth hormone **f.** adrenal corticosteroid **g.** glucocorticoid **h.** melatonin **i.** estrogen **j.** testosterone

4. Определите следующую болезнь.

It is a state in which the thyroid gland does not produce enough of the thyroid hormones thyroxine (T4) and triiodothyronine (T3).

Grammar Point

Conditional Sentences: Type I

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/if.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/if_clauses/type_1_mix3.htm

https://www.englisch-hilfen.de/en/exercises/if_clauses/type_1_mix2.htm

https://www.englisch-hilfen.de/en/exercises/if_clauses/type_1_mix4.htm

3. Проект
Surf the net and prepare a resentation about endocrine disorders. Make sure to include the following:

- **types of endocrine disorders**
- **causes and symptoms**
- **preventionand treatment**

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can talk about the basic structures of the endocrine system
- I can describe the main functions of the endocrine system and its disorders
- I can use conditional sentences of Type I

Key Words

adrenal /ə`driːnəl/ *adj*
calcitonin /ˌkælsɪ`təunɪn/ *n*
Cushing syndrome /`kuʃɪŋ `sɪndrəum/
deficiency /dɪ`fɪʃənsɪ/ *n*
endocrine system /`endəukraɪn `sɪstəm/
endorphin /en`dɔːfɪn/ *n*
estrogen /`estrəʤən/ *n*
excess /ɪk`ses/ *n*
gland /glænd/ *n*
hormone /`hɔːməun/ *n*
hyperthyroidism /ˌhaɪpə`θaɪrɔɪdɪzm/ *n*
hypoglycaemia /ˌhaɪpəuglaɪ`siːmɪə/ *n*
hyporthyroidism /ˌhaɪpəu`θaɪrɔɪdɪzm/ *n*
hypothalamus /ˌhaɪpəu`θæləməs/ *n*
insufficiency /ɪnsə`fɪʃənsɪ/ *n*
melatonin /ˌmelə`təunɪn/ *n*
ovary /`əuvərɪ/ *n*
parathyroid /pærə`θaɪrɔɪd/ *n*
pineal /`pɪnɪəl/ *n*
pituitary /pɪ`tjuːɪtərɪ/ *n*
replacement therapy /rɪ`pleɪsmənt `θerəpɪ/
reproductive glands /ˌriːprə`dʌktɪvglændz/
testes /`testiːz/ *n*
testosterone /te`stɔstərəun/ *n*
thymus /`θaɪməs/ *n*
thyroid /`θaɪrɔɪd/ *n*
thyroxine /θaɪ`rɔksɪn/ *n*
triiodothyronine /traɪˌaɪədəu`θaɪrəniːn/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT XII. DIABETES

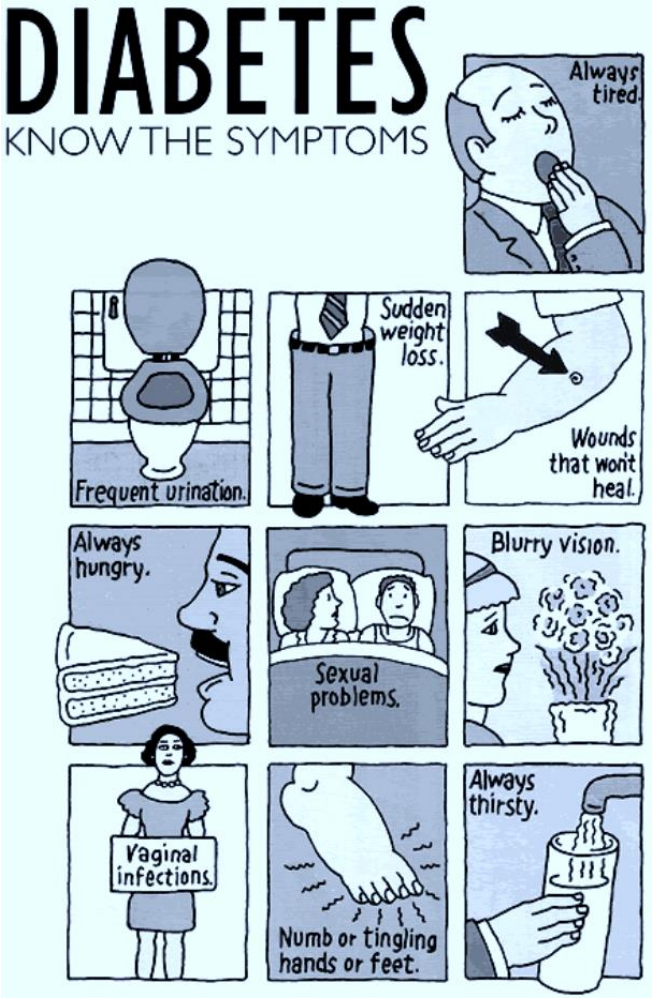
In this unit

- talking about the main factors causing diabetes
- describing the types of diabetes and their treatment
- *Conditional Sentences*:*Type II and III*

Lead-in

1. Интересные факты.

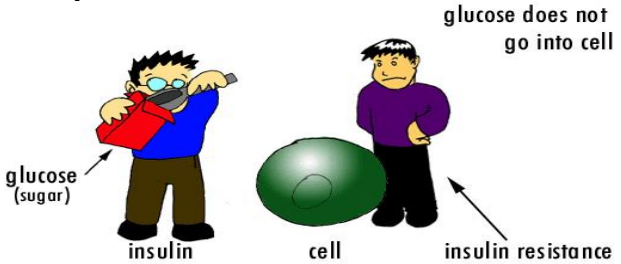
- The term ***diabetes*** (Greek: διαβήτης) was coined by Aretaeus of Cappadocia. It is derived from the Greek word διαβαίνειν, that literally means "passing through," a reference to one of diabetes' major symptoms - excessive urine production.
- In 1675 Thomas Willis added ***mellitus*** from the Latin word meaning a *sweet taste*. This had been noticed long before in ancient times by the Greeks, Chinese, Egyptians, and Indians.
- In 1776 Matthew Dobson confirmed the sweet taste was because of an excess of a kind of sugar in the urine and blood of people with diabetes.
- The ancient Indians tested for diabetes by observing whether ants were attracted to a person's urine, and called the ailment "*sweet urine disease*". The Korean, Chinese and Japanese words for diabetes all mean "sweet urine disease". Medieval European doctors tested for it by tasting the urine themselves.
- While the term, *diabetes*, usually refers to diabetes mellitus, there are several other, rarer, conditions also named diabetes. The most common of these is *diabetes insipidus*, in which the urine is not sweet; it can be caused by either kidney or pituitary gland damage.
- The term "**type 1 diabetes**" has universally replaced several former terms, including childhood onset diabetes, juvenile diabetes and insulin-dependent diabetes. "**Type 2 diabetes**" has also replaced several older terms, including adult-onset diabetes, obesity - related diabetes, and non-insulin dependent diabetes. Beyond these numbers, there is no standard, so a type 2 which has become insulin-dependent has sometimes been called **type 3**, while the same term is also used for gestational diabetes in some cases.



2. В парах обсудите следующие вопросы.

- Is diabetes a serious problem in Russia?
- What symptoms of diabetes have you heard about?
- What is your experience of dealing with patients having diabetes?

3. Прочитайте текст о диабете и подготовьтесь к его обсуждению.



Medical experts believe that African Americans, Latino Americans, Native Americans, and some Asian Americans and Native Hawaiians or other Pacific Islanders have an increased risk for type 2 diabetes.

According to the most recent estimates from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), 23.6 million people – over 7 % of the population – have diabetes.

Reading

DIABETES

Diabetes mellitus is the most common endocrine disorder that is marked by elevated blood glucose (commonly referred to as blood sugar). A large portion of the food that we eat is **converted** by the body into glucose. The blood delivers glucose throughout the body, but the hormone insulin is needed in order for it to be transported into most cells. Insulin comes from the **pancreas**. If the pancreas does not make sufficient insulin or cells are **resistant** to its activity of promoting glucose uptake, the blood glucose level becomes elevated.

The WHO recognizes three main forms of diabetes: *type 1*, *type 2* and *gestational diabetes* (or *type 3*, occurring during pregnancy). Although these share signs and symptoms, they have different causes and population distributions.

Type I diabetes

Type I diabetes, or **insulin-dependent** diabetes, represents approximately 5-10% of diabetic patients. It usually has a rapid **onset** and most frequently **manifest** in children and adolescents. It occurs when the body's immune system destroys the cells in the body—called pancreatic beta cells—that produce insulin which regulates blood glucose levels (BGL).

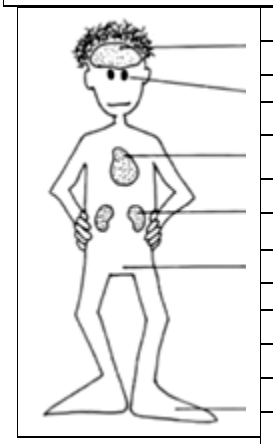
The glucose level in the blood elevates and excess glucose is lost in the urine, causing weakness, weight loss, thirst and hunger. The treatment for type I diabetes is insulin replacement.

Type II diabetes

Type II diabetes, or **insulin-independent** diabetes is found in some 120 million adults (over 90% of people). In type 2 diabetes the pancreas produces insulin but the cells of the body become resistant or the amount of insulin produced is not enough. Glucose increases in the blood stream (**hyperglycemia**) and the cells of the body are unable to function properly.

Some type II diabetics can be effectively treated with diet alone, but many require oral medications.

Historically, this has been thought of as maturity



onset diabetes because it tends to occur after age 50, but there has been a dramatic increase in the number of adolescents with the disease. This is due to increased obesity and decreased physical activity in this age group.

Gestational Diabetes

This type of diabetes refers to glucose intolerance during pregnancy. This imbalance usually appears in women with a family history of diabetes. Women must be monitored during pregnancy for signs of diabetes mellitus, especially those with **predisposing** factors, because this condition can cause complications for both the mother and the fetus.

Complications of Diabetes

Diabetic patients are **prone** to cardiovascular, neurologic, and vision problems, infections, and, sometimes, renal failure.

Retinopathy is caused by damage to the small blood vessels of the **retina**. These blood vessels begin to leak fluid into the retina, which leads to **blurred vision**. Kidney damage is caused by destruction of the small vessels in the nephrons allowing protein to flow into the urine. As this **nephropathy** continues the function of the kidney **declines** and leads to **kidney failure** and end-stage kidney disease. Circulatory problems and nerve damage are caused by a **hardening** of the arteries. This causes loss of **sensation**, risk of **ulcers**. If untreated, infected foot and leg ulcers can spread to the bone and may require amputation. Burning, pain or tingling sensations in the hands, legs and feet are also common.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Соотнесите термины с их определениями.

1. pancreas	**a.** a person who suffers from diabetes
2. diabetes	**b.** a hormone produced in the cells of pancreas
3. hypoglycaemia	**c.** an amount of glucose in the blood
4. insulin	**d.** a low level of sugar in the blood
5. blood sugar level	**e.** the organ that produces insulin, which regulates blood sugar
6. diabetic	**f.** a disease characterized by high levels of sugar in the blood

3. Подберите синонимы к следующим словам.

to diminish	
to demonstrate	
feeling	
beginning	
becoming firm, strong	
to change from one form to another	
not clear (in shape, outline)	

4. Заполните пробелы словами из таблицы.

accumulated, addition, associated, reliable, consumption, elevated, levels, prevented, preventive, protective

Prevention of Diabetes

As little is known on the exact mechanism by which type 1 diabetes develops, there are no _____(**1**) measures available for that form of diabetes. Some studies have attributed a _____(**2**) effect of breastfeeding on the development of type 1 diabetes.

Type 2 diabetes can be _____(**3**) in many cases by making changes in diet and increasing physical activity. Some studies have shown delayed progression to diabetes through the use of metformin or valsartan. Breastfeeding might also be correlated with the prevention of type 2 of the disease in mothers.

Although there are many claims of nutritional cures, there is no _____ (**4**) proof of their effectiveness. In _____ (**5**), despite claims by some that vaccinations may cause diabetes, there are no studies proving any such connection.

Individuals with _____ (**6**) levels of persistent organic pollutants (DDT, dioxins, chlordan) in their body are 38 times more likely to have diabetes than individuals with low _____ (**7**) of these pollutants, according to a Korean study. Among study participants, obesity was _____ (**8**) with diabetes only in people who was tested high for these pollutants. These pollutants are _____ (**9**) in animal fats, so minimizing _____ (**10**) of animal fats may reduce the risk of diabetes.

5. Тест: Выберите правильный ответ, чтобы закончить следующие предложения.

1. Insulin is used to
   - **a** break down glucose
   - **b** change food into glucose
   - **c** make glucose
   - **d** transport glucose into cells

2. Insulin is made by the following organ
   - **a** liver
   - **b** brain
   - **c** pancreas
   - **d** heart

3. When blood sugar levels are elevated, glucose is lost through the
   - **a** urine
   - **b** blood
   - **c** pancreas
   - **d** liver

4. The treatment for type I diabetes is
   - **a** controlling diet
   - **b** drinking lots of water
   - **c** increased exercise
   - **d** insulin replacement

5. The treatment for type II diabetes is
   - **a** controlling diet
   - **b** drinking lots of water
   - **c** increased exercise
   - **d** insulin replacement

6. Type II diabetes is increasing in adolescents because of
   - **a** increased obesity
   - **b** decreased physical activity
   - **c** both of these
   - **d** none of these

7. The major complication of diabetes is

a damage to the eyes.
b damage to the heart and blood vessels.
c nerve damage
d damage to the kidneys

8. A disease damaging nerves outside the brain and spinal cord

a diabetes
b hypertension
c stroke
d neuropathy

9. A diabetic may be forced to have an amputation if

a infection begins
b poor circulation develops
c hypertension begins
d infection spreads to the bone.

10. What is the problem with insulin in type 2 diabetes?

a The pancreas stops producing insulin
b The body cells are resistant to insulin
c There is not enough insulin
d *Both **b** and **c***

11. What populations are most likely to get type 2 diabetes?

a too fat people
b too tall people
c young people
d *All of these*

12. What causes retinopathy in diabetes patients?

a damage to retina capillaries
b damage to retina fluid
c damage to the kidneys
d metabolic syndrome

13. What causes kidney damage in diabetes patients?

a Damage to small vessels in the nephrons
b Damage to small vessels in the liver
c Damage to small vessels in the retina
d Damage to small vessels in the stoma

14. What causes the circulatory problems in diabetes patients?

a hardening of the arteries
b loss of sensation
c ulcers
d *All of these*

Language Development

1. Просмотрите текст о диабете и ответьте на вопросы.

_____

_____

2. What helps glucose to reach cells?

_____

3. In what case does blood sugar level become elevated?

_____

4. What types of diabetes are there?

_____

5. What are different types of diabetes characterized by?

_____

6. What groups of people does type II diabetes usually affect?

_____

7. What is the treatment for diabetes?

_____

_____

8. What are complications of diabetes?

_____

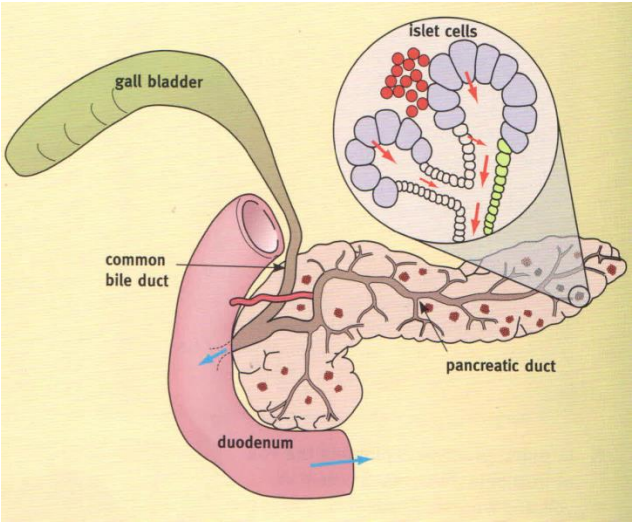
_____

2. Прочитайте информацию о пациенте с диабетом и ответьте на вопрос «Какие простые, но важные изменения в своем образе жизни должен предпринять м-р Виьямс?»

Mr Harry Williams, a 68-year-old insulin-dependent diabetic, has lived on his own since his wife died five years ago. He is overweight and rarely does any exercise. He used to like walking along the beach with his wife but hardly ever goes to the beach now. He has become very careless about eating regular meals and, as a result, his blood sugar levels are not stable. He used to have one or two glasses of beer every night but recently his intake has increased. He also smokes about two packets of cigarettes a week.
Mr Williams has come to the Diabetic Clinic to discuss lifestyle and nutritional changes.

3.a. Прочитайте информационный лист и ответьте на следующие вопросы.

1. What is the exocrine function of the pancreas?
2. What is the endocrine role of the pancreas in diabetes management?
3. What does insulin do to blood sugar levels?
4. What hormone has the opposite function to insulin?



The Pancreas

The pancreas is a small L-shaped organ which sits against the duodenum behind the stomach. It is quite small, at around 15 cm long.

The pancreatic duct runs along the middle of the pancreas and empties into the duodenum. It supplies pancreatic enzymes, also called pancreatic juices, which aid in the digestion process. This is described as the exocrine function of the pancreas, *exo* meaning "out of". Pancreatic juices flow out of the pancreas through the pancreatic duct. The pancreatic duct is joined by the common bile duct before emptying into the duodenum. The pancreas also has an endocrine function, *endo* meaning "within". This is the release of hormone within the bloodstream. There are four main types of hormone produced in the hormone-producing cells of the pancreas – the islets of Langerhans (islet cells). One of the four cell types – beta cells – produce insulin.

The function of insulin is to lower the blood sugar level. Beta cells make up almost eighty per cent of all islet cells. Alpha cells make up almost twenty per cent, and these release glucagon, which raises the level of glucose in the blood. This is the opposite function to insulin. The level of glucose in the blood is called either blood sugar level (BSL) or blood glucose level (BGL). Insulin stimulates cells in the body to use or store the glucose produced from the metabolism of carbohydrates in food. Glucose is used in the body as an energy source.

b. Заполните пробелы в следующей части информационного листа, используя слова из таблицы. Затем прочитайте диалог между Надией, специалистом по диабету, и Бет, у которой только что выявлен диабет (упр. 4, стр. 104), и проверьте ваши ответы.

pumps, oral, injections, normalise, fuel, fat, regulates, inhalers, 90%, children, beta, liver, glucose, ~~insulin~~

The normal pancreas produces a hormone called insulin (**1**) in the beta cells. Insulin _____ (**2**) blood sugar levels (BSL) by moving _____ (**3**) from the blood into the muscle, _____ (**4**) and _____ (**5**) cells. This means that glucose can be used as _____ (**6**) for the body.

The diabetic pancreas may not produce any insulin at all in the _____ (**7**) cells, or produce too little insulin to _____ (**8**) blood sugar levels. If no insulin is produced this is called Type 1 diabetes and is often the cause of diabetes in _____ (**9**). Daily or twice-daily _____ (**10**) of insulin are needed by people with Type 1 diabetes. When the pancreas produces too little insulin, this is called Type 2 diabetes and makes up about _____ (**11**) of all cases of diabetes. This type of diabetes may be treated with an _____ (**12**) hypoglycaemic medication and sometimes also with insulin injections. Two new devices, insulin _____ (**13**) and insulin _____ (**14**), offer great improvements in lifestyle of all diabetics.

c. Работа в парах. Объясните роль поджелудочной железы пациенту, у которого только что диагностировали диабет. Студент А выступает в роли медсестры, студент Б – в роли пациента. Поменяйтесь ролями и воспроизведите диалог еще раз.

4. a. Последние достижения в исследовании диабета обеспечили пациентов с диабетом рядом приемов для самолечения. Прочитайте диалог еще раз и соотнесите средство (1-3) с картинкой (a-c).

Option 1 _____ . Option 2 _____ . Option 3 _____ .

a)

b)

c)

Nadia: There are basically three options for giving yourself your daily dose of insulin.
Beth: Oh, great. I didn't realise there were any options.
Nadia: Yes, there are. There's been quite a lot of research into giving diabetics the easiest, most convenient way of taking their daily insulin. OK, let's look at the first option. This one is worn on the body all the time, that's night and day. It's an insulin pump.
Beth: How do they work?
Nadia: They deliver a steady flow of insulin throughout the day. They can push through both rapid and short-acting insulin - it doesn't matter which - through a catheter which is placed under the skin.
Beth: I see. So you wouldn't be giving yourself a needle every time.
Nadia: No, you wouldn't. That's one advantage of the technology. The other upside is that it can give you an extra, or bolus, dose to cover those times when you eat more carbohydrate, for example during a meal or a snack. The real advantage of this is that patients have fewer large swings in blood glucose levels. The main disadvantage is the cost. It's the most expensive option.
Beth: Mm. OK. What other options are there?
Nadia: The second option is insulin with an insulin syringe. Insulin is drawn up from a vial into a disposable syringe. This means that the dose required can be drawn up, and varying doses can be drawn up if needed.
Beth: Would that be, say, if you'd eaten a little extra treat that day?
Nadia: Could be. Also, one or two types of insulin can be mixed in the syringe as long as you follow the rule: cloudy insulin before clear insulin.
Beth: Right. The markings on the side of the syringe look quite small, don't they?
Nadia: Mm, the markings are difficult to see, which makes drawing up accurate doses more difficult. It's the cheapest option but the least convenient.
Beth: Right.
Nadia: That leads us to option three. It's called an insulin pen. This one has an insulin cartridge which fits into the device and can be changed when it's finished. There are also pre-filled devices which are disposable and easier for diabetics who have arthritis or are visually impaired.
Beth: They would be much easier to use, wouldn't they?
Nadia: Yes, they're much easier to use and more convenient than syringes. They can even fit into your pocket and look like the real thing! You do still need a needle with this one. The needle is inserted on the end of the device and changed with each injection.
Beth: I see, and I suppose you still have to store the insulin in the same way? It has to be stored in the fridge, doesn't it?
Nadia: Any unopened insulin can be stored in the fridge, just don't let it freeze. Once the insulin is opened it can last up to thirty days if it's kept at a temperature of less than thirty degrees.

b. Заполните пробелы в информационном листе.

Option 1

- Worn all the time, delivers a (1) __steady__ ___flow___ of insulin throughout the day.
- Rapid or short-acting insulin is delivered through a (2) _____ placed under the skin.
- Give an extra, or (3) _____ dose to cover times when more carbohydrate is eaten during a meal or snack.
- Patient has fewer (4) _____ in blood glucose levels.
- Most expensive option.

Option 2

- Insulin is drawn up from a (5) _____ into a (6) _____ syringe.
- (7) _____ doses can be drawn up if needed.
- One or two types of insulin can be (8) _____ _____ in the syringe.
- Markings on the side of the syringe can be difficult to see, which makes drawing up (9) _____ more difficult.
- Cheapest option but least (10) _____ .

Option 3

- Insulin (11) _____ fits into the device and can be changed.
- (12) _____ _____ devices are disposable and easier for diabetics who
  have arthritis or are visually impaired.
- Easier to use and more (13) _____
  than syringes; even fit into your pocket!
- Needle is inserted on the (14) _____ of the device and changed with each injection.

c. В парах обсудите преимущества и недостатки каждого способа для самолечения диабета. Который из них вы бы порекомендовали Бет? Который из них выбрали бы вы на месте Бет?

Grammar Point

Conditional Sentences: Type II and III

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/if.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/if_clauses/type_2_mix3.htm

https://www.englisch-hilfen.de/en/exercises/if_clauses/type_3_mix3.htm

https://www.englisch-hilfen.de/en/exercises/if_clauses/multiple_choice3.htm

7. Проект.

Read and listen to the full version of Erica's story at: http://kidshealth.org/teen/diseases_conditions/personal_stories/diabetes_erika

What are the main problems (physical, emotional, psychological, financial) diabetics are facing in the USA?

Find out how people with diabetes cope with the disease in Russia. Do they have similar problems? What seems to be the hardest in living with diabetes

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can talk about the main factors causing diabetes
- I can describe different types of diabetes and their treatment
- I can use conditional sentences of types II and III

Key Words

blurred vision /blə:d `vɪʒən/
convert /kən`və:t/ *v*
decline /dɪ`klaɪn/ *v*
diabetes mellitus /,daɪə`bi:ti:z/
type I diabetes /taɪpwʌn ,daɪə`bi:ti:z/
type II diabetes /taɪptu ,daɪə`bi:ti:z/
insulin-dependent diabetes /`ɪnsjulɪndɪ`pendənt ,daɪə`bi:ti:z/
insulin-independent diabetes /`ɪnsjulɪnɪndɪ`pendənt ,daɪə`bi:ti:z/
harden /`hɑ:dən/ *v*
hyperglycaemia /,haɪpəglaɪ`si:mɪə/ *n*
kidney failure /`kɪdnɪ `feɪljə/
manifest /`mænɪfəst/ *v*
nephropathy /,nəf`rɔpəθɪ/ *n*
onset /`ɔnsət/ *n, v*
option /`ɔpʃən/ *n*
predispose /,pri:dɪ`spəuz/ *v*
prone /prəun/ *adj*
resistant /rɪ`zɪstənt/ *n*
retina /`retɪnə/ *n*
retinopathy /,retɪ`nɔpəθɪ/ *n*
sensation /sen`seɪʃən/ *n*
ulcer /`ʌlsə/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

Self-Assessment (Units IX-XII)

1. Закончите предложения, используя активную лексику уроков.

1. The body's immune system recognizes an allergen in food as foreign and produces _____ to cope with the invasion.
2. Drugs used to suppress allergic reactions are _____.
3. A lot of people have _____ reactions to certain foods and food ingredients.
4. The feeling when one is about to vomit is _____ .
5. In case of anaphylactic shock, _____ can be injected subcutaneously or intravenously.
6. A physician who specializes in study of the endocrine system is _____ .
7. Excess sugar in the blood is called _____ _____ .
8. The most common problem with the endocrine system is _____ .
9. The endocrine glands located above the kidneys are the _____.
10. The _____ gland helps to regulate the human sleep-wake cycle.
11. The gland in the neck that affects metabolic rate is the _____ .
12. The gland under the brain that controls other glands is _____ .

2. Заполните пробелы словами из таблицы.

smoking	sensitive	remains	molecules
repair	chemical	teenagers	kidneys
surface	regular	build up	energy

Diabetes -- What Is It?

To have _____ (**1**) you need sugar, so there's a little bit of sugar in your blood at all times. Your body uses a _____ (**2**) called "insulin" to let this sugar into your cells. Insulin is produced in the pancreas, which is an organ that sits behind your stomach.

Most cells in your body have insulin receptors on their outer _____ (**3**). Insulin fits into these receptors like a key opening a lock. When this connection is made, it signals special transporter proteins to move up to the cell membrane, where they allow more sugar _____ (**4**) to enter the cell. This sugar fuels your body's cells, giving them the energy they need to work properly and _____ (**5**) themselves.

Normally, your body is able to maintain proper levels of sugar in your blood and inside your cells. But in people with diabetes, the body's cells stay locked and sugar can't get in to provide energy. This causes too much sugar to _____ (**6**) in the blood. Over time, high levels of sugar in the blood can lead to serious health problems in the eyes, feet and hands, _____ (**7**), and heart.

There are two main types of diabetes -- type 1 and type 2.

Type 1 diabetes usually begins in young children and _____ (**8**). People with this type of diabetes have a pancreas that doesn't produce enough insulin -- or stops producing it altogether. This means they need to have insulin shots on a _____ (**9**) basis to help keep their blood sugar at the right level.

Type 2 diabetes happens in people whose pancreas DOES make insulin. But in a person with this type of diabetes, the insulin receptors on the cells' surface become less _____(**10**). Since the receptors don't respond to the insulin anymore, sugar stays locked out of the cells and _____ (**11**) in the blood. Type 2 diabetes is usually seen in older people. Also, things like being overweight and _____ (**12**) can make a person more likely to get type 2 diabetes. This is especially true for those who are African American or Hispanic.

3.a. Соотнесите гормон с его функциями.
b. Напишите железы, которые секретируют эти гормоны.

1. estrogen	**a.** decreases blood sugar level
2. thyroxin	**b.** increases blood sugar level
3. testosterone	**c.** regulates biological rhythms
4. parathyroid hormone	**d .**produces analgesia and a feeling of well-being
5. endorphin	**e.** regulates the level of calcium and phosphorus
6. melatonin	**f.** produces male secondary sex characteristics

7. glucagon	**g.** increases rate of metabolism
8. insulin	**h.** produces female secondary sex characteristics
9. adrenaline	**i.** increases heart rate, breathing rate, elevates blood pressure, raises blood sugar

4. Соотнесите термин в правой колонке с его определением в левой колонке:

1. hormone that regulates metabolism of sugar in the body 2. chemical substances that stimulate growth and activity in the cells of tissues and organs 3. network of organs that control the body's chemical messages 4. male endocrine glands 5. the glands that control the levels of calcium in the body 6. sex hormone released by ovaries 7. stage of development in which the reproductive system maturates	a. hormones b. endocrine system c. testes d.parathyroids e. insulin f. estrogen g. puberty

5. Заполните пробелы нужной формой (active or passive) инфинитива (с или без частицы *to*).

How to look after yourself if you have asthma

If you've been diagnosed with asthma, you should _____(1) (know) that this disease can't _____ (2) (cure) and triggers can't always _____ (3) (avoid). Of course, you are expected _____ (4) (use) all your medications regularly. However, there are other ways _____ (5) (achieve) a normal life.

_____(6) (begin) with, you should _____ (7) (learn) _____ (8) (avoid) triggers. Stopping smoking is the best way _____ (9) (help) yourself if you have asthma. Smoke acts as an irritant and can _____ (10) (trigger) asthma attacks. Inhaled medicine turns out _____ (11) (be) less effective. As a result, you're likely_____ (12) (need) _____ (13) (take) bigger doses of inhaled steroid medication. Besides, physical exercises should _____ (14) (take) regularly. It is the healthy thing _____ (15) (do).

You are supposed _____ (16) (understand) your condition. You should _____ _____ (17) (know) what _____ (18) (do) when things change.

Asthma symptoms such as wheezing and shortness of breath are known _____ (19) (cause) by cold air. So it is recommended _____ (20) (stay) indoors on very cold and windy days.

It is also important _____ (21) (eat) a healthy diet and _____ (22) (not/be) overweight. As a proverb has it, 'Eat _____ (23) (live), not live _____ (24) (eat)'. _____ (25) (sum) it up, take good care of yourself, and you will surely _____ (26) (live) a long and happy life.

6. Трансформируйте предложения, используя глагол, данный в скобках, и конструкцию с инфинитивом.

1. *Diabetes insipidus* is caused by either kidney or pituitary gland damage. (know)

_____
_____.

2. The patient is feeling better now, after he has been given an insulin shot. (believe)

_____
_____.

3. I guess she has been doing exercises for 40 minutes already. (seem)

_____
_____.

4. One in ten primary school children suffers from asthma. (consider)

_____
_____.

5. Non-insulin dependent diabetes was diagnosed in one person. (turn out)

_____
_____.

6. Pollution-related illnesses include kidney disease, anaemia and defects in the endocrine system. (suppose)

_____
_____.

7. BP hasn't been taken yet. (expect)

_____ .

UNIT XIII. THE NERVOUS SYSTEM

In this unit

- describing the structure and physiology of the nervous system
- talking about the organs of the nervous system and their functions
- *the Infinitive Constructions*

Lead-in

1. Интересные факты

- The nervous system can transmit impulses as fast as 100 meters per second.
- Potassium and sodium ions are vital to the proper functioning of the nervous system.
- Neurons are the largest cells in the human body.
- Neurons do not undergo mitosis.
- There are about 13,500,00 neurons in the human spinal cord.
- There are 100 billion neurons in your brain alone.
- If we lined up all the neurons in our body it would be around 600 miles long.
- A new born baby loses about half of their nerve cells before they are born.
- Only four per cent of the brain's cells work while the remaining cells are kept in reserve.

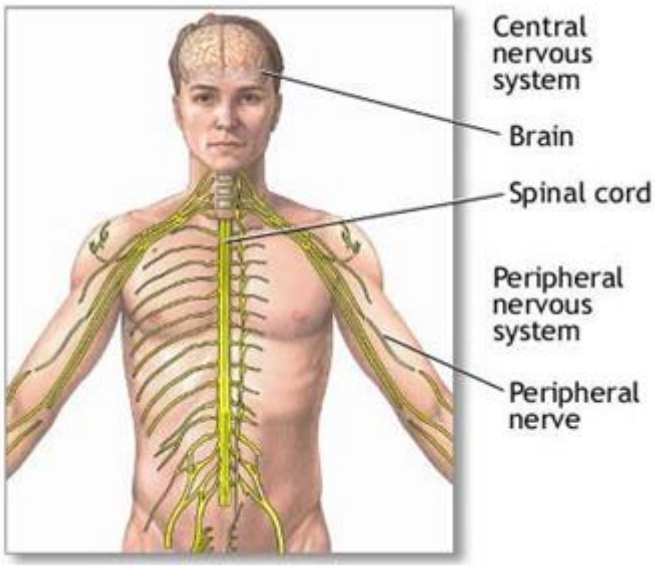
2. Ответьте на вопросы:

- What diseases of the nervous system have you heard about?
- If someone in the street has an epileptic fit, what would you do first?
- If a patient is violent, how should you react?
- If a patient is suffering shock, what should you do?
- If someone is unconscious and you suspect a broken leg, what would be the first thing to do?
- If a very ill patient wants to leave the hospital, what should you do?

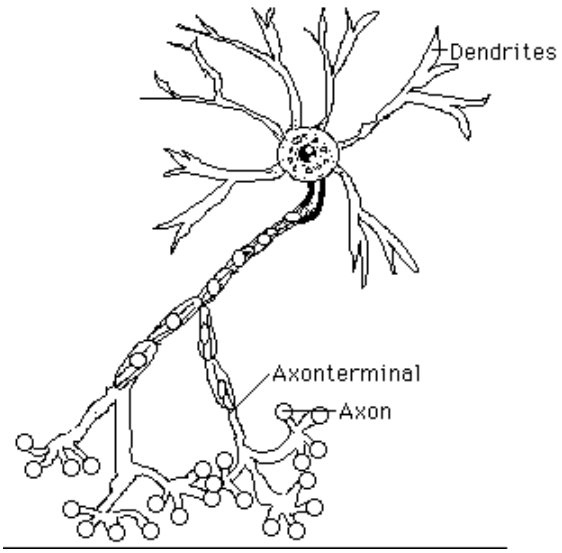
3. Прочитайте текст о нервной системе. Выберите из списка утверждений A-F те, что лучше всего отражают содержание каждой части (1-5) текста. Здесь есть одно лишнее утверждение, которое вам не понадобится. В начале текста приведен пример (1).

A. Functions of the nervous system.
B. How the nervous system works.
C. The neuron.
D. Treatment of the nervous system disorders.
E. The structure of the nervous system.
F. Disorders of the nervous system.

The Nervous System



The Neuron



Reading

The Nervous System

1. A. Functions of the Nervous System

As the most complex system, the nervous system serves as the body control and communication centre which detects, interprets, and **responds** to changes in internal and external conditions. It integrates countless bits of information and generates appropriate reactions by sending electrochemical impulses through nerves to such organs as muscles and glands.

2.

The human body's nervous system is divided into two parts:

- the **central nervous system** (CNS), consisting of the **brain** and **spinal cord.** Its main job is to get the information from the body and send out instructions.
- the **peripheral nervous system** (PNS), consisting of the **cranial nerves** (the brain's 12 pairs of nerves) and the **spinal nerves** (31 pairs of nerves associated with the spinal cord).
  The PNS is subdivided into the **somatic nervous system**, which controls skeletal muscles, and the **autonomic nervous system** (ANS), which controls the "automatic" or **involuntary** movements of the body's smooth muscle, cardiac muscle, and glands.

In addition to the brain and spinal cord, principal organs of the nervous system include the

- eyes
- ears
- sensory organs of taste
- sensory organs of smell
- sensory receptors located in the skin, joints, muscles, and other parts of the body

3.

The basic functioning of the nervous system depends a lot on tiny cells called **neurons**. The neuron, or nerve cell, is the basic functional unit of the nervous system. The brain has billions of them, and they have many specialized jobs.

A neuron that transmits impulses toward the CNS is a **sensory** neuron; a neuron that transmits impulses away from the CNS is a **motor** neuron. For example, sensory neurons take information from the eyes, ears, nose, tongue, and skin to the brain. Motor neurons carry messages away from the brain and back to the rest of the body.
Each neuron has two types of fibres extending from the cell body: the **dendrite**, which carries impulses toward the cell body, and the **axon**, which carries impulses away from the cell body. Some axons are covered with **myelin**, a whitish, fatty material that protects the axon and speeds electric conduction. These axons make up the **white matter** of the nervous system. The axons which are not covered with myelin make up the **grey matter** of the nervous system.

4.

Information is sent from the PNS to the brain, which serves as the activity headquarters of the CNS. Through the five senses (sight, smell, touch, hearing, and taste), the CNS detects a stimulus, which is a change that prompts a response in a living organism. The brain then processes the transmitted information and initiates the appropriate response or responses to an organ, such as a muscle or gland that responds through some kind of reaction (usually movement) to the **stimulus**.

5.

The nervous system is **vulnerable** to various disorders. They may include the following:

- **vascular disorders** - such as stroke, transient ischemic attack (TIA), epidural and subdural haemorrhage and hematoma, *etc*.
- **infections** - such as meningitis, encephalitis, polio, *etc*.
- **structural disorders** - such as brain or spinal cord injury, brain or spinal cord tumours, peripheral **neuropathy**, *etc*.
- **functional disorders** - such as headache, epilepsy, dizziness, and neuralgia
- **degeneration** - such as Parkinson's disease, multiple sclerosis, Alzheimer's disease, *etc*.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Закончите предложения, используя активную лексику урока.

1. The basic functional unit of the nervous system is _____.
2. Both the brain and the spinal cord are protected by _____: the brain by the bones of the _____, and the spinal cord by a set of ring-shaped bones called _____.
3. Nerve fibre that carries impulses toward the cell body is _____.
4. Nerve fibre that carries impulses away from the cell body is _____.
5. Fatty material that covers some axons are _____.
6. The scientific name for a nerve cell is _____ _____ .
7. The study of the nervous system is _____ _____ .
8. Any disease of the nervous system is _____ _____.
9. A neuron that transmits impulses toward the CNS is _____.
10. A neuron that transmits impulses away from the CNS is _____.

3. Образуйте прилагательные от следующих существительных.

Noun	Adjective
spine	
nerve	
sense	
structure	
neuron	
muscle	
vessel	
function	

Составьте словосочетания с этими прилагательными.

e.g. muscular weakness

_____
_____
_____
_____

4. Заполните пробелы словами из таблицы.

storing, nerves, message, react, pain, relays, controls, neurological, bundle, peripheral, spinal cord,

If you think of the brain as a central computer that _____**(1)** all bodily functions, then the nervous system is like a network that _____ _____ **(2)** messages back and forth from the brain to different parts of the body. It does this via the _____ **(3),** which runs from the brain down through the back and contains threadlike _____**(4)** that branch out to every organ and body part.
When a _____**(5)** comes into the brain from anywhere in the body, the brain tells the body how to _____**(6).** For example, if you accidentally touch a hot stove, the nerves in your skin shoot a message of _____ **(7)** to your brain. The brain then sends a message back telling the muscles in your hand to pull away. Luckily, this _____**(8)** relay race takes a lot less time than it just took to read about it.
Considering everything it does, the human brain is incredibly compact, weighing just 3 pounds. Its many folds and grooves, though, provide it with the additional surface area necessary for _____**(9)** all of the body's important information.
The spinal cord, on the other hand, is a long _____**(10)** of nerve tissue about 18 inches long and ¾ inch thick. It extends from the lower part of the brain down through spine. Along the way, various nerves branch out to the entire body. These make up the _____**(11)** nervous system.

5. Подберите антонимы к следующим словам.

peripheral	
to relay a message	
to branch out	
compact	
luckily	
lower part	
vulnerable	
voluntary	

Language Development

1. Тест.

1. Which of the following are the parts of neuron?
a brain, spinal cord, and vertebral column
b dendrite, axon, and cell body
c sensory and motor
d cortex, medulla and sheath
e sympathetic and parasympathetic

2. A dendrite conducts nerve impulses _____ the cell body.
a away from
b toward
c both toward and away from
d around, bypassing
e only inside

3. An axon conducts nerve impulses _____ the cell body.
a away from
b toward
c both toward and away from
d around, bypassing
e only inside

4. Which of the following is/are *type(s)* of neurons?
a sensory
b motor
c interneurons
d all of the above

5. What are the main divisions of the nervous system?
a the sensory system and the motor system
b the peripheral nervous system and central nervous system
c the dendritic and the axonal systems
d the sympathetic and parasympathetic systems

6. The peripheral nervous system includes the nerves, which are neurons with cell bodies that occur in the
a sympathetic nervous system
b brain, spinal cord, or in ganglia
c motor system
d autonomic system

7. The PNS nerves are part of either the somatic system or the
a motor system
b central nervous system
c sympathetic system
d parasympathetic system
e autonomic system

8. The *somatic system* contains nerves that control
a skeletal muscles
b internal organs, joints, and glands
c skeletal muscles, skin, and glands
d smooth muscles, cardiac muscles and glands

9. How many pairs of *cranial nerves* do humans have?
a 4
b 12
c 16
d 21
e 31

10. Humans have *12 pairs of spinal* nerves.
a True
b False

11. The central nervous system consists of the
a combination of the sympathetic and parasympathetic nervous systems
b brain and spinal cord
c combined sensory and motor systems
d cranial and spinal nerves

2. Просмотрите текст о нервной системе и ответьте на вопросы.

1. What is the main function of the nervous system?

_____
_____

2. What is the structure of the nervous system?

_____

3. What is the role of the central and peripheral nervous system?

_____
_____

4. What is the fundamental unit of the nervous system?

_____

5. What types of neurons are there? How do they differ?

_____
_____

6. How does the nervous system work?

_____
_____

7. How are disorders of the nervous system classified?

_____
_____

8. Give examples of different types of mental disorders.

_____

Grammar Point

The Infinitive Constructions

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar_list/gerund_infinitiv.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/infinitive1/index.php

https://www.perfect-english-grammar.com/infinitives-of-purpose-exercise-1.html

https://www.ego4u.com/en/cram-up/grammar/infinitive-gerund/exercises?11

3. Проект.

Many talented painters, writers, actors, *etc.* suffer from mental illnesses. Find out how mental illness affected their lives.

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can talk about the structure and physiology of the nervous system
- I can describe the organs of the nervous system and their functions
- I can use infinitive constructions

Key Words

autonomic nervous system /ˌɔːtə`nɔmɪk `nəːvəs `sɪstəm/
axon /`æksɔn/ *n*
brain /breɪn/ *n*
central nervous system /`sentrəl`nəːvəs `sɪstəm/
cranial nerve /`kreɪnɪəlnəːv/
degeneration /dɪˌʤenə`reɪʃən/ *n*
dendrite /`dendraɪt/ *n*
grey matter /greɪ `mætə/
myelin /`maɪəlɪn/ *n*
neuron /`njuərən/ *n*
neuropathy /ˌnjuə`rɔpəθɪ/ *n*
peripheral /pə`rɪferəl/ *adj*
sensory /`sensərɪ/ *adj*
somatic nervous system /sə`mætɪk `nəːvəs `sɪstəm/
spinal cord /`spaɪnəlkɔːd/
spinal nerve /`spaɪnəlnəːv/
stimulus (*pl.* stimuli) /`stɪmjuləs (`stɪmjulaɪ)/ *n*
voluntary /`vɔləntərɪ/*adj*
vulnerable /`vʌlnərəbl/*adj*
white matter /wait `mætə/

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT XIV. THE BRAIN

In this unit

- describing the structure of the brain
- talking about the disorders of the cerebral circulation
- the participle and the participle constructions

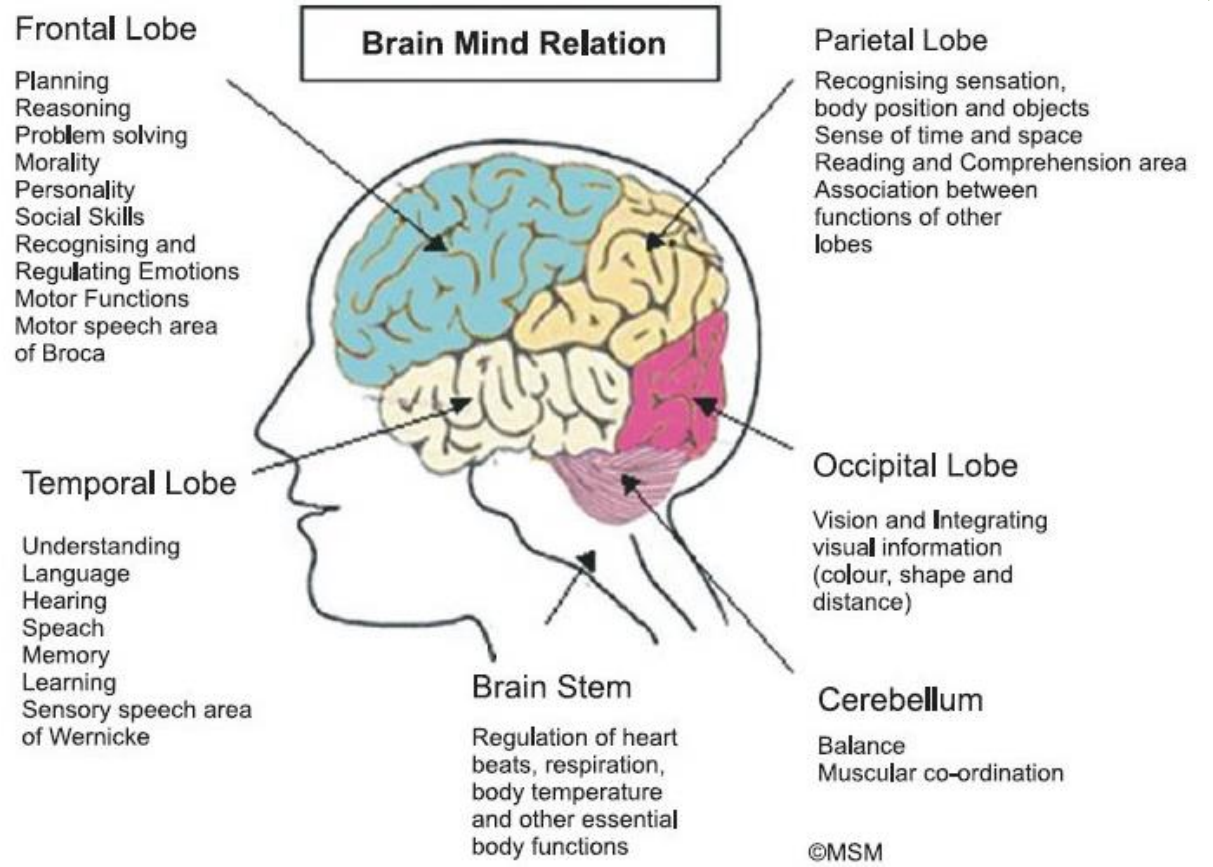
Lead-in

1. Интересные факты

- The average weight of an adult human brain is between 1,300 and 1,400 grams.
- The average weight of an elephant's brain is 7,800 grams.
- The average number of neurons in the brain is 100 billion.
- There are 186 million more neurons in the left hemisphere than in the right one.
  Total surface area of the human brain's cerebral cortex is 2,500 cm^2.
- Total surface area of an elephant's cerebral cortex is 6,300 cm^2.
- Total number of neurons in the cerebral cortex: 10 billion.
- Nerve impulses can travel from the brain at speeds up to 274 kilometers per hour

2. Изучите карту мозга и укажите, какие доли мозга наиболее активно участвуют в видах деятельности на рисунках 1-6.

3. Прочитайте текст о мозге и подготовьтесь к его обсуждению.



To the ancient Egyptians, the heart was the centre of mental activity – the brain was unimportant. However, over the centuries the relationship between the brain and the thought, language, and senses has been revealed.

Differences in brain weight and size do not equal differences in mental ability. The weight of Albert Einstein's brain was 1,230 g that is less than an average weight of the human brain.

Reading

The Brain

What is brain?

Brain is the central organ of the human body. It is extremely complex and **sophisticated**. The functions of the brain were found by the ancient Egyptians and Greeks in 400 BC. It was Hippocrates who first discovered that brain played an important role in sensation and **intelligence**. Here are some interesting facts about this important part of human body.

- Our brain makes up only 2% of our body weight yet it requires 20% of oxygen that enters our bloodstream.
- The brain can live for 4 to 6 minutes without oxygen.
- 80% of the brain is water. This means that it is important that you remain properly hydrated for the sake of your mind.
- The left side of your brain controls the right side of your body and vice versa.
- Our brain is more active at night as compared to day.

The Structure of the Brain

The main parts of the brain are the cerebrum, the cerebellum, and the brainstem.

The **cerebrum** is the largest part of the brain. It is composed largely of white matter with a thin outer layer of grey matter, the **cerebral cortex**. It is within the cortex that the higher brain functions of memory, reasoning, and abstract thought occur. The cerebrum is divided into two hemispheres by a deep groove. Each hemisphere is further divided into lobes, such as the **frontal**, **temporal**, **parietal** and **occipital** ones, each of them having specialized functions.

The **cerebellum** is under the cerebrum. Like the cerebrum, it is divided into two hemispheres. The cerebellum receives sensory input from the eyes, ears, joints, and muscles about the present position of body parts. After integrating this information, the cerebellum sends motor impulses by way of the brainstem to the skeletal muscles. In this way, the cerebellum controls voluntary muscle movements and maintains posture, coordination and balance.
The cerebellum assists the learning of new motor skills like playing the piano or hitting a baseball.

The **brainstem** consists of the **midbrain**, the **pons**, and the **medulla oblongata**. The midbrain contains reflex centres for improved vision and hearing. The pons contains fibres that connect different regions of the brain. The medulla connects the brain with the spinal cord. All impulses passing to and from the brain travel through this region. The medulla also has vital centres for control of heart rate, respiration, and blood pressure.

Brain Injury

Traumatic brain injury is very common – especially in children. A blow to the skull disturbs the nerve cells and symptoms will vary from mild **concussion** to deep **unconsciousness** or **coma**. When a patient is brought in with a head injury, his level of consciousness will often be measured using the Glasgow coma scale by which eye, **verbal**, and **motor response** are assessed and recorded.
Comas have been known to last for decades, though that is rare. Whilst in a comatose state a patient may even talk and walk around. Depending on the degree of neurological damage, patients will either gradually come out of the coma, or pass into a **vegetative state** or die. The image of a patient plugged in to machines providing long-term life support inevitably raises the controversy of euthanasia – the question of whether to keep someone artificially alive in this state or switch off and allow death to come naturally. Different countries have different laws about it, though that doesn't of course mean that the rules are always followed.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.
2. Словообразование.
Прилагательные, относящиеся к частям тела, чувствам, сферам жизни, часто имеют греческие и латинские корни. Закончите словосочетания, используя прилагательные из таблицы.

auditory	nasal	sensory
cerebral	ocular	verbal
cranial	senile	visual
cutaneous		

1. *bleeding in the brain* - a _____ haemorrhage
2. *the ability to hear* - _____ perception
3. *abnormal growths in the nose* - _____ polyps
4. *the ability to use words* - _____ skills
5. *a heart condition associated with the elderly* – _____ aortic stenosis
6. *a problem with one or more of the senses* – _____ impairment
7. *the anatomy of the skull* - _____ anatomy
8. *the ability to see things clearly* - _____ acuity
9. *the surface of the eye* – the _____ surface
10. *diseases of the skin* - _____ diseases

3. Работа в парах. Какие из следующих прилагательных вы можете образовать?

1. weakness of the muscles	m_____ weakness
2. the body's system of veins	the v_____ system
3. cancer of the stomach	g_____ cancer
4. lung problem	p_____ disorders
5. a heart operation	c_____ surgery
6. keeping the mouth clean	o_____ hygiene
7. eczema in babies	i_____ eczema
8. problems with thinking	c_____ impairment

4. Закончите диалог, поставив глаголы в нужном времени.

Nurse 1 How's Mr Rigg?
Nurse 2 If his operation _____ (1) (go) well tomorrow, he _____ (2) (make) a full and speedy recovery.
Nurse 1 It's a straightforward procedure, isn't it?
Nurse 2 Yes, he's having a haematoma evacuated from his skull. He _____ (3) (be) home by the weekend, unless something unexpected _____ (4) (happen).
Nurse 1 We spend too much time treating cyclists. There _____ (5) (not be) so many accidents if they ____ (6) (have) more cycle paths.
Nurse 2 And if cycle helmets _____ (7) (be) compulsory, there _____ (8) (be) fewer brain injuries.
Nurse 1 Yes. This patient was lucky. At least he _____ (9) (wear) a helmet when he next _____ (10) (ride) his bike.

5. Прочитайте рассказы пяти людей о травмах головы у родных или друзей. Посмотрите на картинку мозга на стр. 117 и определите, какая часть мозга повреждена у каждого из них.

1 _____ **3** _____ **5** _____
2 _____ **4** _____

1. He finds walking very difficult – he's had a few nasty falls. It's like he can't control his body any more.

2. The accident has affected the way she sees things. She doesn't recognize colours any more, and if something's moving, she can't see it at all. She sometimes sees the "wrong" thing. Like the other day, she thought my umbrella was a big bird.

3. If he goes out alone, he always gets lost. He confuses right and left and has difficulty picking up objects. In fact, naming objects is also a problem.

4. Her memory's the biggest problem. Sometimes she looks at me and she just doesn't remember who I am. And she doesn't remember anything from one minute to the next. On the plus side, she likes my cooking better now because she's lost her sense of smell.

5. He's changed. He used to be very sociable, but now he's moody and enjoys being on his own. He can't handle everyday tasks such as cleaning his teeth – not only because he's lost the use of his right-hand side. He just seems to have forgotten how to do it.

Language Development

1. Просмотрите текст о головном мозге и ответьте на вопросы.

1. What is the brain? How can you characterize it?

_____

_____

2. What is the structure of the brain?

_____

3. What is the cerebrum composed of?

_____

_____

4. What is the cerebrum responsible for?

_____

5. How does cerebellum work?

_____

_____

6. What are the parts of the brainstem? What are their functions?

_____

_____

7. What is the most common disorder of the brain? What is it characterized by?

_____

_____

8. What is the Glasgow coma scale and what is it used for?

_____

_____

2. a. Шкала комы Глазго

Coma is unconsciousness with a reduced response to external stimuli. The **Glasgow coma scale** is used for measuring how deeply unconscious a patient is, in order to assess the extent of brain damage. **Eye** response, **verbal** response, and **motor** response are tested. For each of these tests, a patient receives a score, with the minimum being 1 for no response. The total for the three tests gives the patient's GCS score.

Eye response		Verbal response		Motor response	
Spontaneous	4	Oriented	5	Obeys	6
To speech	3	Confused	4	Localizes	5
To pain	2	Inappropriate	3	Withdraws	4
None	1	Incomprehen-sible	2	Flexion	3
		None	1	Extension	2
				None	1

b. Заполните пробелы прилагательными и наречиями из таблицы.

appropriately	incomprehensible	verbal
bent	random	
coherently	spontaneously	

Последовательность реакций изменена. Прочитайте каждую секцию и пронумеруйте правильный порядок реакций.

1. eye response (1-4)
2. verbal response (1-5)
3. motor response (1-6)

Eye response	
a eye opening to _____ [1] command	
b no eye opening	**1**
c eye opening in response to pain	
d eye opening _____ [2]	
Verbal response	
a confused (a patient responds to questions but there is _____ [3], some confusion)	
b none	
c inappropriate words (_____ [4] speech, but no conversational exchange)	
d _____ [5] sounds (moaning, but no words)	
e orientated (the patient responds _____ [6] to simple questions)	
Motor response	
a withdrawal (pulls arms away) from pain	
b extension (arms straight by sides) in response to pain	
c no motor response	
d obeys commands (the patient does simple things as asked)	
e localizing to pain (moves hand towards pain)	
f flexion (arms _____ [7] up to chin) to pain	

3. a. «Пациент без сознания».
Луис Гэвин, 45 лет, поступил в больницу без сознания, после того, как жена обнаружила его в таком состоянии на полу ванной. Прочитайте, как старшая медсестра оценивает его состояние, определяя баллы по шкале комы Глазго, используя описание в упр. 2.

1. Eye response **=** _____
2. Verbal response **=** _____
3. Motor response **=** _____
4. GCS **=** _____

D=Doctor, N=Senior nurse

D Right, let's have a look at the patient and assess his GCS. Well, he hasn't opened his eyes at all, has he?
N No.
D OK. Let's see if he can hear me – Lewis. Lewis. Hello. Can you hear me? Yes. His eyes opened a little there. He can hear me. Hello, Lewis. Do you know where you are? You're in hospital. Can you remember what happened? Can you tell me your name? Mm, no – nothing there. Let's test his movements. Can you wiggle your fingers, Lewis? Was there a slight movement there?
N I didn't see anything, no.
D Right. What I'll do now is pinch him on the shoulder. Here goes…
N He' moving his hand …
D ..and he's trying to rub his shoulder. Good.

b. Два врача обсуждают возможные действия. Прочитайте и сделайте заметки в таблице, сравните их с заметками собеседника.

Diagnosis	**1**
Evidence for diagnosis	**2**
actions	**3**

D1, D2 - doctors

D1 He had a stroke two years ago, that's almost certainly what it is.
D2 Yes, he's a high risk patient. His blood pressure's been very high, according to his wife.
D1 Mm. His blood pressure wouldn't be so high if he didn't smoke. How long ago did he collapse?
D2 About an hour.
D1 We need to act quickly. If we break up the clot now, that'll prevent further damage to the brain.
D2 He's regaining consciousness now.
D1 He should start to get better if we give him a thrombolytic. We'll keep him under close observation tonight in case he has a relapse.
D2 OK. He's looking much better.

4. «Выскажи свое мнение по каждому клиническому случаю».
Вы прочитаете о трех клинических случаях из реальной жизни. Обсудите эти случаи и выразите свое мнение по поводу того, что должно произойти. Затем опишите кратко свое мнение по каждому вопросу, данному ниже.

Story A

A couple learned during pregnancy that their baby was missing most of her brain. She only had the brainstem, which controls the basic functions such as breathing and heartbeat. The hospital made it clear that she could not survive without advanced life support, and at most would only be able to breathe. The couple are religious, and believe that it is wrong to take any life, including the life of an unborn baby.

- Should the couple have the baby?
- If they have the baby, should the hospital continue to keep it alive artificially?
- Who should have the right to decide – the parents or the hospital?

Story B

A 27-year-old woman collapsed and fell into a coma, possibly as a result of an eating disorder. When she awoke, she was in a persistent vegetative state. This is where a person wakes and sleeps, and opens their eyes, but seems not to be aware of the world around them. After eight years in this state, her husband asked the hospital to remove her feeding tube. Her parents said that the hospital should continue to keep her alive, because she was conscious.

- Should the hospital remove her feeding tube?
- Who should have the right to decide in this case – the husband or the parents?

Story C

A 26-year-old woman was thrown through the windscreen of her car. She entered a persistent vegetative state. This is where a person wakes and sleeps, and opens their eyes, but seems not to be aware of the world around them. After four years her parents accepted that she would not recover and asked the hospital to remove the feeding tube. The hospital refused, saying that it had no evidence that the woman would have wanted to die in this situation.

- Should the hospital remove her feeding tube?
- Who should have the right to decide in this case – the hospita or the parents?

Grammar Point

Participle Constructions

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar/partizipien.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/structures/participles_sentences.htm

https://www.englisch-hilfen.de/en/exercises/structures/participles_phrases.htm

https://www.englisch-hilfen.de/en/exercises/structures/past_participle.htm

https://www.englisch-hilfen.de/en/exercises/structures/present_participle.htm

6. Проект.

1. Research one of these head injuries.

- **concussion**
- **second-impact syndrome**
- **cerebral contusion**
- **subarachnoid haemorrhage**
- **subdural haematoma**

2. Prepare a short talk for your next lesson, using visual aids if appropriate. Think about

- **common causes**
- **how dangerous it is**
- **how it is treated**

what long-term problems it can cause.

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can describe the structure of the brain
- I can describe the disorders of the cerebral circulation
- I can use the participle and the participle constructions

Key Words

admit /əd`mɪt/ *v*
avoid /ə`vɔɪd/ *v*
brainstem /`breɪnstəm/ *n*
cerebellum /ˌserɪ`beləm/ *n*
cerebrum /`serɪbrəm/ *n*
coma /`kəumə/ *n*
concussion /kən`kʌʃən/ *n*
consider /kən`sɪdə/ *v*
cortex /`kɔːtəks/ *n*
deny /dɪ`naɪ/ *v*
frontal /`frʌntəl/ *adj*
Glasgow coma scale /`glɑːzgəu `kəumə skeɪl/
intelligence /ɪn`telɪʤəns/ *n*
look forward to /luk `fɔːwədtə/ *v*
medulla oblongata /mə`dʌləɔbləŋ`gɑːtə/
midbrain /`mɪdbreɪn/ *n*
occipital /ɔk`sɪpɪtəl/ *adj*
parietal /pə`raɪɪtəl/ *adj*
pons /pɔnz/ *n*
postpone /pəust`pəun/ *v*
sophisticated /sə`fɪstɪkeɪtɪd/ *adj*
suggest /sə`ʤest/ *v*
temporal /`tempərəl/ *adj*
unconsciousness /ʌn`kɔnʃəsnəs/ *n*
vegetative state /`veʤɪtətɪv steɪt/

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT XV. DERMATITIS

In this unit

- talking about different types of dermatites
- describing etiology of skin conditions and features of their treatment
- *verbs followed* by *–"ing" form* (*gerund or participle*)

Lead-in

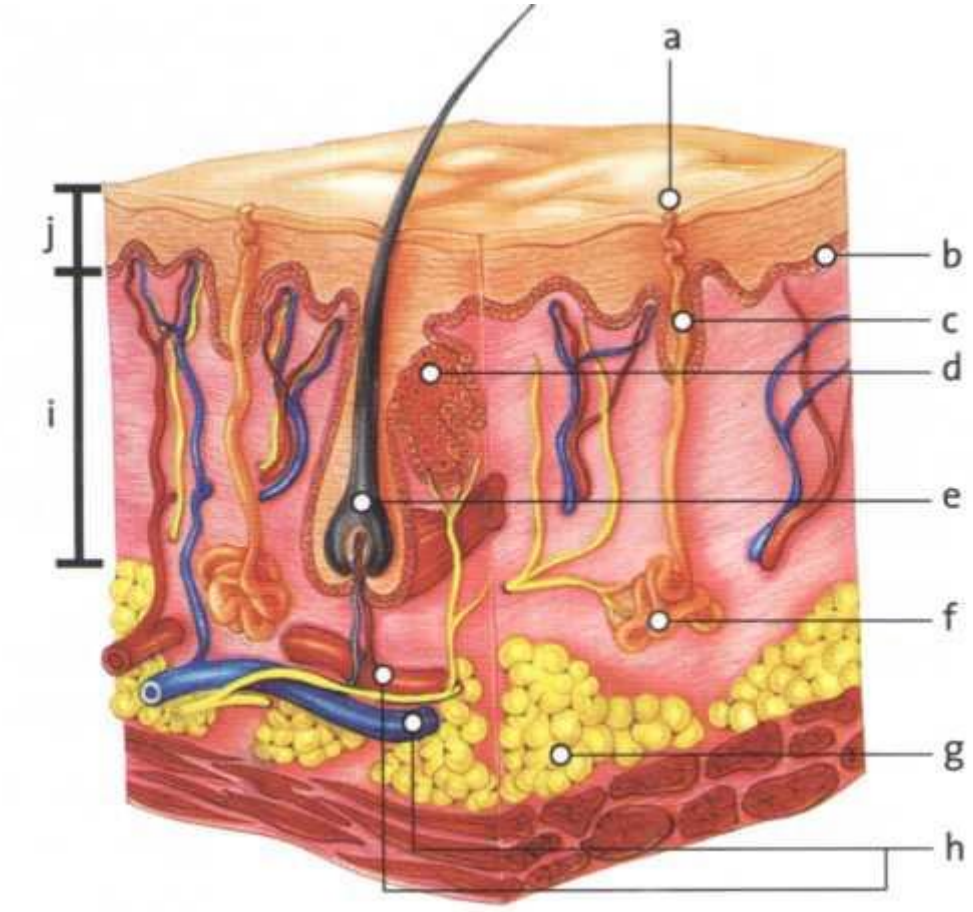
1. Интересные факты.

- Skin is the human body's largest organ
- The average human being has 640 cm^2 of skin and about 300 million skin cells
- The colour of human skin depends on the amount of pigment melanin that the body produces. Small amounts of melanin result in light skin while large amounts result in dark skin.

2. Ответьте на вопросы.

- Do you know any of the conditions in the picture on the right?
- What are the possible causes of each one or the risk factors for developing them?

3. Прочитайте текст о дерматитах, а затем обозначьте на рисунке структурные элементы и слои кожи.



The Human Body
Skin

a _____
b _____
c _____
d _____
e _____
f _____
g _____
h _____
i _____
j _____

In blind people, the brain's visual cortex is rewired to respond to stimuli received through touch and hearing, so they literally "see" the world by touch and sound.

The colour and texture of skin give information about your genes and its secretions generate a scent which is uniquely your own.

Reading

Dermatitis

Functions of the Skin

The skin and its associated structures make up the **integumentary system.** This body-covering system protects against infection, dehydration, ultraviolet radiation, and injury. Extensive damage to the skin, such as by burns, can result in dangerous complications. The skin also serves in temperature regulation and sensory perception. The adjective **cutaneous** refers to the skin.

The Structure of the Skin

The thin outer layer of the skin is the epidermis, which is made of tough, flat cells. Dead cells at the surface form a scaly protective layer, and as these are lost, new skin cells are formed in the basal cell layer at the bottom of the epidermis. Also in this bottom layer are melanocytes, which produce the pigment melanin, giving the skin its colour and protecting it from UV light.

The skin's inner layer, the dermis, is made of strong, elastic tissue. It contains nerve endings and small blood vessels.

Sebaceous glands produce sebum, an oil that rises to the surface of your epidermis to keep your skin lubricated and waterproof.

Sweat is produced in sweat glands, and comes up through sweat ducts to the surface of the skin from where it comes out through tiny pores. Body hairs grow in follicles in the dermis.

Under the skin is a layer of subcutaneous fat. This keeps the body warm, absorbs shocks, and helps hold your skin to all the tissues underneath it.

Skin Diseases

Many common skin conditions such as dermatitis, eczema, psoriasis, hives, acne, keratosis (hardening of their skin) are characterized by **itchy**, red skin **eruptions** called **erythema** (redness).

The study of the skin and diseases of the skin is dermatology, but careful observation of the skin, hair, and nails should be part of every physical examination.

Dermatitis

Dermatitis derives from Greek ***derma*** "skin" + -***itis*** "inflammation". Dermatitis is a general term that describes an inflammation of the skin. Dermatitis is also called **eczema**.

Although dermatitis can have many causes and occurs in many forms, this disorder usually involves an itchy **rash** on swollen, reddened skin. Skin affected by dermatitis may **blister**, **ooze**, develop a **crust** or **flake off**.

There are several types of dermatitis. The most common types include:

- **Atopic dermatitis (eczema).** Usually beginning in infancy, this red, itchy rash most commonly occurs where the skin flexes — inside the elbows, behind the knees and the front of the neck. When **scratched**, the rash can leak fluid and crust over.
- **Contact dermatitis.** This rash occurs on areas of the body that have come into contact with substances that either irritate the skin or cause an allergic reaction, such as poison ivy. The rash may burn, sting or itch. **Blisters** may develop.
- **Seborrheic dermatitis.** This condition causes a red rash with yellowish and somewhat "oily" **scales**, usually on the scalp and sometimes on the face, especially around the ears and nose. It's a common cause of **dandruff**. In infants, this disorder is known as cradle cap.

Treatment

Dermatitis is a common condition that usually isn't life-threatening or contagious. Even so, it can make you feel uncomfortable and self-conscious. Dermatitis treatment varies, depending on the cause. A combination of good skin care and medications can help you treat dermatitis. Using corticosteroid creams, applying wet compresses and avoiding irritants are the cornerstones of most dermatitis treatment plans. Light therapy, which involves exposing your skin to controlled amounts of natural or artificial light, also may be used in some cases.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

-

2. Посмотрите на информацию в таблице и объясните, как называется потеря различных чувств, и подберите синонимы к этим словам.

Function	Loss	Other symptoms
hearing	deafness	**buzzing** or **ringing** in the ear (tinnitus)
sight	blindness	**double vision** (diplopia) blurring (loss of visual acuity – clarity of vision)
sensation (feeling)	numbness (anaesthesia)	**tingling** or **pins and needles** (paraesthesiae)
balance	unsteadiness (ataxia)	**dizziness** (vertigo)

3. Словообразование. Образуйте прилагательные от следующих слов.

itch	
scale	
crust	
inflame	
sore	
flake	
swell	
scratch	

4. Типы поражений кожи.
a. Познакомьтесь с разными типами поражений кожи, приготовьтесь выполнить упражнения.

Medical term	Common word	Features
macule	**spot**	not raised above the surface of the skin
papule	**spot**	raised above the surface of the skin
vesicle	**small blister**	filled with fluid
bulla	**blister**	a large vesicle
crust	**scab**	dried blood etc. on the surface of the skin
scales	**scales**	a thin layer of epidermis separated from the skin
fleshy naevus	**mole**	a raised brown naevus
cicatrix, cicatrices	**scar**	a mark on the skin after healing

b. Rashes
A **single** skin **lesion** can be **regular** or **irregular** in shape. When there are many (**multiple**) lesions, especially macules or papules, the result is a **rash**, (or **spots** in common language); for example the rash of the infectious disease such as rubella. A rash is said to erupt, or break out. The following features of the skin lesion are usually noted:

- location, size, shape, colour, type.

For a rash, note also:

- distribution (widespread – on many parts of the body, localized – on one part only)
- grouping (scattered – more or less evenly spread out, or in clusters –small groups).

c. Завершите описание опоясывающего лишая (*herpes zoster*), заменив медицинские термины в скобках на общеупотребительные английские слова.

_____ (1) (herpes zoster) usually starts with pain and soreness. Then red _____ (2) (macules) appear that develop into groups of _____ (3) (vesicles) over a particular area on one side of the body. In most patients, new _____ (4) (lesions) continue to appear for 3 to 5 days. The _____ _____ (5) (vesicles) become (pustular) and then form _____ (6) (crusts). In severe cases, there may be _____ (7) (cicatrices) afterwards.

5. Прочитайте диалог и найдите прилагательные, относящиеся к различным кожным состояниям. Воспроизведите диалог.

D = doctor, M = Mother of little boy

D So how is Pete's skin doing?
M It's much worse. It itches so much it drives him crazy. And now little blisters have broken out all over his body.
D Yes, I can see. The skin is quite inflamed.
M It's even bleeding in some places, where he's scratched.
D Ah, yes, that looks pretty sore.
M I'm worried about him. Is it going to carry on getting worse?

D No, in fact it will almost certainly get better when he gets older. But it will flare up from time to time. Watch what he eats, in case a particular food makes it worse, and try not to let him get too hot and sweaty.

M Is there anything we can do to make it less uncomfortable?

D I'll prescribe a topical corticosteroid cream for the itching. And keep his fingernails nice and short. Use moisturizing cream on the skin regularly to make it less dry and flaky, but don't use it where the skin is cracked, and avoid clothes made of scratchy materials such as wool.

6. Тест.

1. Eczema is a general medical term for many types of skin inflammation.
a True **b** False

2. Eczema has no known cause.
a Yes **b** No

3. Is eczema contagious?
a Yes **b** No

4. Eczema can be triggered by
a sweat. **c** clothing.
b soap. **d** all of the above.

5. With eczema, the first symptom is usually
a swelling. **c** crusting.
b oozing **d** itching.

6. Pruritus is the medical term for
a itching. **c** flaking
b redness. **d** scratching.

7. In children and adults, eczema usually occurs on the scalp first.
a True **b** False

8. Eczema is best controlled by good skin care.
a True **b** False

9. Prescription treatments are available for severe eczema.
a True **b** False

10. How is eczema diagnosed?
a Blood test **c** Ultrasound
b CT scan **d** None of the above

11. Eczema can mimic other skin diseases and infections.
a True **b** False

12. _____ can irritate skin in people with eczema.
a Dairy **c** Sand
b Salt **d** Vitamin C

13. The skin itches. Scratching the itch is temporarily satisfying but actually leads to more itching. This describes

a itching. **c** the itch-scratch cycle.
b scratching. **d** none of the above.

14. People who have been diagnosed with eczema should avoid

a caffeine **c** the current smallpox vaccine.
b ibuprofen **d** salt.

7. Прочитайте информацию о кожной болезни и поставьте все возможные вопросы к тексту.

Psoriasis is a chronic overgrowth (hyperplasia) of the epidermis, producing large, erythematous (red) plaques with silvery scales. The cause is unknown but there is sometimes a hereditary pattern. Psoriasis is treated with topical corticosteroids and with exposure to ultraviolet (UV) light. Severe cases have been treated with a combination of a drug, psoralen (P), to increase sensitivity to light, followed by exposure to a form of UV light.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Language Development

1. Просмотрите текст о дерматите и ответьте на вопросы.

1. What are the functions of the skin?

_____

_____

2. What are the main layers of the skin?

_____

3. What does epidermis contain?

_____

4. What gives the colour to the skin?

_____

5. What is dermis? What is it made of?

_____

6. What glands are found to the skin? What is their role?

_____

7. What skin diseases are there?

_____

_____

8. What branch of medicine deals with skin diseases?

_____

_____

9. What kind of disease is dermatitis? What types of dermatites are there?

_____

_____

10. What are the causes of dermatitis?

_____

_____

11. What are the symptoms and treatment of dermatitis?

_____

_____

2. Посмотрите на картинку и опишите сыпь:

location, distribution	grouping	type of lesion	colour

3. Описание болезни.

a. Прочитайте эссе студента об импетиго и соотнесите заголовки с абзацами A-H ниже.

1. Prognosis	_____
2. Diagnosis	_____
3. Prevention	_____
4. What it is	_____
5. Transmission	_____
6. Treatment	_____
7. Causes	_____
8. Signs and symptoms	_____

b. Заполните пробелы в эссе, используя выражения в таблице.

affected by	characterized by
avoided by	effective against
based on	resolves without
caused by	spread by
likely to	treated with

Etiology, Signs and Symptoms, and Management of Impetigo

A. Impetigo is a contagious skin infection which usually occurs in children aged two to six. It is also common in people of any age who play contact sports.

B. It is usually_____[1] the same Streptococcus bacteria that causes strep throat. It can also be caused by Staphylococcus aureus. Skin that has already been _____[2] cuts, insect bites or other trauma, or by an allergic reaction is more _____[3] develop impetigo.

C. The infection is _____[4] direct contact with lesions or with nasal carriers. The incubation period is one to three days. Scratching the lesions can spread the infection to other parts of the body.

D. Impetigo is _____[5] small, pus-filled blisters surrounded by reddened skin, which is often itchy. After four to six days, the blisters break down and form a thick crust.

E. Diagnosis is made _____[6] the typical appearance of the skin lesion. A culture of the skin or mucosal lesion usually grows Streptococcus or Staphylococcus.

F. Impetigo usually _____[7] sequelae within two weeks if left untreated. Complications, which are rare, include permanent scarring to the skin and kidney damage.

G Good hygiene is the most effective preventive measure. Scratching a sore or rash, which can lead to impetigo, can be _____ [8] keeping the nails short.

H The infected area should be washed with soap and water and allowed to dry in the air. Impetigo can be _____ [9] bactericidal ointments that are _____ [10] impetigo, such as Fucidin and Bactroban. Severe cases can be treated with oral antibiotics such as Floxapen or Erythrocin.

c. Используя заметки ниже, опишите этиологию, признаки и симптомы , а также лечение эпидермофитии стопы. Используйте те же заголовки абзацев, что в тексте выше.

- fungal infection of the skin, usually between toes
- funqus on everyone's skin – feeds on dead skin
- people with sweating feet more likely to get it
- contagious – direct skin-to-skin contact, through towels, shoes, floors, etc.
- scaling, flaking, itching
- possibly blisters and cracked skin - can lead to exposed raw tissue, pain, inflammation
- can spread to armpits, knees, elbows, groin
- diagnosis from appearance
- skin lesion biopsy examination may show presence of fungus
- usually responds well to treatment
- risk of re-infection if preventive measures are not taken
- complications rare - e.g. secondary bacterial skin infections, lymph gland infection
- prevention – keep feet clean and dry (e.g., cotton socks, leather shoes)
- talcum powder or antifungal powder useful
- severe cases - topical creams, e.g., *Ketoconazole* or *Terbinafine*.

Grammar Point

Verbs followed by “ing” form (gerund or participle)

1. Повторите грамматический материал по теме занятия:

https://www.englisch-hilfen.de/en/grammar_list/gerund_infinitiv.htm

2. Выполните грамматические упражнения по следующим ссылкам:

https://www.englisch-hilfen.de/en/exercises/structures/gerund_progressive.htm

https://www.englisch-hilfen.de/en/exercises/structures/gerund_infinitive_verbs.htm

https://www.englisch-hilfen.de/en/exercises/structures/gerund_infinitive2.htm

5. Проект.
What are the most popular / well-paid medical specialties in your country? Choose one specialty and write an essay, answering the questions:

- What conditions does this specialty deal with?
- What are its perks/disadvantages?

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can describe the structure of the skin
- I know the causes of different types of dermatites
- I can describe the symptoms and treatment of dermatites
- I can use gerunds and participles

Key Words

basal cell layer /`beɪsəl sel leɪə/
blister /`blɪstə/ *n*
crust /krʌst/ *n*
cutaneous /kjuː`teɪnɪəs/ *adj*
dandruff /`dændrʌf/ *n*
dermatology /,dəːmə`tɔlədʒɪ/ *n*
dermis /`dəːmɪs/ *n*
eczema /`ekzɪmə/ *n*
epidermis /,epɪ`dəːmɪs/ *n*
eruption /ɪ`rʌpʃən/ *n*
erythema /,erɪ`θɪmə/ *n*
flake off /fleɪk ɔf/ *v*
follicle /`fɔlɪkl/ *n*
integumentary system /ɪn,tegju`mentərɪsɪstəm/
itchy /ɪtʃɪ/ *adj*
ooze /uːz/ *v*
pore /pɔː/ *n*
rash /ræʃ/ *n*
scale /skeɪl/ *n*
scratch /skrætʃ/ *v*
sebaceous gland /sɪ`beɪʃəsglænd/
seborrheic /,sebə`riːək/ *adj*
subcutaneous fat /səbkjuː`teɪnɪəsfæt/
sweat gland /swet glænd/

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

UNIT XVI. THE URINARY SYSTEM

In this unit

- talking about the structure of the urinary system
- describing the functions of the urinary system
- revision of tenses

Lead-in

1. Интересные факты.

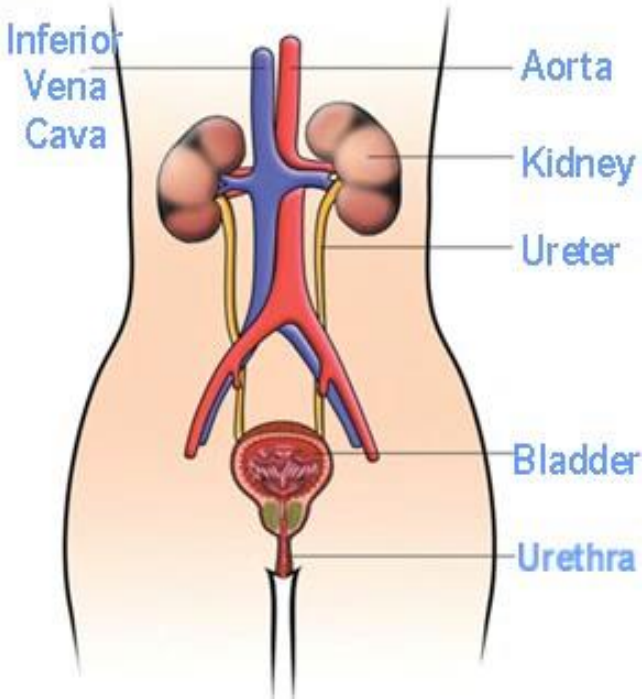
- About 25 per cent of the total volume of blood in the body is pumped through the kidneys every minute.
- At birth, each kidney weighs about 15 g. The kidneys do not reach their final weight until adolescence.
- The kidney can clean more than 1 million gallons of water in a lifetime, which is more than enough to fill a small lake.
- A healthy adult bladder can comfortably hold 400–600 millilitres of urine.
- The tissues of the bladder are isolated from urine and toxic substances by a coating that discourages bacteria from attaching and growing on the bladder wall.
- The average adult ingests about 3 l of fluid per day and urinates about 1.5 l of urine each day.
- The volume of urine formed at night is about half that formed in the daytime.
- Normal urine is sterile. It contains fluids, salts and waste products, but it is free of bacteria, viruses and fungi.
- In the middle ages, trying to extract gold from urine, alchemists discovered white phosphorus and urea.
- Urine is often diluted and added to potted plants in the garden as it has adequate urea content which is a wonderful source of nitrogen to plants.

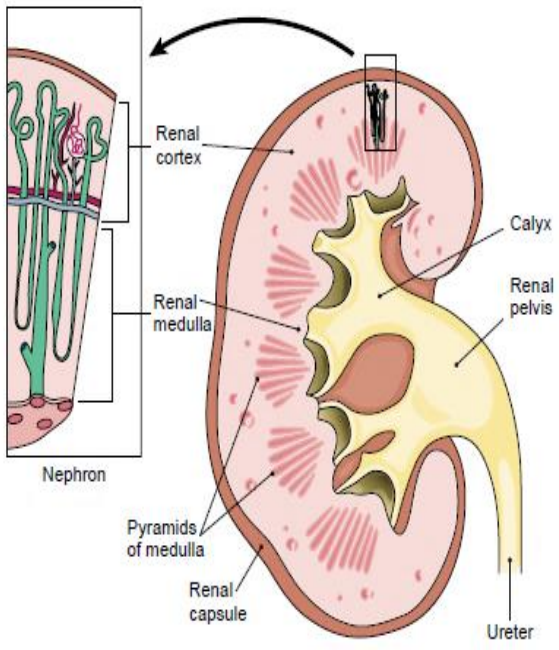
2. Ответьте на вопросы.

- How important is the role of kidneys in our overall health?
- Have you ever had any problems with kidneys?
- Have you had experience of caring for a patient with a kidney problem? If so, how did you manage his/her condition?

3. Прочитайте текст о мочевыделительной системе и опишите органы, входящие в ее состав.

The Urinary System





Kidney

Urine used to be used to make the medicine urokinase, which dissolved blood clots. Ancient Romans used urine as bleaching agent for cleaning cloths.

If one kidney fails to function and is removed, the other kidney can increase in size by 50% within two months to handle the entire task of filtration.

Reading

The Urinary System

The urinary system's primary responsibility is to remove waste from the body. However, this system has other important jobs also, including ensuring that the body is properly hydrated and the body fluids are in proper balance.

The primary components of the urinary system are the kidneys, ureters, urinary bladder, urethra, and urinary **sphincter muscles**. These organs play the key roles in urine production, storage, and elimination as well as in other processes of the urinary system.

Kidneys

The two bean-shaped kidneys are a pair of purplish-brown organs located below the ribs toward the middle of the back. Their function is to:

- remove liquid waste from the blood in the form of urine;
- maintain a stable balance of water and concentration of minerals, such as sodium, potassium, and phosphorus, in the blood;
- produce erythropoietin, a hormone that stimulates red blood cell production;
- produce renin, an enzyme that helps regulate blood pressure;
- produce an active form of vitamin D, needed for bone health.

The kidneys remove **urea** from the blood through tiny filtering units called nephrons. Each **nephron** consists of a ball formed of small blood capillaries, called a **glomerulus**, and a small tube called a **renal tubule.** Urea, together with water and other waste substances, forms the **urine** as it passes through the nephrons and down the renal tubules of the kidney.

Each kidney contains about one million nephrons, microscopic structures coiled and folded into various shapes. It is here that the blood is filtered.

The branch of medicine which specializes in kidneys is called **nephrology**. This is because nephrons are the basic functioning parts of the kidney.

Ureters

Two **ureters** - narrow tubes that carry urine from the kidneys to the bladder. Muscles in the ureter walls continually **tighten** and relax forcing urine downward, away from the kidneys. If urine backs up, or is allowed to stand still, a kidney infection can develop. About every 10 to 15 seconds, small amounts of urine are emptied into the bladder from the ureters.

Bladder

Bladder is a triangle-shaped, hollow organ located in the lower abdomen. It is held in place by ligaments that are attached to other organs and the pelvic bones. The bladder's walls relax and expand to store urine, and contract and flatten to empty urine through the urethra.

Two sphincter muscles are circular muscles that help keep urine from leaking by closing tightly like a rubber band around the opening of the bladder. Nerves in the bladder alert a person when it is time to urinate, or empty the bladder.

Urethra

Urethra is the tube that allows urine to pass outside the body. The brain signals the bladder muscles to tighten, which squeezes urine out of the bladder. At the same time, the brain signals the sphincter muscles to relax to let urine exit the bladder through the urethra. When all the signals occur in the correct order, normal urination takes place.

Urinalysis

Urinalysis is a simple and widely used method for diagnosing disorders of the urinary tract. Urinalysis is the analysis of urine. Tests are carried out in a laboratory on a specimen of urine. Typical specimens are a **midstream** specimen and **catheter** specimen.

In a routine urinalysis, the urine is grossly examined for colour and **turbidity** (a sign of bacteria); **specific gravity** (a measure of concentration) and pH are recorded. Microscopic examination may reveal the presence of red blood cells or pus cells.

Vocabulary Practice

1. Объясните значение выделенных слов из текста на предыдущей странице.

2. Соотнесите термины с их определениями.

1. urine	**a.** the process of analysing urine using physical or chemical tests
2. renal	**b.** filtering units of the kidney
3. nephron	**c.** relating to the kidneys
4. urinalysis	**d.** the fluid which is excreted by the kidneys
5. bladder	**e.** The main nitrogen-containing waste product in the urine
6. urea	**f.** a muscular membranous sac in the abdomen which receives urine from the kidneys and stores it for excretion
7. medulla	**g.** the outer layer of the kidney
8. cortex	**h.** the middle layer of the kidney

3. Вставьте нужные предлоги в словосочетания, затем составьте три предложения с любыми из них.

1. to empty _____ the bladder, 2. to remove urea _____ blood, 3. to consist _____ smth, 4. to pass _____ the body, 5. to carry _____ tests, 6. to coil (fold) _____ shape, 7. to be attached _____ smth, 8. to specialize _____ smth.

_____
_____
_____
_____

4. Заполните пробелы, используя слова из таблицы.

toxic oedema nephrons urine

1. If the _____ don't filter properly, the waste products aren't removed.
2. As a result, _____ levels of waste products build up in the blood.
3. If the kidney disease is untreated, the nephrons stop working altogether and no _____ is passed at all.
4. Because your kidneys are not filtering out waste products or excess water, your hands or feet may swell; this accumulation of fluid is called _____ .

5. Тест.

1 The outer layer of the kidney is
a cortex **c** glomerulus
b medulla **d** adrenal gland

2. After blood enters the kidney, it travels to the
a glomerulus **c** distal tubule
b collecting duct **d** proximal tubule

3. What tube carries urine outside the body from the bladder?
a ureter **c** distal tubule
b urethra **d** renal tubule

4. Which of the following is NOT a job of the kidneys?
a regulate blood pressure
b remove wastes
c keep the volume of water in your body constant
d control endocrine glands

5. The kidneys are located:
a dorsal to the liver
b within the mesentery of the small intestine
c on either side of the lung
d near the middle of the back, on either side of the spine

6. What is the function of the urinary bladder?
a store urine **c** aid defecation
b filter the blood **d** contain bacteria to fight infection

7. What is the source of the waste products that are excreted by the urinary system?
a pollutants in the water and food
b metabolic processes
c undigested fibre
d excess food

8. Urination is controlled by
a hormones
b impulses from the prostate gland
c the internal urethral sphincter
d both voluntary and involuntary actions

9. Most nephrons have short loops and are located almost entirely in the
a renal cortex **c** renal medulla
b renal pelvis **d** ureters

10. What shape does the kidney resemble?
A pea **c** bean
b cone **d** pear

Language Development

1. a. Прочитайте информационный лист пациента и найдите слова и выражения в тексте, имеющие следующее значние.

1. the outer layer of the kidney – _____
2. the filtration units of the kidney - _____
3. the section of the kidney where the level of salt and water in urine is controlled – _____
4. the section of the kidney where the urine collects - _____
5. a thin tube which transport the urine from the kidney to the bladder - _____
6. a tube through which the urine passes to the outside - _____

b. Ответьте на вопросы.

- What are the functions of the kidneys?
- What vessels carry blood to and from the kidneys?
- What are the filtration units of the kidney called?
- Which part of the kidney controls salt and water concentration levels?
- Which part of the urinary system stores urine?
- What is the tube that carries urine outside the body called?

How Do Your Kidneys Work?

Unfiltered blood enters the kidney for filtration through the renal artery from the heart. Blood passes to the kidneys in large quantities so that it can be filtered well and have most of the waste products removed. Renal veins carry the cleaned blood away from each kidney. Renal veins are wider than renal arteries because they transport blood towards the inferior vena cava of the heart. The blood returned from the heart through the renal artery contains a toxic product, called urea, and also high levels of salt and large amounts of water. The kidney's function is to filter out these unwanted materials. In addition, the kidney also reabsorbs any products the body needs and secretes waste materials as urine.

Blood enters the kidney through the hard outer layer, or cortex. The filtration units of the kidney, called nephrons, are found in the renal cortex.The nephrons help to filter out waste from the blood, leaving a filtrate of important salts and glucose. The next section of the kidney is called the renal medulla. This is where the level of salt and water in urine is controlled. Sodium ions are concentrated in the medulla so that very concentrated urine is produced. Any excess water and waste products are then secreted as urine. The urine collects in the renal pelvis, which is the fan-shaped section at the narrowest part of the kidney that joins onto each ureter. The ureters are the two tubes which transport the urine from the kidney to the bladder, or storage section. From the bladder there is another tube called the urethra which is where the urine passes to the outside.

c. В парах обсудите работу почек. Используйте рисунок в разделе *Lead-In*.

2. Просмотрите текст о мочевыделительной системе и ответьте на вопросы.

1. What are the functions of the urinary system?
_____
_____

2. What does the urinary system consist of?
_____

3. What are the most important excretory organs in the body? What are their functions?
_____

4. What is nephron and what is its function?
_____

5. How do ureters work?
_____

6. What is urethra? How does urination occur?
_____

7. What is urinalysis? What does it determine?
_____
_____

8. What science specializes in kidneys?
_____
_____

Grammar Point

Self-Assessment (Units XIII-XV)

1. Заполните пробелы, используя активную лексику уроков.

1. The _____is responsible for balance.
2. The outer layer of the skin is called_____.
3. A _____ machine purifies blood.
4. _____Scale is used to assess the level of unconsciousness.
5. The basic functional unit of the nervous system is _____.
6. A fibre extending from the cell body of neuron and carrying impulses toward the cell body is the _____.
7. A whitish, fatty material that protects the axon and speeds electric conduction is _____.
8. A skin disease with red, itchy rash on the elbows, behind the knees and on the neck is _____.
9. Itchy, red skin eruptions on the skin are called _____.
10. A small blister filled with fluid is called a ____.
11. Pruritus is the medical term for _____.
12. Psoriasis is treated with topical corticosteroids and _____ .
13. Bleeding in the brain is a _____ haemorrhage.
14. The branch of medicine dealing with kidneys is called _____.
15. Someone who gives an organ is called a_____.
16 .A narrow tube that carries urine from the kidneys to the bladderis the _____.
17. The muscle at the neck of the bladder is _____ .
18. Tiny filtering units of the kidneys are called _____.
19. The main nitrogen-containing waste product in the urine is _____.
20. The kidney resemble_____ in shape.
21. Painful or difficult urination is _____.
22. Someone who receives an organ is called a_____..
23. A doctor who specializes in kidney diseases is called a _____.
24. Presence of blood in the urine is _____.
25._____are the pains felt in the abdomen by women in labour.
26. The leading cause of kidney failure is _____.
27._____ is the outer layer of the kidney.
28.Surgical removal of stones is called a _____.

2. Тест. Подберите правильный синоним к словам, выделенным жирным шрифтом.

1. This disorder relates to what she **ingests.**

A breaths in	C believes
B eats, drinks or swallows	D says

2.. Any **side effects** on the patients must be noticed.

A desirable effects	C beneficial effects
B undesirable effects	D lateral effects

3. Other symptoms include **fatigue**, blurred vision, increased hunger, and sores that do not heal.

A extreme cold	C excitement
B extreme heat	D extreme tiredness

4. The best way to prevent allergic rhinitis is to **avoid** the things to which you are allergic.

A keep on	C get used to
B keep away from	B prevent

5. A smoker with high blood pressure can increase her **incidence** of heart disease.

A birth rate	C number of cases
B mortality	D obesity

. The pupil of the bad eye is bigger than _____ of the good eye.

A which	C that
B what	D this

7. Chlorampheramine **relieves** the symptoms of a hay fever.

A increases	C maintains
B lessens	D expresses

8. Progress has been made in **eradication** or control of many life-threatening diseases.

A eliminating	C replicating
B maintaining	D suggesting

9. Drinking lots of water make the bladder **bloat**.

A clean with water	C infect
B enlarge	D invade

10. Ultrasound investigation of the renal tract is often used to **distinguish** between various sources of bleeding.

A differ	C extinguish
B differentiate	D distinct

11. Some studies have found out a **protective** effect of breastfeeding on the development of type I diabetes.

A defensive	C relative
B offensive	D selective

12. Most urinary tract infections are caused by bacteria from the **bowel** invading the urinary tract.

A stomach	C kidney
B esophagus	D intestine

13. Humankind remains **vulnerable to** many new and resurgent diseases.

A resistant to	C liable to be damaged or harmed by
B allergic to	D free from

14. You should have your lungs _____ if your cough lasts for over a month.

A X-rayed	C X-raying
B X-ray	D to X-ray

3. Закончите предложения, употребляя вместо глагоов в скобках инфинитив или герундий в соответствующей форме.

1. She will _____ (return) the books next weekend.
2. The ward doctor suggested _____ (invite) the consultant.
3. They refused _____ (refer) the patient to the hospital.
4. The floor in this ward needs _____ (clean).
5. Our lecturer makes us _____ (do) our homework every evening.
6. The have begun _____ (make) preparations for the Graduation Ball.
7. The neurologist advised his patient _____ (stop) _____ (smoke).
8. I dislike _____ (go) to the anatomy department alone. I'm scared!
9. Our professor let us _____ (take) part in the students' contest in physiology.
10. I am looking forward to _____ (graduate) from the university and _____ (start) a career of a doctor.
11. I wouldn't risk _____ (tell) the lecturer that I am not ready for the test.

4. Трансформируйте предложения, используя причастия.

1. Participle clauses are not very common in spoken English. They are found in fiction and, particularly, in scientific articles.

_____
_____
_____.

2. The eye consists of a transparent lens that focuses light on the retina.

_____
_____.

3. Sight is probably the most developed sense in humans. It is followed closely by hearing.

_____
_____.

4. The receptors for taste are situated chiefly in the tongue. That is why we feel the taste of food we eat.

_____
_____
_____.

5. Преобразуйте предложения, используя конструкции с инфинитивом (1 или 2).

1. Experiments have shown that the back of the brain records the visual input from the eyes.

_____
_____.

2. The sense of touch is distributed throughout the body. The physiologists have observed it.

_____
_____.

3. They think the sense of balance is maintained by a complex interaction of visual inputs, the inner ear vestibular system, and the CNS.

_____
_____.

4. They consider I am simply the best.

_____
_____.

6. Поставьте глаголы в скобках в правильную форму. Возможны формы *active* и *passive*.

1. While the test _____ (perform), the patient felt very anxious.
2. _____ you ever _____ (take) sedatives?
3. Now, attention, please! Analgesics _____ _____ (inject).
4. What kinds of patients _____ you _____ (see)?
5. 'Could you help me, please? I'm in a hurry, and somebody _____ (call).' 'No problem. I _____ (answer).'
6. Recently, unwanted teen pregnancy _____ _____ (affect) more and more women under the age of 18, usually as a result of poor sexual education or neglect.
7. *Save the Children* is an organization that ___ _____ (form) in 1919.
8. If you _____ (have) any problems, _____ (call) your doctor immediately.
9. 'I'd like so much to work in this hospital.' 'Oh, then _____ (apply) right now! A new obstetrician _____ (look) for.'
10. I can't believe it! My new stethoscope _____ _____ (steal).
11. 'Relax, Mrs Goldsmith. This time tomorrow you _____ (breastfeed) your little one.
12. I was very glad that all the decoration _____ _____ (complete) before I _____ (go) to the birth centre.
13. 'What _____ you _____ (do)?' 'I _____ (smell) these wonderful roses. _____ you _____ (not/know) who _____ (bring) them to my ward?'
14. 'What _____ you _____ (think) about?' 'I _____ (plan) where to put a cot.'
15. 'Where _____ you _____ (live) after you _____ (have) a baby?' 'We _____ (rent) a flat in the downtown.'
16. '_____ the sex of your baby _____ _____ (determine) yet?' 'No. I _____ _____ (see) my ObGyn tomorrow, and I hope she _____ (tell) me that.'
17. I _____ (think) you'd better deliver a baby in our centre. You _____ (give) the best care.
18. A community midwife who _____ (deliver) hundreds of babies over the past 30 years _____ (honour) with an award for the special care she has given patients.
19. An arrow through the brain _____ necessarily _____ (not kill) you. The neurosurgeon _____ (remember) well having treated a 30-year-old Canadian who _____ (come) in to have an arrow extracted from his brain. He _____ (try) to outrun the arrow. As he _____ (look) over his shoulder to see how he _____ (do), the arrow _____ (go) into the side of his eyeball and through the skull. He _____ (lose) his sight in that eye but, luckily for him, it _____ (miss) all the bits of the brain that _____ (control) vital functions.
20. By 2020, I _____ (learn) medicine for 6 years.

7. Прочитайте следующие пословицы. Поставьте глаголы в скобках в нужной форме. Переведите на русский язык.

1. Money _____ (not make) you happy but it _____ (quiet) your nerves.
_____
_____.
2. My brain _____ (be) like the Bermuda Triangle. Information _____ (go) in and then it _____ never _____ (find) again.
_____
_____
_____.
3. My brain _____ (experience) technical difficulties. Please, stand by…
_____
_____.
4. Health _____ (not value) till illness _____ (come).
_____
_____.
5. If you _____ (correct) your mind, the rest of your life _____ (fall) into place.
_____
_____
_____.

Checklist

Оцените, чему вы научились в этом уроке. Отметьте (✓) утверждения, которые справедливы для вас.

- I can describe the structure of the urinary system
- I can describe the functions of the urinary system
- I can use all present forms with both stative and dynamic verbs
- I can use all the verbs in proper past tenses

Key Words

bladder /`blædə/ *n*
catheter /`kæθɪtə/ *n*
cortex /`kɔːtəks/ *n*
glomerulus /glɔ`meruləs/ *n*
medulla /me`dʌlə/ *n*
midstream specimen /mɪd`striːm `spesɪmɪn/
nephrologist /nə`frɔlədʒɪst/ *n*
nephrology /nə`frɔlədʒɪ/ *n*
nephron /`nefrɔn/ *n*
renal pelvis /`riːnəl `pelvɪs/
renal tubule /`riːnəl `tjuːbjuːl/
specific gravity /spə`sɪfɪk `grævɪtɪ/
specimen /`spesɪmɪn/ *n*
tighten /`taɪtən/ *v*
turbidity /tə:`bɪdɪtɪ/ *n*
urea /`juərɪə/ *n*
ureter /ju`riːtə/ *n*
urethra /ju`riːθrə/ *n*
urinalysis /juərɪ`nælɪsɪs/ *n*
urine /`juərɪn/ *n*
waterworks *pl.* /`wɔːtəwəːks/ *n*

Просмотрите еще раз материал урока. Запишите другие слова и выражения, которые могут оказаться для вас полезными, и выучите их.

VOCABULARY

adj = adjective /`ædʒɪktɪv/ имя прилагательное
adv = adverb /`ædvɜ:b/ наречие
conj = conjunctive /kən`dʒʌŋktɪv/ союз, союзное слово
irreg = irregular /ɪ`regjulə/ неправильный *(о глаголах)*
pl = plural /`pluərəl/ множественное число
prep = preposition /ˌprepə`zɪʃən/ предлог
pron = pronoun /`prəunaun/ местоимение
pp = past participle /pɑ:st `pɑ:tɪsɪpl/ причастие прошедшего времени
n = noun /naun/ имя существительное
v = verb /vɜ:b/ глагол

A

abdomen /`æbdəmən/ *n* брюшная полость, живот
abdominal /æb`dɑmɪnəl/ *adj* абдоминальный, брюшной
ablation /ə`bleɪʃən/ *n* дулание, иссечение
abnormality /ˌæbnɔ:`mælətɪ/ *n* отклонение, аномалия
above /ə`bʌv/ *prep* над; *adj* вышеупомянутый
absorb /əb`zɔ:b/ *v* поглощать, абсорбировать
absorption /əb`zɔ:pʃən/ *n* поглощение
abstain /əb`steɪn/ **from** *v* воздерживаться от *чего-л.*
accessory /ək`sesərɪ/ *adj* вспомогательный, дополнительный
accident /`æksɪdənt/ *n* несчастный случай
accommodation /əkɔmə`deɪʃən/ *n* аккомодация, приспособляемость
accompany /ə`kʌmpənɪ/ *v* сопровождать
accumulate /ə`kju:mjuleɪt/ *v* накапливать, скапливаться
accumulation /əˌkju:mjə`leɪʃən/ *n* накапливание, скопление
accustomed /ə`kʌstəmd/ *pp;* **to get accustomed to** привыкать к *чему-л.*
ACE inhibitor /eɪs ɪn`hɪbɪtə/ (**angiotensin-converting enzyme inhibitor**) ингиби́тор АПФ (*ингибитор ангиотензинпревращающего фермента*)
ache /eɪk/ *n* боль
achieve /ə`tʃi:v/ *v* достигать
aching /`eɪkɪŋ/ *adj* больной; ноющий
acquire /ə`kwaɪə/ *v* приобретать
acquired /ə`kwaɪəd/ *adj* приобретенный
acute /ə`kju:t/ *adj* острый *(о боли, стадии заболевания)*
add /æd/ *v* прибавлять, присоединять
admit /əd`mɪt/ *v* принимать, допускать
adrenal /ə`dri:nəl/ *adj* надпочечный; *n* надпочечная железа
adult /`ædəlt, ə`dʌlt/ *n* взрослый человек; *adj* взрослый
advanced /əd`vɑ:nst/ *adj* современный, «продвинутый»
advertisement /əd`və:tɪsmənt/ *n* рекламное объявление
advice /əd`vaɪs/ *n* совет
advise /əd`vaɪz/ *v* советовать
affect /ə`fekt/ *v* оказывать *(вредное)* воздействие
affected /ə`fektɪd/ *adj* поражённый *(болезнью)*
affirmative /ə`fə:mətɪv/ *adj* утвердительный
age /eɪdʒ/ *n* возраст; век
aging /`eɪdʒɪŋ/ *n* старение; *adj* стареющий
aid /eɪd/ *v* оказывать помощь
AIDS (acquired immunodeficiency syndrome) /eɪdz/ СПИД, синдром приобретенного иммунодефицита
aim /eɪm/ *n* цель; *v* ставить целью
airborne /`eɜbɔ:n/ *adj* воздушно-капельный
alcohol abuse /`ælkəhɔl ə`bju:s/ злоупотребление алкоголем
alcohol-induced /`ælkəhɔl ɪn`dju:st/ *adj* вызванный алкоголем
alimentary /ˌælɪ`mentərɪ/ *adj* пищеварительный
alimentary canal /elɪ`mentərɪ `kænəl/ пищеварительный тракт
alkaline /`ælkəlaɪn/ *adj* щелочной
allergen /`ælədʒən/ *n* аллерген
allergy /`ælədʒɪ/ *n* аллергия
almost /`ɔ:lməust/ *adv* почти
alone /ə`leun/ *adj* один, сам
alter /`ɔ:ltə/ *v* изменять
alternate /ɔ:l`tə:nət/ *adj* чередующийся, поочередный
alternative /ɒl`tɜ:nətɪv/ *n* альтернатива, выбор
although /ɔ:l`ðəu/ *conj* хотя; несмотря на то что
amazement /ə`meɪzmənt/ *n* изумление
ambulance /`æmbjələns/ *n* машина скорой помощи
amniotic fluid /æmnɪ`ɔtɪk `flu:id/ амниотическая жидкость
amount /ə`maunt/ *n* количество, сумма
anaemia /ə`ni:mɪə/ *n* анемия
anaesthetic /ˌænəs`θetɪk/ *n* обезболивающее средство; *adj* обезболивающий
anaphylaxis /ˌænəfɪ`læksɪs/ *n* анафилаксия (*незамедлительная реакция аллергического*

adjust /ə`ʤʌst/ *v* приспосабливаться

ancient /`eınʃənt/ *adj* древний
anger /`æŋgə/ *n* гнев
angina (pectoris) /ən`ʤaınə (`pektərıs)/ стенокардия
angioplasty /`ændʒıəu,plestı/ *n* ангиопластика (*реконструкция сосудов*)
angry /`æŋgrı/ *adj* сердитый
ankle /`æŋkl/ *n* лодыжка
antacid /æn`tæsıd/ *n* антацид *(средство, нейтрализующее кислоту)*
anthrax /`ænθræks/ *n* сибирская язва
antibody /`æntıbɔdı/ *n* антитело
antigen /`æntıʤən/ *n* антиген
antihistamine /,æntı`hıstəmın/ *n* антигистаминное средство
anus /`eınəs/ *n* анальное отверстие
anxiety /eŋ`zaıətı/ *n* тревога, боязнь
anxious /`æŋkʃəs/ *adj* тревожный, озабоченный
aorta /eı`ɔ:tə/ *n* аорта
apart from /ə`pɑ:t frəm/ *prep* кроме
apartment building /ə`pɑ:tmənt `bıldıŋ/ многоквартирный дом
apex /`eıpəks/ *n* верхушка
appendectomy /,epən`dektəmı/ *n* апендэктомия *(удаление червеобразного отростка)*
appendix /ə`pendıks/ *n* аппендикс; приложение
apply /ə`plaı/ *v* применять; подавать заявление (*о приеме на работу*)
apprehension /,æprı`henʃən/ *n* опасение, мрачное предчувствие
approach /ə`prəutʃ/ *n* подход
appropriate /ə`prəuprıət/ *adj* подходящий, соответствующий
approximately /ə`prɔksımətlı/ *adv* приблизительно, почти
arm /ɑ:m/ *n* рука *(предплечье + плечо)*
armpit /`ɑ:mpıt/ *n* подмышечная ямка
arrest /ə`rest/ *n* остановка; *v* угнетать, останавливать
arrhythmia /eı`rıðmıə/ *n* аритмия
artery /`ɑ:tərı/ *n* артерия
arthritis /ɑ:`θraıtıs/ *n* артрит
assess /ə`ses/ *v* оценивать
associate /ə`səuʃıeıt/ *v* связывать
asthma /`æsmə/ *n* астма
astigmatism /ə`stıgmətızm/ *n* астигматизм
at least /ət li:st/ по крайней мере
atheromatous /,æθə`rəumətəs/ *adj* атероматозный, относящийся к кисте сальной железы
atrium (pl: **atria**) /`eıtrıəm (`eıtrıə)/ *n* предсердие
atrophy /`ætrəfı/ *n* атрофия, истощение *типа*)

attach /ə`tætʃ/ *v* прикреплять, присоединять(ся)
attack /ə`tæk/ *n* приступ
attempt /ə`tempt/ *n* попытка
attenuated /ə`tenjueıtıd/ *adj* ослабленный
auditory /`ɔ:dıtərı/ *adj* слуховой
auricle /`ɔ:rıkəl/ = **pinna** /`pınə/ *n* ушная раковина
autonomic nervous system /,ɔ:tə`nɔmık `nə:vəs `sıstəm/ автономная (вегетативная) нервная система
average /`ævərıʤ/ *adj* средний, среднестатистический
avoid /ə`vɔıd/ *v* избегать
aware /ə`weə/ *adj* осведомлённый; **be aware of sth** знать, осознавать
axon /`æksɔn/ *n* аксон

B

back /bæk/ *n* спина
backflow /`bækfləu/ *n* обратный ток; рефлюкс
bacterium (*pl.* **bacteria**) /bæk`tıərıəm (bæk`tıərıə)/ *n* бактерия
bald /bɔ:ld/ *adj* лысый
balloon /bə`lu:n/ *n* воздушный шар; шар-зонд
basal cell layer /`beısəl sel leıə/ базальный слой эпителия кожи
because of /bı`kɔ:z əv/ *prep* из-за
bedridden /`bed,rıdən/ *adj* прикованный к постеле
belief /bı`li:f/ *n* убеждение
believe /bı`li:v/ *v* верить, полагать
below /bı`ləu/ *adv* внизу; *prep* ниже, под
beneath /bı`ni:ð/ *adv* ниже; внизу
benign /bı`naın/ *adj* доброкачественный
beta blocker (β-blocker) /`betə`blɔkə/ *n* бета-блокатор (*лекарственное вещество, блокирующее бета- рецепторы*)
bicuspid /baı`kʌspıd/ *adj* двустворчатый
bilaterally /baı`lætərəlı/ *adv* с двух сторон
bile /baıl/ *n* желчь
biopsy /`baıəpsı/ *n* биопсия
birth /bə:θ/ *n* рождение
birthrate /`bə:θreıt/ *n* рождаемость
bladder /`blædə/ *n (мочевой)* пузырь, *тж.* **urinary bladder** /`juərınərı `blædə/
bliss /blıs/ *n* блаженство
blister /`blıstə/ *n* волдырь
bloated /`bləutıd/ *adj* вздутый (*о животе; вследствие скопления газов*)
bloating /`bləutıŋ/ *n* вздутие
blockage /`blɔkıʤ/ *n* блокада
blocked /blɔkt/ *pp* заблокированный

blood clot /blʌd klɔt/ сгусток крови
blood loss /blʌd lɑs/ кровопотеря
blood pressure /blʌd `preʃə/ кровяное (артериальное) давление
blood-stained /`blʌdsteɪnd/ *adj* с примесью крови
bloodstream /`blʌdstri:m/ *n* кровоток
blurred vision /blə:d `vɪʒən/ расплывчатое зрение
boast /bəust/ *v* хвастаться
boring /`bɔrɪŋ/ *adj* скучный
bottom /`bɔtəm/ *n* низ, дно
botulism /`bɔtjulɪzm/ *n* ботулизм *(острая инфекционная болезнь из группы кишечных инфекций)*
bowel /bauəl/ *n, usually pl.* кишечник
bowel sounds /bauəl saundz/ кишечный шум
brain /breɪn/ *n* мозг
brainstem /`breɪnstəm/ *n* мозговой ствол
branch /brɑ:ntʃ/ *n* ветвь, отрасль; *v* разветвляться
break /breɪk/ *v irreg* ломать, разбивать; **break up** распадаться; **break down** расщеплять(ся)
breakdown /`breɪkdaun/ *n* расщепление
breath /breθ/ *n* дыхание (***вдыхаемый и выдыхаемый воздух***)
breathe /bri:ð/ **in** *v* вдыхать
breathe /bri:ð/ **out** *v* выдыхать
breathe /bri:ð/ *v* дышать
breathing /`bri:ðɪŋ/ *n* = **ventilation** /,ventɪ`leɪʃən/ *n* (внешнее) дыхание (*газообмен между организмом и окружающей средой*)
breathlessness /`breθlɪsnɪs/ = **shortness of breath** /`ʃɔ:tnɪs əv breθ/ *n* одышка
bring /brɪŋ/ *v irreg* приносить; **bring about** вызывать, осуществлять; **bring up** воспитывать
brittle /`brɪtl/ *adj* хрупкий, ломкий
bronchiole /`brɔŋkɪəul/ *n* бронхиола
bronchus (pl. **bronchi**) /`brɔŋkəs (`brɔŋkaɪ)/ *n* бронх
bruising /`bru:zɪŋ/ *n* синяк, кровоподтек
bug /bʌg/ *n* жучок
build-up /`bɪldʌp/ *n* создание
bulky /`bʌlkɪ/ *adj* объёмный
burn the candle at both ends жечь свечу с обоих концов: поздно ложиться и рано вставать
burning /`bə:nɪŋ/ *adj* жгучий; *n* жжение
burst /bə:st/ *v* разрываться
by-products /`baɪ,prɔdəkts/ *n pl.* побочные продукты

C

C. difficile = Clostridium difficile /si: dɪfɪ`sɪlɪ/ *название вида строго анаэробных грамположительных бактерий*
caecum /`si:kəm/ *n* слепая кишка
caesarean section /sɪ`zærɪən `sekʃən/ кесарево сечение
calcitonin /,kælsɪ`təunɪn/ *n* кальцитонин
calm /kɑ:m/ *adj* спокойный; *v* успокаивать
cancel /`kænsəl/ *v* отменять
cancer /`kænsə/ *n* рак *(заболевание)*
capillary /kə`pɪlərɪ/ *n* капилляр
carbohydrate /,kɑ:bəu`haɪdreɪt/ *n* углевод
carbon dioxide /`kɑ:bən daɪ`ɑksaɪd/ углекислота, углекислый газ
cardiac arrest /`kɑ:dɪək ə`rest/ остановка сердечной деятельности
cardiogenic /,kɑ:dɪə`ʤenɪk/ *adj* кардиогенный, обусловленный деятельностью сердца
cardiovascular system /,kɑ:dɪəu`væskjulə `sɪstəm/ сердечно-сосудистая система
care /keə/ *n* забота; *v* заботиться
carefully /keəfəl/ *adv* осторожно
carrier /`kerɪə/ *n* носитель
carry /`kærɪ/ *v* нести, переносить
case-history /`keɪs ,hɪstərɪ/ *n* история болезни
catch /kætʃ/ *v irreg.* заразиться, подхватить
catheter /`kæθɪtə/ *n* катетер
catheterization /,kæθətərə`zeɪʃən/ *n* катетеризация (***введение катетера с диагностической или лечебной целью)***
cause /kɔ:z/ *n* причина; *v* вызывать, быть причиной
cauterize /`kɔ:təraɪz/ *v* прижигать
caution /`kɔ:ʃən/ *n* осторожность; предостережение
cavity /`kævɪtɪ/ *n* полость (***в т.ч. кариозная***)
cease /si:s/ *v* прекращать
central nervous system /`sentrəl `nə:vəs `sɪstəm/ центральная нервная система
cerebellum /,serɪ`beləm/ *n* мозжечок
cerebrum /`serɪbrəm/ *n* головной мозг
certain /`sə:tən/ *adj* определенный
certainty /`sə:təntɪ/ *n* определенность
cervix /`sə:vɪks/ *n* шейка
challenge /`ʧælɪnʤ/ *v* бросать вызов, побуждать к действиям
challenging /`ʧælɪnʤɪŋ/ *adj* побуждающий к действиям, требующий напряжения сил
chamber /`ʧeɪmbə/ *n* камера
charlatan /`ʃɑ:lətən/ *n* шарлатан
chart /ʧɑ:t/ *n* таблица, график
cheat /ʧi:t/ *v* пользоваться шпаргалками, жульничать

check /ʧek/ *v* проверять; **check-up** осмотр у врача
chest /ʧest/ *n* грудная клетка
chew /ʧju:/ *v* жевать
chickenpox /`ʧıkınpɔks/ *n* = **varicella** /,verı`selə/ *n* ветряная оспа
chill /ʧıl/ *n* озноб
cholecystic /,kəulı`sıstık/ *adj* относящийся к желчному пузырю
cholera /`kɔlərə/ *n* холера
chorion /`kɔ:rıən/ *n* хорион, ворсинчатая оболочка
choroid /`kɔ:rɔıd/ *n* сосудистая оболочка *(напр., хорион)*
chronic /`krɒnık/ *adj* хронический
chuckle /`ʧʌkl/ *v* посмеиваться
chyme /kaım/ *n* химус *(содержимое желудка или кишечника)*
cilia /`sılıə/ *n pl.* реснички
ciliary body /`sılıərı `bɔdı/ ресничное тело
ciliated /sılı`eıtıd/ *adj* реснитчатый
circle /sə:kl/ *n* круг
circulate /`sə:kjuleıt/ *v* циркулировать
circulation /ˏsə:kju`leıʃən/ *n* кровообращение
circulatory /ˏsə:kju`leıtərı/ *adj* кровеносный, циркуляторный
circumstance /`sɜ:kəmstæns/ *n* обстоятельство
cirrhosis /sı`rəusıs/ *n* цирроз (*печени*)
clause /klɔ:z/ *n* придаточное предложение
clay /kleı/ *n* глина
clear /klıə/ *adj* прозрачный; *v* очищать
climb /klaım/ *v* взбираться
clog /klɔg/ *v* засорять, блокировать
clogged /klogd/ *adj* заблокированный
clot /klɑt/ *n* сгусток; *v* свертываться
clubbing /`klʌbıŋ/ *n* "барабанные палочки" (*утолщение концевых фаланг пальцев*)
clue /klu:/ *n* ключ (*к разгадке*)
cluster /`klʌstə/ *n* скопление
coach /kəuʧ/ *n* кушетка
cochlea /`kɔklıə/ *n* улитка (*уха*)
coeliac disease /`si:li:ək dı`zi:z/ целиакия, глютеновая энтеропатия (*непереносимость глютена*)
cold /kəuld/ *n* простуда, *тж.* **common cold**
collapse /kə`læps/ *n* упадок сил; *v* сильно ослабеть
colon /`kəulən/ *n* ободочная кишка
colostomy /kə`lɔstəmı/ *n* колостомия *(наложение соустья на ободочную кишку)*
coma /`kəumə/ *n* кома
comb /kəum/ *n* расческа
combine /kəm`baın/ *v* сочетать
command /kə`mɑ:nd/ *n* приказ; *v* приказывать
common /`kɒmən/ *adj* распространенный
communicability /kə`mju:nıkə`bılıtı/ *n* контагиозность
communicable /kə`mju:nikəbl/ *adj* инфекционный, контагиозный
compensate /`kɔmpənseıt/ *v* возмещать
competitiveness /kəm`petıtıvnıs/ *n* конкуренция
complain /kəm`pleın/ *v* жаловаться ***(of –*** на*)*
complete /kəm`pli:t/ *v* завершать; *adj* полный
complication /kɔmplı`keıʃən/ *n* осложнение
compound /kəm`paund/ *n* смесь, соединение; *adj* сложный, составной; *v* смешивать
compress /kəm`pres/ *v* сдавливать
conceive /kən`si:v/ *v* зачать
concept /`kɔnsəpt/ *n* понятие, идея
conception /kən`sepʃən/ *n* зачатие
concern /kən`sɜ:n/ *v* касаться, иметь отношение
concussion /kən`kʌʃən/ *n* сотрясение, контузия
condition /kən`dıʃən/ *n* условие; состояние
confined /kən`faınd/ **to bed** прикованный к постеле
confirm /kən`fɜ:m/ *v* подтверждать
confusion /kən`fju:ʒən/ *n* спутанность сознания
congenital /kən`ʤenıtəl/ *adj* врождённый
congestive / kən`ʤestıv / *adj* застойный
congestive heart failure /kən`ʤestıv hɑ:t `feıljə/ застойная сердечная недостаточность
conjunctiva /,kɔnʤʌŋk`taıvə/ *n* конъюнктива (*слизистая оболочка глаза*)
conjunctivitis /kən,ʤʌŋktı`vaıtıs/ *n* конъюнктивит
conscience /`kɔnʃəns/ *n* сознание; совесть
consider /kən`sıdə/ *v* полагать
considerably /kən`sıdərəblı/ *adv* значительно
consist /kən`sıst/ **of** состоять из
constipation /kɔnstı`peıʃən/ *n* запор
constitute /`kɔnstıtjut/ *v* составлять
constricted /kən`strıktıd/ *adj* сжатый, суженный
consume /kən`sju:m/ *v* потреблять
consumption /kən`sʌmpʃən/ *n* потребление
contain /kən`teın/ *v* содержать
contagious /kən`teıʤəs/ *adj* контагиозный, заразный
contain /kən`teın/ *v* содержать
contamination /kən,tæmı`neıʃən/ *n* инфицирование, заражение
continue /kən`tınju:/ *v* продолжать
continuity /kɔntı`nju:ıtı/ *n* непрерывность
contraceptive counselling /,kɔntrə`septıv `kaunselıŋ/ консультирование по поводу методов контрацепции

contract /kən`trækt/ *v* сокращаться
contraction /kən`trækʃən/ *n* сокращение *(мышц)*
contribute /kən`trɪbjuːt/ *v* способствовать
conversation /ˌkɔnvə`seɪʃən/ *n* беседа
conversion /kən`vəːʃən/ *n* превращение
convert /kən`vəːt/ *v* превращать
convincing /kən`vɪnsɪŋ/ *adj* убедительный
cope /kəup/ **with** справляться с *чем-л.*
cope /kəup/ **with** справляться с *чем-л.*
cornea /`kɔːnɪə/ *n* роговица
coronary / `kɔrənərɪ / *adj* коронарный
cortex /`kɔːtəks/ *n* кора головного мозга
coryza /kə`raɪzə/ *n* острый ринит, насморк
cottage cheese /`kɔtɪʤ ʧiːz/ *n* творог
cough /kɔf/ *n* кашель; *v* кашлять
couple /kʌpl/ *n* пара (*напр., муж и жена*)
courage /`kʌrɪʤ/ *n* мужество
cowpox /kaupɔks/ *n* коровья оспа
crackle /`krækl/ *v* потрескивать, хрустеть
cramp /kræmp/ *n* судорога, спазм
cranial nerve /`kreɪnɪəl nəːv/ черепно-мозговой нерв
craving /`kreɪvɪŋ/ *n* тяга (**for** – к *чему-л.*)
create /krɪ`eɪt/ *v* создавать
crushing /`krʌʃɪŋ/ *adj* сокрушительный
crust /krʌst/ *n* корочка
culture/culturing /`kʌlʧə(rɪŋ)/ *n* культура (*микроорганизмов*)
curable /`kjuərəbl/ *adj* излечимый
cure /kjuə/ *v* излечить
current /`kʌrənt/ *adj* текущий
Cushing syndrome /`kuʃɪŋ `sɪndrəum/ синдром гиперкортицизма
cut /kʌt/ *n* порез, разрез; *v irreg.* резать, порезать(ся)
cutaneous /kjuː`teɪnɪəs/ *adj* кожный
cyanosis /ˌsaɪə`nəusɪs/ *n* цианоз (*синюшная окраска кожи и слизистых оболочек*)
cystitis /sɪ`staɪtɪs/ *n* цистит

D

dairy /`deərɪ/ *adj* молочный
damage /`dæmɪʤ/ *n* повреждение; *v* повреждать
damp /dæmp/ *adj* сырой, влажный
dander /`dændə/ = **dandruff** /`dændrʌf/ *n* перхоть
dangerous /`deɪnʤərəs/ *adj* опасный
deafness /defnəs/ *n* глухота
death /deθ/ *n* смерть
decline /dɪ`klaɪn/ *v* уменьшаться, идти на спад
decomposition /ˌdiːkəmpə`zɪʃən/ *n* разложение
defend /dɪ`fend/ *v* защищать
defense /dɪ`fens/ *n* защита
deficiency /dɪ`fɪʃənsɪ/ *n* дефицит
degeneration /dɪˌʤenə`reɪʃən/ *n* вырождение
dehydrate /ˌdiːhaɪ`dreɪt/ *v* обезвоживать
deliberate /dɪ`lɪbɪrət/ *adj* спланированный, неслучайный
deliberately /də`lɪbərətlɪ/ *adv* не случайно, спланированно
deliver /dɪ`lɪvə/ *v* доставлять; **deliver a baby** принимать роды
delivery /də`lɪvərɪ/ *n* роды
dendrite /`dendraɪt/ *n* дендрит (*отросток нервной клетки*)
deny /dɪ`naɪ/ *v* отрицать
depend /dɪ`pend/ *v* зависеть ***(on – от)***
depending on /dɪ`pendɪŋ ən/ в зависимости от
derive /dɪ`raɪv/ **from** происходить от
dermatology /ˌdəːmə`tɔləʤɪ/ *n* дерматология
dermis /`dəːmɪs/ *n* дерма, собственно кожа
describe /dɪ`skraɪb/ *v* описывать
desirable /dɪ`zaɪərəbl/ *adj* желательный
despite /dɪ`spaɪt/ *prep* несмотря на, вопреки
destroy /dɪs`trɔɪ/ *v* разрушать
destruction /dɪ`strʌkʃən/ *n* разрушение, уничтожение
detect /dɪ`tekt/ *v* обнаруживать, выявлять
deteriorate /dɪ`tɪərɪəreɪt/ *v* ухудшать(ся)
determine /dɪ`tɜːmɪn/ *v* определять
detoxicate /diː`tɔksɪkeɪt/ = **detoxify** /diː`tɔksɪfaɪ/ *v* детоксифицировать (*освобождать(ся) от алкогольной или наркотической зависимости*)
detoxification /diːˌtɔksɪfɪ`keɪʃən/ *n* детоксикация
develop /dɪ`veləp/ *v* развиваться
device /dɪ`vaɪs/ *n* прибор
diabetes (mellitus) /ˌdaɪə`biːtiːz (`melɪtəs)/ *n* (сахарный) диабет
diagnose /`daɪəgnəuz/ *v* диагностировать
diagnosis /daɪəg`nəusɪs/ *n* диагноз
dialysis /daɪ`ælɪsɪs/ *n* диализ
diaphragm /`daɪəfræm/ *n* диафрагма
diarrheoa /ˌdaɪə`rɪə/ *n* диарея, жидкий стул
diastole /daɪ`æstəlɪ/ *n* диастола
die /daɪ/ *v* умирать
dietary /`daɪətrɪ/ *adj* диетический, пищевой
differ /`dɪfə/ *v* различаться
diffusion /dɪ`fjuːʒən/ *n* диффузия, распространение
digest /daɪ`ʤest/ *v* переваривать *(пищу)*
digestion /d(a)ɪ`ʤesʧən/ *n* пищеварение
digestive /daɪ`ʤestɪv/ *adj* пищеварительный

digestive system /d(a)ɪ`ʤestɪv `sɪstəm/ пищеварительная система
dilate /d(a)ɪ`leɪt/ *v* расширять
dilated /d(a)ɪ`leɪtɪd/ *adj* расширенный
dilute /daɪ`luːt/ *v* разбавлять, разводить
diphtheria /dɪf`θɪərɪə/ *n* дифтерия
dipsophobia /,dɪpsəu`fəubjə/ *n* дипсофобия (*патологическая боязнь питья алкоголя*)
direct /dɪ`rekt/ *adj* прямой; *v* направлять
directly /dɪ`rektlɪ/ *adv* прямо, непосредственно
dirty /dəːtɪ/ *n* грязный
discharge /dɪs`ʧɑːʤ/ *v* выписывать *(из больницы)*; *n* выделения (*из раны*)
discoloration /dɪs,kʌlə`reɪʃən/ *n* нарушение окраски или цвета
disorder /dɪ`sɔːdə/ *n* расстройство, нарушение
disruption /dɪs`rʌpʃən/ *n* нарушение; разрыв
dissolve /dɪ`zɑlv/ *v* растворять
distend /dɪ`stend/ *v* расширять(ся)
distinct /dɪ`stɪŋkt/ *adj* четкий; отдельный
distress /dɪ`stres/ *n* тяжелое недомогание; расстройство
distribute /dɪ`strɪbjuːt/ *v* распределять
diuretic /daɪjuə`retɪk/ *n* мочегонное средство; *adj* мочегонный
dizzy /`dɪzɪ/ *adj* испытывающий головокружение
DNA (deoxyribonucleic acid) ДНК, дезоксирибонуклеиновая кислота
doorknob /`dɔːnɔb/ *n* дверная ручка
drain /dreɪn/ *v* оттекать, отводить воду
drainage /`dreɪnɪʤ/ *n* дренирование
drop /drɔp/ *n* капля; *v* капать
droplet /`drɔplɪt/ *n* капля
droplet contact /`drɔplɪt `kɔntəkt/
drug /drʌg/ *n* лекарство
dry /draɪ/ *adj* сухой
duct /dʌkt/ *n* канал, проток
due to /djuː tə/ из-за
duodenal /,djuːə`diːnəl/ *adj* относящийся к двенадцатиперстной кишке
duodenum /,djuːə`diːnəm/ *n* двенадцатиперстная кишка
dust /dʌst/ *n* пыль
dye /daɪ/ *n* краситель
dysentery /`dɪsentrɪ/ *n* дизентерия
dysfunction /dɪs`fʌŋkʃən/ *n* дисфункция
dyspnoea /dɪsp`niːə/ *n* одышка
dysuria /dɪs`juərɪə/ *n* дизурия, боль при мочеиспускании

E

eardrum /`ɪədrʌm/ = **tympanic membrane** /tɪm`pænɪk `membreɪn/ барабанная перепонка
echocardiogram /,ekəu`kɑːdɪəgrəm/ *n* эхокардиограмма
echocardiography /,ekəukɑːdɪ`ɔgrəfɪ/ *n* эхокардиография (ЭхоКГ)
eczema /`ekzɪmə/ *n* экзема
effector /ɪ`fektə/ *n* эффектор *(в физиологии, генетике, биохимии)*
effort /`efət/ *n* усилие
ehrlichiosis /ə:,laɪkɪ`əusɪs/ *n* эрлихиоз (*острое инфекционное заболевание*)
elephantiasis /,elɪfən`taɪəsɪs/ *n* слоновая болезнь, элефантиаз
elevate /`elɪveɪt/ *v* поднимать
elevation /,elɪ`veɪʃən/ *n* повышение
eliminate /ɪ`lɪmɪneɪt/ *v* устранять
elimination /ɪ,lɪmɪ`neɪʃən/ *n* устранение
embryo /`embrɪəu/ *n* эмбрион
emesis /`emɪsɪs/ *n* рвота
emotion /ɪ`məuʃən/ *n* эмоция
empathise /`empəθaɪz/ *v* сочувствовать, сопереживать
emphasise /`emfəsaɪz / *v* подчеркивать, выделять
empty /`emptɪ/ *n* пустой; *v* опустошать
emulsification /ɪ,mʌlsɪfɪ`keɪʃən/ *n* эмульгирование, образование эмульсии
enclose /ɪn`kləuz/ *v* окружать, заключать
encourage /ɪn`kʌrɪʤ/ *v* воодушевлять
endocrine system /`endəukraɪn `sɪstəm/ эндокринная система
endogenous /en`dɔʤɪnəs/ *adj* эндогенный, возникший внутри организма
endorphin /en`dɔːfɪn/ *n* эндорфин
endoscope /`endəskəup/ *n* эндоскоп
endoscopy /en`dɔskəpɪ/ *n* эндоскопия
endurance /ɪn`djuərəns/ *n* выносливость, стойкость
enema /`enɪmə/ *n* клизма
enlarge /ɪn`lɑːʤ/ *v* увеличивать
enough /ɪ`nʌf/ *adv* достаточно
enteroscopy /entə`rɔskəpɪ/ *n* энтероскопия
entire /ɪn`taɪə/ *adj* целый, весь
entirely /ɪn`taɪə/ *adv* целиком, полностью
envy /`envɪ/ *v* завидовать
enzyme /`enzaɪm/ *n* фермент, энзим
epidermis /,epɪ`dəːmɪs/ *n* эпидерма
epiglottis /,epɪ`glɔtɪs/ *n* надгортанник
episode (attack) /`epɪsəud (ə`tæk)/ *n* приступ

Epstein-Barr virus /`epstaın bɑː `vaıərəs/ вирус Эпштейна-Барр (*вирус герпеса человека 4-го типа*)
equal /`iːkwəl/ *adj* равный
equilibrium /ˌiːkwɪ`lıbrıəm/ *n* равновесие
eradicate /ı`rædıkeıt/ *v* искоренять
erosion /ı`rəuʒən/ *n* эрозия
eruption /ı`rʌpʃən/ *n* прорыв, выброс
erythema /ˌerı`θımə/ *n* эритема (*ограниченная гиперемия кожи*)
escape /ıs`keıp/ *v* избегать, выделяться
estimate /`estımeıt/ *v* оценивать
estrogen /`estrədʒən/ *n* эстроген
eustachian tube /juː`steıʃən tjuːb/ евстахиева труба
evaluation /ɪˌvælju`eıʃən/ *n* оценка
eventually /ı`ventʃuəlı/ *adv* в конечном счете, в итоге
evidence /`evıdəns/ *n* свидетельство, доказательство
examine /ıgˌzæmın/ *v* обследовать
example /ıg`zɑːmpl/ *n* пример
except /ık`sept/ *prep* кроме
excess /ık`ses/ *n* избыток, превышение
excessive /ık`sesıv/ *adj* чрезмерный, излишний
exchange /ıks`tʃeındʒ/ *n* обмен; *v* обменивать
excise /ık`saız/ *v* вырезать, удалять (*конечность, орган*) ; иссекать
excision /ek`sıʒən/ *n* иссечение, удаление
exclude /ık`sklu:d/ *v* исключать
excrete /ık`skriːt/ *v* выделять
exert /ıg`zəːt/ *v* приводить в действие, влиять
exertion /ıg`zəːʃən/ *n* (физическая) нагрузка
exhale /ıks`heıl/ *v* выдыхать
exhaust smoke /ıg`zɔst sməuk/ выхлопные газы
exhausted /ıg`zɔstıd/ *adj* измождённый, уставший
exogenous /ek`sɔdʒınəs/ *adj* экзогенный *(вызываемый внешними причинами)*
expand /ıks`pænd/ *v* расширяться, растягиваться
expansion /ıks`pænʃən/ *n* расширение
expect /ıks`pekt/ *v* ожидать, рассчитывать
expectant mother /ıks`pektənt `mʌðə/ будущая мама (*беременная женщина*)
expel /ıks`pel/ *v* выталкивать
expensive /ıks`pensıv/ *adj* дорогой
experience /ık`spıərıəns/ *n* (жизненный) опыт; *v* испытывать
expiration /ˌekspı`reıʃən/ *n* выдох
expiratory /ık`spırətərı/ *adj* экспираторный, относящийся к выдоху
explain /ıks`pleın/ *v* объяснять
expose /ık`spəuz/ *v* подвергать *(воздействию)*
express /ıks`pres/ *v* выражать
expulsion /ıks`pʌlʃən/ *n* выталкивание, изгнание
extend /ıks`tend/ *v* простираться
extent /ıks`tent/ *n* степень, мера
extra /`ekstrə/ *adj* дополнительный
eyebrow /`aıbrau/ *n* бровь
eyelash /`aılæʃ/ *n* ресница
eyelid /`aılıd/ *n* веко

F

face /feıs/ *v* сталкиваться
facilitate /fə`sılıteıt/ *v* облегчать, содействовать
facility /fə`sılıtı/ *n* устройство, средство
faecal-oral /`fiːkəl `ɔːrəl/ **transmission** фекально-оральный механизм передачи инфекции
faeces /`fiːsiːz/ *n* кал
fail /feıl/ *v* не удаваться
faint /feınt/ *n* обморок; *v* падать в обморок
family history /`fæmılı `hıstərı/ семейный анамнез (*часть истории болезни*)
fasten /`fɑːsən/ *v* застёгивать
fat /fæt/ *n* жир
fatality /fə`tælıtı/ *n* смертность
fatigue /fə`tiːg/ *n* усталость, утомление
feacal occult blood /`fiːkəl ɔ`kʌlt blʌd/ анализ кала на скрытую кровь**feature** /`fiːtʃə/ *n* отличительная черта
febrile /`fiːbraıl/ *adj* лихорадочный
fertility /fə`tılıtı/ *n* фертильность
fertilization /ˌfəːtılaı`zeıʃən/ *n* оплодотворение
fetus /`fiːtəs/ *n* плод
fever /`fiːvə/ *n* = **pyrexia** /paı`reksıə/ *n* жар, лихорадка
feverish /`fıvərıʃ/ *adj* лихорадочный
fibrillation /ˌfıbrı`leıʃən/ *n* мерцание, трепетание (*асинхронное сокращение мышечных или нервных волокон*)
fibroid /`faıbrɔıd/ *n* фиброзная опухоль
figure /`fıgə/ *n* цифра; *pl* цифровые данные
fill /fıl/ *v* наполнять
findings /`faındıŋz/ *n pl* данные, результаты
fine (=**minute**) /faın (maı`njuːt)/ *adj* мелкий, мельчайший
fist /fıst/ *n* кулак
fit /fıt/ *n* припадок
flake off /fleık ɔf/ *v* отшелушиваться
flat /flæt/ *adj* плоский
flexibility /fleksı`bılıtı/ *n* гибкость
flow /fləu/ *v irreg.* течь

flu /fluː/ *n* грипп
fluid /fluːɪd/ *n* жидкость
follicle /ˋfɔlɪkl/ *n* фолликул, мешочек
forbid /fəˋbɪd/ *v irreg.* запрещать
force /fɔːs/ *n* сила
foreign /ˋfɒrɪn/ *adj* иностранный; инородный
forget /fəˋget/ *v irreg.* забывать
framework /ˋfreɪmwəːk/ *n* каркас, строение
frequency /ˋfriːkwənsɪ/ *n* частота
frontal /ˋfrʌntəl/ *adj* передний
fuel /fjuːəl/ *n* топливо, горючее
full-blown /ˋfulbləun/ *adj* полноценный, развившийся
fuse /fjuːz/ *v* сплавляться, объединяться
fuss /fʌs/ *n* суета

G

gain /geɪn/ *v* получать, приобретать
gall bladder /ˋgɔːlblædə/ *n* желчный пузырь
gastric /ˋgæstrɪk/ *adj* относящийся к желудку
gastritis /gæˋstraɪtɪs/ *n* гастрит
gastroenteritis /ˌgæstrəuentəˋraɪtɪs/ *n* гастроэнтерит
gastrointestinal /ˌgæstrəuɪnˋtestɪnəl/ *adj* желудочно-кишечный
gastrointestinal tract /ˌgæstrəuɪnˋtestɪnəl trækt/ желудочно-кишечный тракт
generalised /ˋʤenərəlaɪzd/ *adj* генерализованный, распространенный
generate /ˋʤenəreɪt/ *v* генерировать, создавать
generation /ˌʤenəˋreɪʃən/ *n* поколение
germ /ʤəːm/ *n* зародыш; микроб, микроорганизм
german measles /ˋʤəːmən ˋmiːzlz/ *n* = **rubella** /ruˋbelə/ *n* (коревая) краснуха
gestation /ʤesˋteɪʃən/ *n* период беременности
give up /gɪv ʌp/ отказываться от *чего-л.*
gland /glænd/ *n* железа
glandular /ˋglændjulə/ *adj* железистый, гландулярный
glandular fever /ˋglændjulə ˋfiːvə/ инфекционный мононуклеоз, железистая лихорадка
Glasgow coma scale /ˋglɑːzgəu ˋkəumə skeɪl/ шкала комы Глазго
glaucoma /glɔːˋkəumə/ *n* глаукома
glomerulus /glɔˋmeruləs/ *n* клубочек
gluten /ˋgluːtən/ *n* глютен, клейковина
gnawing /ˋnɔːɪŋ/ *adj* грызущий, мучительный
goal /gəul/ *n* цель
goblet cell /ˋgɔblɪt sel/ бокаловидная (эпителиальная) клетка
gonad /ˋgəunæd/ *n* гонада, половая железа
gradually /ˋgrædjuəlɪ/ *adv* постепенно
grey matter /greɪ ˋmætə/ серое вещество (*мозга*)
groin /grɔɪn/ *n* пах
grow /grəu/ *v irreg.* расти
guarding /ˋgɑːdɪŋ/ *n* защитное напряжение *(спазм мышц, уменьшающий подвижность пораженных отделов тела)*
guess /ges/ *v* угадывать, преполагать
gustatory /ˋgʌstətərɪ/ *adj* вкусовой

H

(hepatic) portal vein /(hɪˋpætɪk) ˋpɔːtəl veɪn/ воротная вена
habit /ˋhæbɪt/ *n* привычка
haematoma /ˌhiːməˋtəumə/ *n* гематома
haemodialysis /ˌhiːməudaɪˋælɪsɪs/ *n* гемодиализ
haemoglobin /ˌhiːməˋgləubɪn/ *n* гемоглобин
haemoptysis /hiːˋmɔptɪsɪs/ *n* кровохарканье
haemostasis /ˌhiːməˋsteɪsɪs/ *n* гемостаз
harbour /ˋhɑːbə/ *v* являться носителем (*болезни*)
harden /ˋhɑːdən/ *v* напрягаться, затвердевать
harmful /ˋhɑːmfəl/ *adj* вредный
harsh /hɑːʃ/ *adj* жёсткий, суровый
hay fever /heɪ ˋfiːvə/ сенная лихорадка
heal /hiːl/ *v* вылечивать, исцелять
healer /ˋhiːlə/ *n* целитель, знахарь
healthcare /ˋhelθkeə/ *n* здравоохранение
healthy /ˋhelθɪ/ *adj* здоровый
hearing loss /ˋhɪərɪŋ lɔs/ потеря слуха
heart /hɑːt/ *n* сердце
heart attack /hɑːt əˋtæk/ сердечный приступ
heart failure /hɑːt ˋfeɪljə/ сердечная недостаточность
heart rate /hɑːt reɪt/ частота сердечных сокращений
heart rhythm /hɑːt rɪðm/ сердечный ритм
heart sounds /hɑːt saundz/ тоны сердца
heartbeat /ˋhɑːtbiːt/ *n* сердечное сокращение
heartburn /ˋhɑːtbəːn/ *n* изжога
heel /hiːl/ *n* пятка
Helicobacter pylori /heˌlɪkəuˋbæktə paɪˋləuraɪ/ *название спиралевидной грамотрицательной бактерии*
hepatic /hɪˋpætɪk / *adj* относящийся к печени
hepatic artery /hɪˋpætɪk ˋɑːtərɪ/ печеночная артерия
hepatitis /ˌhepəˋtaɪtɪs/ *n* гепатит
herbal /ˋhəːbəl/ *adj* травяной
hesitate /ˋhezɪteɪt/ *v* колебаться
hiccups /ˋhɪkʌps/ *n pl.* икота
hill /hɪl/ *n* холм

HIV/AIDS /ˌeɪtʃ aɪ `viː/eɪdz/ ВИЧ/СПИД
hives /haɪvz/ *n* крапивница
hormone /`hɔːməun/ *n* гормон
hospital /`hɒspɪtəl/ *n* больница
hospital acquired diseases /`hɔspɪtəl ə`kwaɪəd dɪ`ziːz/ внутрибольничные инфекции
host /həust/ *n* хозяин паразита
hot /hɑt/ *adj* горячий
housing /`hauzɪŋ/ *n* условия проживания
however /hau`evə/ *conj* однако
hurt /hɜːt/*v irreg* причинять боль, болеть
hydrochloric acid /ˌhaɪdrə`klɔrɪk `æsɪd/ соляная кислота
hydronephrosis /haɪdrəunef`rəusɪs/ *n* гидронефроз
hygiene /`haɪʤiːn/ *n* гигиена
hyperglycaemia /ˌhaɪpəglaɪ`siːmɪə/ *n* гипергликемия (*повышение концентрации глюкозы в крови натощак*)
hyperopia /ˌhaɪpər`əupɪə/ =**farsightedness** /`fɑːsaɪtɪdnəs/ *n* дальнозоркость
hypersensitivity /`haɪpəˌsensɪ`tɪvɪtɪ/ *n* повышенная чувствительность
hyperthyroidism /ˌhaɪpə`θaɪrɔɪdɪzm/ *n* гипертиреоз
hypoglycaemia /ˌhaɪpəuglaɪ`siːmɪə/ *n* гипогликемия
hyporthyroidism /ˌhaɪpəu`θaɪrɔɪdɪzm/ *n* гипотиреоз
hypothalamus /ˌhaɪpəu`θæləməs/ *n* гипоталамус

I

iatrogenic /aɪˌætrəu`ʤenɪk/ *adj* ятрогенный (*о неблагоприятных последствиях: вызванный диагностическими или лечебными вмешательствами*)
iatrogenic transmission /aɪˌætrəu`ʤenɪk trænz`mɪʃən/ ятрогенный путь заражения (*например, через зараженные иглы*)
identify /aɪ`dentɪfaɪ/ *v* устанавливать, определять
ileum /`ɪlɪəm/ *n* подвздошная кишка
illness /`ɪlnəs/ *n* болезнь
image /`ɪmɪʤ/ *n* изображение
immediately /ɪ`miːdɪətlɪ/ *adv* немедленно
immune system /ɪ`mjuːn `sɪstəm/ иммунная система
immunity /ɪ`mjuːnɪtɪ/ *n* иммунитет
immunization /ɪˌmjunaɪ`zeɪʃən/ *n* создание иммунитета
impairment /ɪm`peəmənt/ *n* повреждение
impatience /ɪm`peɪʃəns/ *n* нетерпение
impending /ɪm`pendɪŋ/ *adj* неминуемый, надвигающийся
implant /ɪm`plɑːnt/ *v* пересаживать, вживлять
imply /ɪm`plaɪ/ *v* подразумевать
impression /ɪm`preʃən/ *n* впечатление
improve /ɪm`pruːv/ *v* улучшать
improvement / ɪm`pruːvmənt/ *n* улучшение
impulse /`ɪmpʌls/ *n* импульс, стимул
in vitro fertilisation (IVF) /ɪn `viːtrəu ˌfəːtɪlaɪ`zeɪʃən/ экстракорпоральное оплодотворение (ЭКО)
incidence /`ɪnsɪdəns/ *n* заболеваемость
incise /ɪn`saɪz/ *v* надрезать, иссекать
incision /ɪn`sɪʒən/ *n* надрез, иссечение
include /ɪn`kluːd/ *v* включать в себя
incompatible /ˌɪnkəm`pætɪbl/ *adj* несовместимый
incompetence /ɪn`kɔmpɪtəns/ *n* некомпетентность; недостаточность
increase /ɪn`kriːs/ *v* увеличивать
incubation period /ɪnkju`beɪʃən `pɪərɪəd/ инкубационный период (*отрезок времени от попадания микроба в организм до проявления симптомов болезни*)
incubator /`ɪŋkjubaɪtə/ *n* медицинский инкубатор
incurable /ɪn`kjuərəbl/ *adj* неизлечимый
indicate /`ɪndɪkeɪt/ *v* показывать, указывать
indication /ˌɪndɪ`keɪʃən/ *n* показание
indigestion /ˌɪndɪ`ʤestʃən/ *n* диспепсия, нарушение пищеварения
indirectly /ɪnd(a)ɪ`rektlɪ/ *adv* опосредованно
induce /ɪn`djuːs/ *v* вызывать, стимулировать
induced abortion /ɪn`djust ə`bɔːʃən/ искусственный аборт
infant /`ɪnfənt/ *n* младенец
inferior /ɪn`fɪərɪə/ *adj* нижний
infertility /ɪnfə`tɪlɪtɪ/ *n* бесплодие
inflamed /ɪn`fleɪmd/ *adj* воспаленный
inflammation /ɪnflə`meɪʃən/ *n* воспаление
inflammatory /ɪn`flæmətərɪ/ *adj* воспалительный
inflate /ɪn`fleɪt/ *v* накачивать, надувать
influence /`ɪnfluəns/ *n* влияние; *v* оказывать влияние, влиять
influenza /ɪnflu`enzə/ *n* = **flu** /fluː / *n* грипп
ingest /ɪn`ʤest/ *v* глотать, принимать внутрь
ingestion /ɪn`ʤestʃən/ *n* проглатывание, прием внутрь
inhale /ɪn`heɪl/ *v* вдыхать
inhibit /ɪn`hɪbɪt/ *v* подавлять
initial /ɪ`nɪʃəl/ *adj* первоначальный
injure /`ɪnʤə/ *v* поражать, травмировать

injured /ˈɪndʒəd/ *adj* травмированный
injury /ˈɪndʒərɪ/ *n* травма, ранение
inner ear /ˈɪnə ɪə/ внутреннее ухо
insert /ɪnˈsəːt/ *v* вставлять, вводить
insignificant /ɪnsɪgˈnɪfɪkənt/ *adj* незначительный
insomnia /ɪnˈsɔmnɪə/ *n* бессоница
inspect /ɪnˈspekt/ *v* обследовать, осматривать
inspiration /ˌɪnspɪˈreɪʃən/ *n* вдох; вдохновение
inspiratory /ɪnˈspaɪərətrɪ/ *adj* инспираторный, относящийся к вдоху
insufficiency /ɪnsəˈfɪʃənsɪ/ *n* недостаточность
insulin-dependent diabetes /ˈɪnsjulɪn dɪˈpendənt ˌdaɪəˈbiːtiːz/ инсулин-зависимый сахарный диабет (I тип)
insulin-independent diabetes /ˈɪnsjulɪn ɪndɪˈpendənt ˌdaɪəˈbiːtiːz/ инсулин-независимый сахарный диабет (II тип)
intake /ˈɪnteɪk/ *n* прием внутрь
integral /ɪnˈtegrəl/ *adj* неотъемлемый; существенный
integrity /ɪnˈtegrɪtɪ/ *n* целостность
integumentary /ɪnˈtegjuˈmentərɪ/ *adj* покровный, кожный
integumentary system /ɪnˌtegjuˈmentərɪ sɪstəm/ система покровов тела
intelligence /ɪnˈtelɪdʒəns/ *n* интеллект, рассудок
intensive care unit (ICU) /ɪnˈtensɪv kɜə ˈjuːnɪt/ отделение интенсивной терапии
intention /ɪnˈtenʃən/ *n* намерение
interact /ɪntərˈækt/ *v* взаимодействовать
interconnected /ɪntəkəˈnektɪd/ *adj* взаимосвязанный
intercostal space /ˌɪntəˈkɔstəl speɪs/ межреберье
interfere /ɪntəˈfɪə/ **with** *v* мешать *чему-л.*
interpret /ɪnˈtəːprɪt/ *v* интерпретировать
interpreter /ɪnˈtəːprɪtə/ *n* переводчик (*устный*)
interrogative /ˌɪntəˈrɔgətɪv/ *adj* вопросительный
interrupt /ˌɪntəˈrʌpt/ *v* прерывать; нарушать
intestinal tract /ɪnˈtestɪnəl trækt/ кишечный тракт
intestines /ɪnˈtestɪnz/ *n pl.* кишечник
intramuscular /ˌɪntrəˈmʌskjulə/ *adj* внутримышечный
intravenous /ˌɪntrəˈviːnəs/ *adj* внутривенный
intravenous urography /ɪntrəˈviːnəs juˈrɔgrəfɪ/ внутривенная урография
introduce /ɪntrəˈdjuːs/ *v* вводить, внедрять
invader /ɪnˈveɪdə/ *n* патогенный организм
invasion /ɪnˈveɪʒən/ *n* инвазия *(внедрение в организм человека, животного или растения паразитов животной природы)*
invite /ɪnˈvaɪt/ *v* приглашать
involve /ɪnˈvɒlv/ *v* вовлекать, включать
iris /ˈaɪrɪs/ *n* радужная оболочка
iron /aɪən/ *n* железо
irritability /ɪˌrɪtəˈbɪlɪtɪ/ *n* раздражительность
irritable bowel syndrome /ˈɪrɪtəbl bauəl ˈsɪndrəum/ синдром раздраженной толстой кишки или СРТК (*характеризуется коликами, вздутием, усиленным газообразованием, неустойчивым стулом*)
irritation /ɪrɪˈteɪʃən/ *n* раздражение
ischaemia /ɪsˈkiːmɪə/ *n* ишемия, местное малокровие
itching /ˈɪtʃɪŋ/ *n* зуд
itchy /ɪtʃɪ/ *adj* вызывающий зуд
item /ˈaɪtəm/ *n* пункт, вопрос

J

jaundice /ˈdʒɔːndɪs/ *n* желтуха
jaw /dʒɔː/ *n* челюсть
jejunal / dʒɪˈdʒuːnəl/ *adj* отсящийся к двенадцатиперстной кишке
jejunum /dʒɪˈdʒuːnəm/ *n* двенадцатиперстная кишка

K

kidney /ˈkɪdnɪ/ *n* почка *(орган)*
kidney failure /ˈkɪdnɪ ˈfeɪljə/ почечная недостаточность
kiss /kɪs/ *v* целовать

L

lack /læk/ *v* испытывать недостаток чего-л.
lactose /ˈlækteus/ *n* лактоза, молочный сахар
laptop /læptɑp/ *n* лэптоп, ноутбук
large intestine /lɑːdʒ ɪnˈtestɪn/ толстый кишечник
larynx /ˈlærɪŋks/ *n* гортань
lateral /ˈlætərəl/ *adj* латеральный, удаленный от средней линии
laxative /ˈlæksətɪv/ *n* слабительное средство; *adj* слабительный
layer /leɪə/ *n* слой
lead /liːd/ *v irreg* вести, приводить
legionella /ˌliːdʒəˈnelə/ *n* бактерия рода *Legionella*
Legionnaires' disease /ˌliːdʒəˈneɜz dɪˈziːz/ леогинеллёз, «болезнь легионеров» (*форма бактериальной пневмонии*)
leprosy /ˈleprəsɪ/ *n* проказа
level /ˈlevəl/ *n* уровень
life-threatening /ˈlaɪf.θretənɪŋ/ *adj* опасный для жизни
lift /lɪft/ *v* поднимать

light-headed /ˈlaɪthedɪd/ *adj* испытывающий головокружение
likely /ˈlaɪklɪ/ *adv* вероятно
likewise /ˈlaɪkwaɪz/ *adv* подобным образом**line** /laɪn/ *v* выстилать
lining /ˈlaɪnɪŋ/ *n* выстилка
liquid /ˈlɪkwɪd/ *n* жидкость; *adj* жидкий
list /lɪst/ *n* список
liver /ˈlɪvə/ *n* печень
local anaesthetic /ˈləukəl ˌænɪsˈθetɪk/ местный анестетик
loop /luːp/ *n* петля, круг
loose /luːs/ *adj* свободный, расслабленный;
loose stool частый жидкий стул
loosen /ˈluːsən/ *v* ослаблять
lose /luːz/ *v irreg.* терять
loss /lɔs/ *n* потеря
lower /ləuə/ *adj* нижний; *v* опускать
lower back /ləuə bæk/ поясница
lower respiratory tract /ləuə rəˈspɪrətərɪ trækt/ нижниедыхательные пути
lubb-dupp /lʌbˈdʌb/ слоги, имитирующие первый и второй тоны сердца
lubricate /ˈluːbrɪkeɪt/ *v* смазывать

M

mad /mæd/ *adj* сумасшедший
magnify /ˈmægnɪfaɪ/ *v* увеличивать
mainly /ˈmeɪnlɪ/ *adv* главным образом
maintain /meɪnˈteɪn/ *v* поддерживать
major /ˈmæʤə/ *adj* главный, основной
malaria /məˈleɜrɪə/ *n* малярия
malformation /ˌmælfəˈmeɪʃən/ *n* порок развития
malignancy /məˈlɪgnənsɪ/ *n* злокачественность
malignant /məˈlɪgnənt/ *adj* злокачественный
manifest /ˈmænɪfəst/ *v* проявляться
manufacture /ˌmænjuˈfæktʃə/ *v* производить
masses /ˈmæsɪz/ *n pl.* (пальпируемое) образование
masticate /ˈmæstɪkeɪt/ *v* жевать
match /mætʃ/ *v* подбирать пару
meal /miːl/ *n* прием пищи
measles /ˈmiːzlz / *n* = **rubeola** /ruˈbiːələ/ *n* корь
measurement /ˈmeʒəmənt/ *n* измерение
medulla oblongata /məˈdʌlə ɔblɔŋˈgɑːtə/ продолговатый мозг
melatonin /ˌmeləˈtəunɪn/ *n* мелатонин
memorise /ˈmeməraɪz/ *v* запоминать
meningitis /menɪnˈʤaɪtɪs/ *n* менингит
menopause /ˈmenəpɔːz/ *n* менопауза
menstrual cycle /ˈmenstruəl saɪkl/ менструальный цикл
mention /ˈmenʃən/ *v* упоминать
midbrain /ˈmɪdbreɪn/ *n* средний мозг
middle ear /ˈmɪdl ɪə/ среднее ухо
midstream specimen /mɪdˈstriːm ˈspesɪmɪn/ средняя порция мочи
mild /maɪld/ *adj* слабовыраженный
mind /maɪnd/ *v* иметь в виду
minor /ˈmaɪnə/ *adj* незначительный, лёгкий
miscarriage /mɪsˈkærɪʤ/ *n* самопроизвольный аборт
mitral /ˈmaɪtrəl/ *adj* митральный
mitral valve replacement /ˈmaɪtrəl vʌlv rɪˈpleɪsmənt/ замена митрального клапана
moan /məun/ *v* стонать
moisten /ˈmɔɪsən/ *v* увлажнять
morbid /ˈmɔbɪd/ *adj* болезненный, патологический
morbidity rate /mɔːˈbɪdɪtɪ reɪt/ заболеваемость
morbilli /mɔːˈbɪlaɪ/ *n* корь
morning sickness /ˈmɔːnɪŋ ˈsɪknəs/ утренняя тошнота и рвота беременных
mortality (rate) /mɔˈtælɪtɪ/ *n* смертность
motion /ˈməuʃən/ *n* движение
MRSA /əmɑːrəsˈeɪ/ (**methicillin-resistant Staphylococcus aureus**) метициллин-резистентный *Staphylococcus aureus (золотистый стафилококк)*
mucoid /ˈmjuːkɔɪd/ *adj* слизеподобный; мукоид
mumps /mʌmps/ *n* = **infectious parotitis** /ɪnˈfekʃəs perəˈtaɪtɪs/ *n* эпидемический паротит, свинка
murmur /ˈməːmə/ *n* шумы (***в сердце***)
myelin /ˈmaɪəlɪn/ *n* миелин
myocardial infarction /ˌmaɪəuˈkɑːdɪəl ɪnˈfɑːkʃən/ инфаркт миокарда

N

nail /neɪl/ *n* ноготь
nausea /ˈnɔːzɪə/ *n* тошнота
neck /nek/ *n* шея
neoplasm /ˈniːəuplæzm/ *n* новообразование, опухоль
nephrologist /nəˈfrɔlәʤɪst/ *n* нефролог
nephrology /nəˈfrɔlәʤɪ/ *n* нефрология
nephron /ˈnefrɔn/ *n* нефрон
nervous system /ˈnəːvəs ˈsɪstəm/ нервная система
nettle rash /ˈnetl ræʃ/ *n* крапивница
network /ˈnetwəːk/ *n* сеть
neuron /ˈnjuərən/ *n* нейрон
neuropathy /ˌnjuəˈrɔpəθɪ/ *n* невропатия
noise /nɔɪz/ *n* шум
nourishment /ˈnʌrɪʃmənt/ *n* питание, пища

numb /nʌm/ *v* вызывать онемение; *adj* онемелый, неподвижный
nutrient /ˈnjuːtrɪənt/ *n* питательное вещество; *adj* питательный
nutrition /njuːˈtrɪʃən/ *n* питание, пища

O

obesity /əuˈbiːsɪtɪ/ *n* тучность, ожирение
obstruction /əbˈstrʌkʃən/ *n* закупорка, обструкция
obstructive /əbˈstrʌktɪv/ *adj* обструктивный, закупоривающий
obtain /əbˈteɪn/ *v* получать
obvious /ˈɑbvɪəs/ *adj* очевидный, само собой разумеющейся
occasionally /əˈkeɪʒənəlɪ/ *adv* иногда, изредка
occipital /ɔkˈsɪpɪtəl/ *adj* затылочный
occlusion /əˈkluːʒən/ *n* закупорка, непроходимость
occur /əˈkəː/ *v* случаться, происходить
oedema /ɪˈdiːmə/ *n* отёк
oesophageal /ˌiːsəˈfeɪʤɪəl/ *adj* относящийся к пищеводу
oesophagus /ɪˈsɑfəgəs/ *n* пищевод
olfactory /ɔlˈfæktərɪ/ *adj* обонятельный
oliguria /ɔlɪgˈjuərɪə/ *n* олигурия (*уменьшенное выделение мочи*)
omit /əˈmɪt/ *v* пропускать
onset /ˈɔnsət/ *n* начало, приступ
ooze /uːz/ *v* выделяться, истекать
opacity /əuˈpæsɪtɪ/ *n* непрозрачность
opinion /əˈpɪnjən/ *n* мнение
opportunistic /ɔpətuːˈnɪstɪk/ *adj* условно-патогенный (*о микроорганизмах*)
option /ˈɔpʃən/ *n* выбор, вариант
order /ˈɔːdə/ *n* приказ; *v* приказывать
orifice /ˈɔrɪfɪs/ *n* отверстие
originate /əˈrɪʤəneɪt/ *v* происходить, брать начало
orthopnoea /ɔːˈθɔpnɪə/ *n* ортопноэ, высшая степень одышки
outbreak /ˈautbreɪk/ *n* вспышка, начало
outer /ˈautə/ *adj* наружный, внешний
outward /ˈautwəd/ *adj* наружный, внешний
overall /ˌəuvəˈrɔːl/ *adv* в целом
overcooked /əuvəˈkukt/ *adj* пережаренный
overload /ˈəuvələud/ *n* перегрузка
overwhelming /ˌəuvəˈwelmɪŋ/ *adj* подавляющий, неодолимый
owing to /ˈəuɪŋ tə/ *prep* вследствие

P

pacemaker /ˈpeɪsˌmeɪkə/ *n* кардиостимулятор
pallor /ˈpælə/ *n* бледность
palpate /pəlˈpeɪt/ *v* пальпировать
palpitation /ˌpælpɪˈteɪʃən/ *n* (учащённое) сердцебиение
pancreas /ˈpæŋkrɪəs/ *n* поджелудочная железа
pancreatic /ˌpæŋkrɪˈætɪk/ *adj* относящийся к поджелудочной железе
paramyxovirus /ˌpærəˈmɪksəˌvaɪrəs/ *n* парамиксовирус
parathyroid /pærəˈθaɪrɔɪd/ *n* паращитовидная железа
parietal /pəˈraɪɪtəl/ *adj* париетальный, пристеночный
parotitis /ˌpærəˈtaɪtɪs/ *n* паротит *(воспаление околоушной железы)*
particular /pəˈtɪkjulə/ *adj* особенный
particularly /pəˈtɪkjuləlɪ/ *adv* в особенности
pass down /pɑːs daun/ передавать
passageway /ˈpæsɪʤweɪ/ *n* проход; канал
past history /pɑːst ˈhɪstərɪ/ история предыдущих заболеваний (*часть истории болзени*)
pathogen /ˈpæθəʤən/ *n* патоген, возбудитель
pattern /ˈpætən/ *n* модель, шаблон
peak /piːk/ *adj* высший, максимальный
peptic ulcer /ˈpeptik ˈʌlsə/ пептическая язва *(желудка и/или двенадцатиперстной кишки)*
percent /pəˈsent/ *n* процент
percentage /pəˈsentɪʤ/ *n* процентное содержание
perception /pəˈsepʃən/ *n* восприятие
percuss /pəˈkʌs/ *v* перкутировать
perfect pitch /ˈpəːfəkt pɪʧ/ абсолютный слух
perforation /ˌpəːfəˈreɪʃən/ *n* перфорация, отверстие
perform /pəˈfɔːm/ *v* выполнять
perhaps /pəˈhæps/, /præps/ *adv* возможно
pericardium /ˌperɪˈkɑːdɪəm/ *n* перикард
peripheral /pəˈrɪferəl/ *adj* периферический
peristalsis /ˌperɪˈstælsɪs/ *n* перистальтика
peritoneal dialysis /perɪˈtɔːnɪəl daɪˈælɪsɪs/ перитонеальный диализ
permit /pəˈmɪt/ *v* позволять, разрешать
pernicious anaemia /pəˈnɪʃəs əˈniːmɪə/ злокачественная анемия
persist /pəˈsɪst/ *v* сохраняться
persistent /pəˈsɪstənt/ *adj* устойчивый, постоянный
persuade /pəˈsweɪd/ *v* убеждать
pertain /pəˈteɪn/ *v* относиться к
pertussis /pəˈtʌsɪs/ *n* коклюш

phagocytosis /ˌfægəˌsaɪˋtəusɪs/ *n* фагоцитоз
pharynx /ˋfærɪŋks/ *n* клотка, зев
phlegm /flem/ *n* мокрота, слизь
physician /fɪˋzɪʃən/ *n* врач, терапевт
physician /fɪˋzɪʃən/ *n* врач, терапевт
pick up /eɪk/ *v* заразиться
pig /pɪg/ *n* поросёнок
pill /pɪl/ *n* таблетка, пилюля
pineal /ˋpɪnɪəl/ *n* пинеальный, относящийся к шишковидному телу
pituitary /pɪˋtjuːɪtərɪ/ *n* гипофиз
placenta /pləˋsentə/ *n* плацента
plague /pleɪg/ *n* чума; *v* изводить, мучить
plaque /plak/ *n* бляшка
plenty /ˋplentɪ/ *n* множество
pleura /ˋpluərə / *n* плевра
pleural rub /ˋpluərəl rʌb/ шум трения плевры
pleurisy /ˋpluərəsɪ/ *n* плеврит, воспаление плевры
pneumonia /njuːˋməunɪə/ *n* пневмония
pneumothorax /ˌnjuːməuˋθɔːræks/ *n* пневмоторакс *(наличие воздуха или газа в плевральной полости)*
poisoning /ˋpɔɪzənɪŋ/ *n* отравление
poisonous /ˋpɔɪzənəs/ *adj* ядовитый
polio(myelitis) /ˌpəuliə(maɪəˋlaɪtɪs)/ *n* полиомиелит
pollen /ˋpɔlən/ *n* пыльца
pollutant /pəˋluːtənt/ *n* загрязняющий агент
polyp /ˋpɔlɪp/ *n* полип
pons /pɔnz/ *n* варолиев мост
poor /puə/ *adj* бедный; слабый, недостаточный
population /ˌpɔpjuˋleɪʃən/ *n* население
pork /pɔːk/ *n* свинина
portal circulation /ˋpɔːtəl .səːkjuˋleɪʃən/ воротное кровообращение
possess /pəˋzes/ *v* обладать
possibility /ˌpɔsəˋbɪlɪtɪ/ *n* возможность
possible /ˋpɔsɪbl/ *adj* возможный
postpone /pəustˋpəun/ *v* откладывать
potassium /pəˋtæsɪəm/ *n* калий
pouch /pautʃ/ *n анат.* карман, мешок
powerful /ˋpauəfəl/ *adj* мощный
predispose /ˌpriːdɪˋspəuz/ *v* предрасполагать
predisposition /priːdɪspəˋzɪʃən/ *n* предрасположенность
pregnancy /ˋpregnənsɪ/ *n* беременность
pregnant /ˋpregnənt/ *adj* беременная
premedication /ˌpriːmedɪˋkeɪʃən/ *n* премедикация, медикаментозная подготовка к операции
prepare /prɪˋpeə/ *v* готовить
prescribe /prɪˋskraɪb/ *v* прописывать
presence /ˋprezəns/ *n* присутствие, наличие
pressure /ˋpreʃə/ *n* давление
prevent /prɪˋvent/ *v* предотвращать
preventable /prɪˋventəbl/ *adj* предотвратимый
prevention /prɪˋvenʃən/ *n* профилактика
previously /ˋpriːvɪəslɪ/ *adv* предварительно; ранее
prion /ˋpraɪən/ *n* прион *(вирусоподобный агент, вызывающий заболевания нервной системы)*
prior /praɪə/ **to** до, перед тем как
probable /ˋprɔbəbl/ *adj* вероятный
probably /ˋprɔbəblɪ/ *adv* вероятно
procedure /prəˋsiːʤə/ *n* процедура
process /prəuˋses/ *v* обрабатывать
produce /prəˋdjuːs/ *v* производить; вызывать
productive /prəˋdʌktɪv/ *adj* продуктивный, с выделением мокроты (*о кашле*)
projection /prəˋʤekʃən/ *n* выступ, проекция
promise /ˋprɔmɪs/ *n* обещание; *v* обещать
prone /prəun/ **to** *adj* предрасположенный *к чему-л.*
pronounce /prəˋnauns/ *v* произносить
proper /ˋprɔpə/ *adj* соответствующий
properly /ˋprɔpəlɪ/ *adv* соответствующим образом
prostatic adenoma /prɔsˋtætɪk ædɪˋnəumə / аденома простаты
protect /prəˋtekt/ *v* защищать
protozoa /ˌprəutəˋzəuə/ *n pl.* простейшие животные
protrude /prəˋtruːd/ *v* выпячиваться, выдаваться
prove /pruːv/ *v* доказывать
provide /prəˋvaɪd/ *v* обеспечивать
psittacosis /ˌsɪtəˋkəusɪs/ *n* пситтакоз, попугайная болезнь
ptyalin /ˋtaɪəlɪn/ *n* птиалин (*фермент слюны*)
pulmonary circulation /ˋpʌlmənərɪ .səːkjuˋleɪʃən/ малый круг кровообращения
pulse /pʌls/ *n* пульс
pulse oximeter /pʌls ɔkˋsɪmɪtə/ пульсоксиметр
pulse rate /pʌls reɪt/ частота пульса
pump /pʌmp/ *n* насос; *v* накачивать
PUO (**pyrexia of unknown origin)** лихорадка неизвестного происхождения
pupil /ˋpjuːpɪl/ *n* зрачок
purpose /ˋpɜːpəs/ *n* цель
purulent /ˋpjuərulənt/ *adj* гнойный
pus /pʌs/ *n* гнойный
push /puʃ/ *v* толкать
pyelonephritis /ˌpaɪləunefˋraɪtɪs/ пиелонефрит
pyrexia /paɪˋreksɪə/ *adj* лихорадка

Q

question mark /`kwestʃən mɑːk/ вопросительный знак
question tag /`kwestʃən tæg/ «хвост» разделительного вопроса (типа *It's nice out, isn't it?*)
quotation marks /kwəu`teʃən mɑːks/ кавычки
quote /kwəut/ *n* цитата

R

rabies /`reɪbiːz/ *n* бешенство
radiate /`reɪdɪeɪt/ *v* излучать; распространяться
radioactive /ˌreɪdɪəu`æktɪv/ *adj* радиоактивный
radiotherapy /ˌreɪdɪəu`θerəpɪ/ *n* лучевая терапия
range /reɪndʒ/ *n* ряд, диапазон
rare /reə/ *adj* редкий
rash /ræʃ/ *n* сыпь
raw /rɔː/ *adj* сырой
razor /`reɪzə/ *n* бритва
reach /riːtʃ/ *v* достигать
react /rɪ`ækt/ *v* реагировать
reason /`riːzən/ *n* причина
reason /`riːzən/ *n* причина
rebound tenderness /`riːbaund `tendənɪs/ болезненность при внезапном ослаблении давления *(на стенку живота; симптом раздражения брюшины)*
recently /`riːsəntlɪ/ *adv* недавно
receptor /rɪ`septə/ *n* рецептор
recipient /rɪ`sɪpɪənt/ *n* реципиент
recognise /`rekəgnaɪz/ *n* узнавать
recognition /ˌrekəg`nɪʃən/ *n* узнавание
recommend /ˌrekə`mend/ *v* рекомендовать
record /`rekəd/ *n* запись
recover /rɪ`kʌvə/ *v* выздоравливать
recovery /rɪ`kʌvərɪ/ *n* выздоровление
recovery area /rɪ`kʌvərɪ `eзrɪə/ место для восстановления (*после процедур*)
rectal /`rektəl/ *adj* ректальный
rectum /`rektəm/ *n* прямая кишка
recuperate /rɪ`kuːpəreɪt/ *v* поправляться, выздоравливать
recurrent /rɪ`kʌrənt/ *adj* повторный, рецидивный
reduce /rɪ`djuːs/ *v* снижать
reduction /rɪ`dʌkʃən/ *n* снижение
refer /rɪ`fəː/ *v* обращаться, направлять
reflux /`riːflʌks/ *n* рефлюкс, обратный ток
refraction /rɪ`frækʃən/ *n* рефракция, преломление
refreshment /rɪ`freʃmənt/ *n* восстановление сил; отдых
refrigerate /rɪ`frɪdʒəreɪt/ *v* охлаждать
refuse /rɪ`fjuːz/ *v* отказывать
regenerate /rɪ`dʒenəreɪt/ *v* регенерировать(ся)
regular /`regjulə/ *adj* правильный; регулярный
reinforce /ˌriːɪn`fɔːs/ *v* усиливать
relate /rɪ`leɪt/ *v* относиться; передавать чужую речь
relatively /`relətɪvlɪ/ *adv* относительно
relay /rɪ`leɪ/ *v* передавать, транслировать
release /rɪ`liːs/ *v* высвобождать, выделять
relevant /`reləvənt/ *adj* релевантый, значимый
relief /rɪ`liːf/ *n* облегчение
relieve /rɪ`liːv/ *v* облегчать
rely /rɪ`laɪ/ **on** полагаться на *что-л.*
remain /rɪ`meɪn/ *v* оставаться
remind /rɪ`maɪnd/ *v* напоминать
remove /rɪ`muːv/ *v* удалять
renal /`riːnəl/ *adj* относящийся к почкам
renal colic /`riːnəl `kɔlɪk/ почечная колика
renal pelvis /`riːnəl `pelvɪs/ почечная лоханка
renal tubule /`riːnəl `tjuːbjuːl/ почечный каналец
replace /rɪ`pleɪs/ *v* замещать
replacement therapy /rɪ`pleɪsmənt `θerəpɪ/ заместительная терапия
reported /rɪ`pɔːtɪd/ *adj* косвенный (*о речи*)
reproduce /ˌriːprə`djuːs/ *v* вопроизводить
reproduction /riːprə`dʌkʃən/ *n* воспроизводство
reproductive /ˌriːprə`dʌktɪv/ *adj* репродуктивный
reproductive glands /ˌriːprə`dʌktɪv glændz/ половые железы
request /rɪ`kwest / *n* просьба
require /rɪ`kwaɪə/ *v* требовать, нуждаться
requirement /rɪ`kwaɪəmənt/ *n* требование
rerouting /rɪ`rutɪŋ/ *n* изменение направления
research /rɪ`sɜːtʃ/ *n* научное исследование
resemble /rɪ`zembl/ *v* походить
resist /rɪ`zɪst/ *v* сопротивляться
resistance /rɪ`zɪstəns/ *n* сопротивляемость, устойчивость
resistant /rɪ`zɪstənt/ *adj* резистентный
respiration /ˌrespɪ`reɪʃən/ *n* дыхание
respiratory /rɪ`spɪrətərɪ/ *adj* дыхательный
respiratory rate / rɪ`spɪrətərɪ reɪt/ частота дыхания
response /rɪ`spɔns/ *n* ответ, реакция
responsibility /rɪˌspɒnsə`bɪlɪtɪ/ *n* ответственность
responsible /rɪ`spɒnsɪbl/ *adj* ответственный
restlessness /`restləsnəs/ *n* беспокойство
result /rɪ`zʌlt/ **in** приводить к *чему-л.*
retention /rɪ`tenʃən/ *n* задержка
retirement /rɪ`taɪəmənt/ *n* отставка, пенсия

retrograde pyelography /ˈretrəgreɪd paɪəˈlɔgrəfɪ/ ретроградная (восходящая) пиелография
reveal /rɪˈviːl/ *v* выявлять
reverse /rɪˈvəːs/ *adj* противоположный, *v* разворачиваться в противоположном направлении
review /rɪˈvjuː/ *v* обозревать
rhinitis /raɪˈnaɪtɪs/ *n* ринит (*(воспаление слизистой оболочки полости носа)*
rhythm /rɪðm/ *n* ритм
rickets /ˈrɪkɪts/ *n* рахит
rid /rɪd/; **get rid of** освободиться от *чего-л.*
rigid /ˈrɪʤɪd/ *adj* жёсткий, твёрдый
rigidity /rɪˈʤɪdɪtɪ/ *n* жёсткость, твёрдость
rigor /ˈriːgə/ *n* озноб, дрожь
rise /raɪz/ *v* подниматься
rubella /ruːˈbelə/ *n* краснуха
rubeola /ruˈbiːələ/ *n* корь
rupture /ˈrʌpʧə/ *n* разрыв
rural /ˈruərəl/ *adj* деревенский

S

sac /sæk/ *n* мешок
saliva /səˈlaɪvə/ *n* слюна
salivary /səˈlaɪvərɪ/ *adj* слюнной
salivation /ˌsælɪˈveɪʃən/ *n* слюноотделение
salmonella /ˌsælməˈnelə/ *n* сальмонелла
sample /sɑːmpl/ *n* пример, образец; *adj* примерный
scar /skɑː/ *n* шрам; *v* рубцеватьсяspecies /ˈspiːʃiːz/ *n* вид, род
science /saɪəns/ *n* наука
scientific /ˌsaɪənˈtɪfɪk/ *adj* научный
screen /skriːn/ *v* проводить регулярное медицинское обследование
seafood /ˈsiːfuːd/ *n* морепродукты
seatbelt /ˈsiːtbəlt/ *n* ремень безопасности
secondary /ˈsekəndərɪ/ *adj* вторичный
secrete /sɪˈkriːt/ *v* выделять, секретировать
secretion /sɪˈkriːʃən/ *n* секрет, секреция
seek /siːk/ *v irreg.* искать
semen /ˈsiːmən/ *n* семя, сперма
semilunar /ˌsemiˈluːnə/ *adj* полулунный
sensation /senˈseɪʃən/ *n* ощущение
sense organ /sens ˈɔːgən/ орган чувств
sensory /ˈsensərɪ/ *adj* сенсорный, чувствительный
separate /ˈsepərət/ *adj* отдельный
septum /ˈseptəm/ *n* перегородка
serum /ˈsɪərəm/ *n* сыворотка
severe /sɪˈvɪə/ *adj* тяжелый
sex /seks / *n* пол; *adj* половой
sexually transmitted infections (STI) /ˈsekʃuəlɪ trænzˈmɪtɪd ɪnˈfekʃəns/ инфекции, передающиеся половым путем (ИППП)
shaft /ʃɑːft/ *n* стержень, штифт
shake /ʃeɪk/ *v irreg.* трясти, дрожать
share /ʃeə/ *v* делить
shifting dullness /ˈʃɪftɪŋ ˈdʌlnɪs/ симптом флуктуации *(при наличии жидкости в животе)*
shiver /ˈʃɪvə/ *v* дрожать
shooting /ˈʃuːtɪŋ/ *adj* стрляющий *(о боли)*
short of breath испытывающий одышку
shout /ʃaut/ *n* кричать
shut /ʃʌt/ *v irreg.* закрывать
shy /ʃaɪ/ *adj* робкий
sick /sɪk/ *adj* больной
sick leave /ˈsɪkˌliːv/ *n* больничный лист
side effect /saɪd ɪˈfekt/ побочный эффект
sigh /saɪ/ *v* вздыхать
sight /saɪt/ *n* зрение
sigmoid colon /ˈsɪgmɔɪd ˈkəulən/ сигмовидная ободочная кшика
sign /saɪn/ *n* знак; признак болезни *(объективный)*
significant /sɪgˈnɪfɪkənt/ *adj* значительный
signify /ˈsɪgnɪfaɪ/ *v* означать
silent /ˈsaɪlənt/ *adj* тихий; молчаливый
since /sɪns/ *prep* с (*какого-то времени*); так как
site /saɪt/ *n* место
size /saɪz/ *n* размер
slash /slæʃ/ *n* косая черта
slight /slaɪt/ *adj* незначительный; слабовыраженный
small intestine /smɔl ɪnˈtestɪn/ тонкий кишечник
smallpox /ˈsmɔːlpɒks/ *n* оспа
smell /smel/ *v* пахнуть, нюхать
smooth /smuːð/ *adj* гладкий, ровный
sneeze /sniːz/ *v* чихать
sneezing /ˈsniːzɪŋ/ *n* чихание
sober /ˈsəubə/ *adj* трезвый
somatic nervous system /səˈmætɪk ˈnəːvəs ˈsɪstəm/ соматическая нервная система
sophisticated /səˈfɪstɪkeɪtɪd/ *adj* сложно устроенный
soul /saul/ *n* душа
sound /saund/ *adj* здоровый, крепкий
source /sɔːs/ *n* источник
space /speɪs/ *n* пространство, космос
species /ˈspiːʃiːz/ *n* вид, род
specific gravity /spəˈsɪfɪk ˈgrævɪtɪ/ плотность
specimen /ˈspesɪmɪn/ *n* образец; проба
sphincter /ˈsfɪŋktə/ *n* сфинктер

sphygmomanometer /ˌsfɪgməmæn`ɑmɪtə/ *n* сфигмоманометр, манометр *(прибор для измерения кровяного давления)*
spice /spaɪs/ *n* специя, пряность
spider-like veins /`spaɪdə laɪk veɪnz/ сосудистые звёздочки
spinal column /`spaɪnəl `kɑləm/ позвоночный столб
spinal cord /`spaɪnəl kɔːd/ спинной мозг
spinal nerve /`spaɪnəl nəːv/ спинномозговой нерв
spitting /`spɪtɪŋ/ *n* отхаркивание
spleen /spliːn/ *n* селезенка
split apart /splɪt ə`pɑːt/ расколоть(ся)
spoil /spɔɪl/ *n* испортить
spread /spred/ *v irreg.* распространяться
spring /sprɪŋ/ *n* пружина
sputum /`spjuːtəm/ *n* мокрота
squeeze /skwiːz/ *v* сжимать, выдавливать
squirt /skwəːt/ *n* струя; *v* бить струёй
staff /stɑːf/ *n* персонал
stairs /steəz/ *n pl.* ступени, лестница
stand for обозначать
statins /`stætɪnz/ *n pl.* статины (*препараты, снижающие холестерин*)
steady /`stedɪ/ *adj* устойчивый
stenosis /stə`neusɪs/ *n* стеноз *(сужение трубчатого органа)*
stent /stent/ *n* стент *(устройство для реконструкции просвета органа)*
stillbirth /`stɪlbəːθ/ *n* мертворождение
stillborn /`stɪlbɔːn/ *adj* мертворожденный
stimulate /`stɪmjuleɪt/ *v* стимулировать
stimulation /ˌstɪmju`leɪʃən/ *n* стимуляция
stimulus (*pl.* **stimuli**) /`stɪmjuləs (`stɪmjulaɪ)/ *n* стимул
stockpiling /`stɔkpaɪlɪŋ/ *n* накопление запасов
stomach /′stʌmək/ *n* желудок
stomach cancer /`stʌmək `kænsə/ рак желудка
stool /stuːl/ *n* стул
storage /`stɔːrɪʤ/ *n* хранение
store /stɔː/ *n* запас; *v* хранить
strain /streɪn/ *n* натяжение
strand /strænd/ *n* жила, прядь
stranger /`streɪnʤə/ *n* незнакомец; посторонний человек
streak /striːk/ *v* полоска, прожилка
strength /streŋθ/ *n* сила, эффективность
strengthen /`steŋθən/ *v* усиливать, укреплять
strenuous /`strenjuəs/ *adj* энергичный, усердный
stroke /strəuk/ *n* инсульт
stuffy nose /`stʌfɪ nəuz/ заложенный нос
subcutaneous fat /səbkjuː`teɪnɪəs fæt/ подкожный жир
subfebrile /səb`fiːbraɪl/ *adj* слегка повышенный (*о температуре*)
succeed /sək`siːd/ *v* достигать цели
successfully /sək`sesfəlɪ/ *adv* успешно
sue /sjuː/ *v* преследовать в судебном порядке
suffer /`sʌfə/ *v* страдать
sufficient /sə`fɪʃənt/ *adj* достаточный
suggest /sə`ʤest/ *v* предложить
summarise /`sʌməraɪz/ *v* резюмировать
sunflower /`sʌnflauə/ *n* подсолнечник
superficial /ˌsjuːpə`fɪʃəl/ *n* поверхностный
superior /sju`pɪərɪə/ *adj* верхний
supine /`sjuːpaɪn/ *adj* лежащий на спине
suppress /sə`pres/ *v* подавлять
surface /`səːfɪs/ *n* поверхность
surgeon /`sɜːʤən/ *n* хирург
surgery /`sɜːʤərɪ/ *n* хирургия; кабинет врача; приемные часы
surround /sə`raund/ *v* окружать
survive /sə`vaɪv/ *v* выживать
susceptible /sə`septɪbl/ *adj* восприимчивый
suspect /sə`spekt/ *v* подозревать
sustain /sə`steɪn/ *v* поддерживать
swab /swɔb/ *n* тампон; *v* смазывать
swallow /`swɑləu/ *v* глотать
sweat gland /swet glænd/ потовая железа
sweating /`swetɪŋ/ *n* потение
swell /swel/ *v* отекать
swelling /`swelɪŋ/ *n* отек
symptom /`sɪmptəm/ *n* симптом, признак болезни *(субъективный)*
syphilis /`sɪfɪlɪs/ *n* сифилис
systemic circulation /sɪs`temɪk .səːkju`leɪʃən/ большой круг кровообращения
systole /`sɪstəlɪ/ *n* систола

T

tactile /`tæktaɪl/ *adj* тактильный
tap /tæp/ *n* кран; *v* постукивать
tarry /`tɑːrɪ/ *adj* дегтеобразный
taste /teɪst/ *n* вкус; *v* ощущать вкус
taste bud /teɪst bʌd/ вкусовой сосочек языка
tear /tɪə/ *n* слеза
temporal /`tempərəl/ *adj* височный
tender /`tendə/ *adj* болезненный
tenderness /`tendənɪs/ *n* болезненность
tension /`tenʃən/ *n* напряжение
term /təːm/ *n* термин; *v* давать название
terminate /`təːmɪneɪt/ *v* завершать
terrible /`terɪbl/ *adj* ужасный
tetanus /`tetənəs/ *n* столбняк

therapist /ˋθerəpɪst/ *n* психотерапевт; узкий специалист
thereafter /ˌðeəˋrɑːftə/ *adv* впоследствии
therefore /ˋðeəfɔː/ *adv* следовательно
thick /θɪk/ *adj* толстый; густой
thoracic /θəˋræsɪk/ *adj* грудной
thorough /ˋθʌrə/ *adj* тщательный
threat /θret/ *n* угроза
threaten /ˋθretən/ *v* угрожать
thrive /θraɪv/ *v* процветать
throat /θrəut/ *n* горло
through /θruː/ *prep* через, сквозь
thymus /ˋθaɪməs/ *n* вилочковая железа
thyroid /ˋθaɪrɔɪd/ *n* щитовидная железа
thyroxine /θaɪˋrɔksɪn/ *n* тироксин
tighten /ˋtaɪtən/ *v* сжимать
tightness /ˋtaɪtnəs/ *n* сжатость
tinnitus /ˋtɪnɪtəs/ *n* шум в ушах
tiny /ˋtaɪnɪ/ *adj* маленький, крошечный
tip /tɪp/ *n* полезный совет
tire /taɪə/ *v* утомлять, уставать
tissue /ˋtɪsjuː/, /ˋtɪʃuː/ *n* ткань
tolerate /ˋtɑlərеɪt/ *v* переносить, выносить
tongue /tʌŋ/ *n* язык
total artificial heart /ˋtəutəl ˌɑːtɪˋfɪʃəl hɑːt/ полностью искусственное сердце
touch /tʌtʃ/ *v* касаться
toxoid /ˋtɔksɔɪd/ *n* анатоксин (*обезвреженный бактериальный токсин*)
trace /treɪs/ *n* след
transmissible /trænzˋmɪsɪbl/ *adj* заразный, инфекционный
transmission /trænzˋmɪʃən/ *n* перенос, передача
transmit /trænzˋmɪt/ *v* передавать
trauma /ˋtrɔːmə/ *n* травма
treat /triːt/ *v* лечить
treatable /ˋtriːtəbl/ *adj* поддающийся лечению
treatment /ˋtriːtmənt/ *n* лечение
trick обманывать
tricuspid /traɪˋkʌspɪd/ *adj* трехстворчатый
trigger /ˋtrɪgə/ *n* триггер; *v* запускать
triiodothyronine /traɪˌaɪədəuˋθaɪrəniːn/ *n* трийодтиронин
tuberculosis /tjuˌbɜːkjuˋləusɪs/ *n* туберкулёз
tummy /ˋtʌmɪ/ *n* животик (*детское*)
tumour /ˋtjuːmə/ *n* опухоль
tunica adventitia /ˋtjunɪkə ˌadvənˋtiʃə/ наружная оболочка
tunica intima /ˋtjunɪkə ˋɪntɪmə/ внутренняя оболочка
tunica media /ˋtjunɪkə ˋmiːdɪə/ средняя оболочка
turbidity /tɜːˋbɪdɪtɪ/ *n* помутнение
type I diabetes /taɪp wʌn ˌdaɪəˋbiːtiːz/ диабет I типа
type II diabetes /taɪp tu ˌdaɪəˋbiːtiːz/ диабет II типа
typhoid /ˋtaɪfɔɪd/ *n* брюшной тиф

U

ulcer /ˋʌlsə/ *n* язва
ulcerative colitis /ˋʌlsərətɪv kəˋlaɪtɪs/ язвенный колит
ultimately /ˋʌltɪmətlɪ/ *n* в конечном счёте
ultrasound /ˋʌltrəsaund/ *n* ультразвук
ultrasound investigation /ˋʌltrəsaund ɪnˌvestɪˋgeɪʃən/ ультразвуковое исследование
umbilical cord /ʌmˋbɪlɪkəl kɔːd/ пуповина
uncertainty /ʌnˋsəːtəntɪ/ *n* неуверенность
unconsciousness /ʌnˋkɔnʃəsnəs/ *n* бессознательное состояние
undercooked /ʌndəˋkukt/ *adj* недоготовленный (*о еде*)
underlying problem /ʌndəˋlaɪɪŋ ˋprɔbləm/ ключевая проблема
undesirable /ˌʌndɪˋzaɪərəbl/ *adj* нежелательный
unintentional /ˌʌnɪnˋtenʃənəl/ *adj* нечаянный
unless /ʌnˋles/ *conj* если не
unlikely /ʌnˋlaɪklɪ/ *n* вряд ли, маловероятно
upper respiratory tract /ˋʌpə rəˋspɪrətərɪ trækt/ верхние дыхательные пути
upset /ʌpˋset/ *v* нарушать (*пищеварение*), *adj* расстроенный (*о желудке*)
upstairs /ʌpˋsteəz/ *adv* наверху, на втором этаже
uraemia /juˋriːmɪə/ *n* уремия
urea /ˋjuərɪə/ *n* мочевина
ureter /juˋriːtə/ *n* мочеточник
urethra /juˋriːθrə/ *n* мочеиспускательный канал
urethritis /ˌjurɪθˋraɪtɪs/ *n* уретрит
urgent /ˋɜːʤənt/ *adj* срочный
urinalysis /juərɪˋnælɪsɪs/ *n* анализ мочи
urinary stasis /ˋjurɪnərɪ ˋsteɪsɪs/ уростаз
urinary tract infection /ˋjurɪnərɪ trækt ɪnˋfekʃən/ инфекция мочевыводящих путей
urine /ˋjuərɪn/ моча
urolithiasis /ˌjuerəulɪˋθaɪəsɪs/ *n* мочекаменная болезнь
urticaria /ɜːtɪˋkɜrіə/ *n* крапивница

V

vaccination /ˌvæksɪˋneɪʃən/ *n* введение вакцины
valve /vælv/ *n* клапан
varicella /værɪˋselə/ *n* ветряная оспа

vary /`veərɪ/ *v* изменяться
vector-borne /`vektəbɔ:n/ **diseases** трансмиссивные заболевания (*переносимые биологическими объектами*)
vegetative state /`vedʒɪtətɪv steɪt/ вегетативное состояние
vena cava /`vi:nə `keɪvə/ полая вена
ventricle /`ventrɪkl/ *n* желудочек
vertigo /`və:tɪgəu/ *n* головокружение
vessel /`vesəl/ *n* сосуд
vestibular /ve`stɪbjulə/ *adj* вестибулярный
victim /`vɪktɪm/ *n* жертва, пострадавший
villus, *pl.* **villi** /`vɪləs (`vɪlai)/ *n* ворсинка
violate /`vaɪəleɪt/ *v* нарушать
vision /`vɪʒən/ *n* зрение
visual /`vɪʒjuəl/ *adj* зрение
visual acuity /`vɪʒjuəl ə`kju:ɪtɪ/ острота зрения
vital /`vaɪtəl/ *adj* жизненно важный
voice box /vɔɪs bɔks/ *n* гортань
volume /`vɑlju:m/ *n* объём
voluntary /`vɔləntərɪ/ *adj* произвольный
vomiting /`vɑmɪtɪŋ/ *n* рвота
vulnerable /`vʌlnərəbl/ *adj* уязвимый

W

ward /wɔ:d/ *n* палата
ward round /wɔ:d raund/ обход палат
warn /wɔ:n/ *v* предостерегать
waste (product) /weɪst (`prɑdʌkt)/ *n* продукты выделения
waste /weɪst/ *v* изнурять
waterworks *pl.* /`wɔ:təwə:ks/ *n эвф.* мочевыводящие пути
watery eyes /`wɔtərɪ aɪz/ слезящиеся глаза
wave /weɪv/ *n* волна; зубец (*ЭКГ*)
weigh /weɪ/ *v* весить; взвешивать
weight /weɪt/ *n* вес
wheat /wi:t/ *n* пшеница
wheeze /wi:z/ *v* дышать с присвистом
wheezing /`wi:zɪŋ/ *n* дыхание с присвистом
whistling /`wɪslɪŋ/ *n* свист
white matter /wait `mætə/ белое вещество (*мозга*)
whooping cough /`hu:pɪŋ kɔf/ коклюш
windpipe /`wɪndpaɪp/ *n* трахея
wire /weɪt/ *n* проволока, провод
wisdom /`wɪzdəm/ *n* мудрость
wonder /`wʌndə/ *n* чудо; *v* хотеть знать, интересоваться
worm /wə:m/ *n* червь
worn /wɔ:n/ *adj* изношенный; изнуренный
worry /`wʌrɪ/ *v* переживать
worsen /`wə:sən/ *v* ухудшать
wrinkled /`rɪŋkld/ *adj* морщинистый
wrong /rɔŋ/ *adj* неправильный

Y

yellow fever /`jeləu `fi:və/ *n* желтая лихорадка (*острое геморрагическое трансмиссивное заболевание*)

Appendix 1

Таблица наиболее употребительных неправильных глаголов английского языка

№	Перевод	I форма Infinitive	II форма Past Simple Active	III форма Past Participle
1	быть; находиться	be [biː]	was [wɔz] were [wəː]	been [biːn]
2	носить; рождать (born)	bear [bɛə]	bore [bɔː]	borne [bɔːn] born [bɔːn]
3	становиться, делаться	become [bɪ´kʌm]	became [bɪ´keɪm]	become [bɪ´kʌm]
4	начинать(ся); приступать (к)	begin [bɪ´gɪn]	began [bɪ´gæn]	begun [bɪ´gʌn]
5	гнуть(ся), сгибать(ся)	bend [bend]	bent [bent]	bent [bent]
6	держать пари, спорить	bet [bet]	bet [bet]	bet [bet]
7	кусать(ся)	bite [baɪt]	bit [bɪt]	bitten [bɪtn]
8	дуть, раздувать	blow [blou]	blew [bluː]	blown [bloun]
9	ломать(ся)	break [breɪk]	broke [brouk]	broken [broukn]
10	приносить, привозить	bring [brɪŋ]	brought [brɔːt]	brought [brɔːt]
11	строить	build [bɪld]	built [bɪlt]	built [bɪlt]
12	жечь, обжигать; гореть	burn [bəːn]	burnt [bəːnt]	burnt[bəːnt]
13	покупать	buy [baɪ]	bought [bɔːt]	bought [bɔːt]
14	ловить, поймать; схватить	catch [kætʃ]	caught [kɔːt]	caught [kɔːt]
15	выбирать; избирать	choose [tʃuːz]	chose [tʃouz]	chosen [´tʃouzn]
16	приходить, приезжать	come [kʌm]	came [keɪm]	come[kʌm]
17	стоить	cost [kɔst]	cost [kɔst]	cost [kɔst]
18	резать; снижать	cut [kʌt]	cut [kʌt]	cut [kʌt]
19	рыть(ся), копать(ся)	dig [dɪg]	dug [dʌg]	dug [dʌg]
20	делать; вспом. глагол и др.	do [duː]	did [dɪd]	done [dʌn]
21	тянуть; рисовать, чертить	draw [drɔː]	drew [druː]	drawn [drɔːn]
22	мечтать; видеть во сне	dream [driːm]	dreamt [dremt]	dreamt [dremt]
23	пить	drink [drɪŋk]	drank [dræŋk]	drunk [drʌŋk]
24	везти; вести (машину)	drive [draɪv]	drove [drouv]	driven [´drɪvn]
25	есть, питаться	eat [iːt]	ate [et]	eaten [´iːtn]
26	падать	fall [fɔːl]	fell [fel]	fallen [´fɔːln]
27	кормить(ся)	feed [fiːd]	fed [fed]	fed [fed]
28	чувствовать; ощущать	feel [fiːl]	felt [felt]	felt [felt]
29	бороться	fight [faɪt]	fought [fɔːt]	fought [fɔːt]
30	находить, обнаруживать	find [faɪnd]	found [faund]	found [faund]

31	лететь	fly [flaɪ]	flew [fluː]	flown [floun]
32	забывать, не помнить	forget [fə´get]	forgot [fə´gɔt]	forgotten [fə´gɔtn]
33	прощать	forgive [fə´gɪv]	forgave [fə´geɪv]	forgiven [fə´gɪvn]
34	замерзать; замораживать	freeze [friːz]	froze [frouz]	frozen [frouzn]
35	получать; приобретать; понимать	get [get]	got [gɔt]	got [gɔt]
36	давать, передавать	give [gɪv]	gave [geɪv]	given [gɪvn]
37	идти; ехать; уходить, уезжать	go [gou]	went [went]	gone [gɔn]
38	расти; увеличиваться	grow [grou]	grew [gruː]	grown [groun]
39	1) висеть, вешать; 2) вешать (казнить)	hang [hæŋ]	1) hung [hʌŋ] 2) hanged [hæŋd]	1) hung [hʌŋ] 2) hanged [hæŋd]
40	иметь; быть должным	have [hæv]	had [hæd]	had [hæd]
41	слышать; слушать	hear [hɪə]	heard [həːd]	heard [həːd]
42	прятать(ся); скрывать(ся)	hide [haɪd]	hid [hɪd]	hidden [hɪdn]
43	держать; владеть; вмещать	hold [hould]	held [held]	held [held]
44	ушибить, причинять боль	hurt [həːt]	hurt [həːt]	hurt [həːt]
45	содержать, хранить	keep [kiːp]	kept [kept]	kept [kept]
46	знать	know [nou]	knew [njuː]	known[noun]
47	класть, положить	lay [leɪ]	laid [leɪd]	laid [leɪd]
48	вести, руководить	lead [liːd]	led [led]	led [led]
49	учить(ся), изучать; узнавать	learn [ləːn]	learnt [ləːnt]	learnt [ləːnt]
50	покидать, оставлять	leave [liːv]	left [left]	left [left]
51	позволять, разрешать	let [let]	let [let]	let [let]
52	1) лежать 2) лгать (прав. глагол)	lie [laɪ]	1) lay [leɪ] 2) lied [laɪd]	1) lain [leɪn] 2) lied [laɪd]
53	зажигать(ся), освещать(ся)	light [laɪt]	lit [lɪt]]	lit [lɪt]
54	терять; проигрывать	lose [luːz]	lost [lɔst]	lost [lɔst]
55	делать, производить	make [meɪk]	made [meɪd]	made [meɪd]
56	значить	mean [miːn]	meant [ment]	meant [ment]
57	встречать(ся); знакомиться	meet [miːt]	met [met]	met [met]
58	платить	pay [peɪ]	paid [peɪd]	paid [peɪd]
59	класть, положить	put [put]	put [put]	put [put]
60	читать	read [riːd]	read [red]	read [red]
61	звонить	ring [rɪŋ]	rang [ræŋ]	rung [rʌŋ]
62	подниматься; возрастать	rise [raɪz]	rose [rouz]	risen [rɪzn]
63	бежать; двигаться	run [rʌn]	ran [ræn]	run [rʌn]
64	говорить, сказать	say [seɪ]	said [sed]	said [sed]
65	видеть; понимать	see [siː]	saw [sɔː]	seen [siːn]

66	искать, разыскивать	seek [si:k]	sought [sɔ:t]	sought [sɔ:t]
67	продавать(ся)	sell [sel]	sold [sould]	sold [sould]
68	посылать, отправлять	send [send]	sent [sent]	sent [sent]
69	помещать, ставить	set [set]	set [set]	set[set]
70	трясти(сь); качать	shake [ʃeɪk]	shook [ʃuk]	shaken [ˊʃeɪkn]
71	стрелять; поражать	shoot [ʃu:t]	shot [ʃɔt]	shot [ʃɔt]
72	показывать	show [ʃou]	showed [ˊʃoud]	shown [ʃoun]
73	закрывать(ся); перекрывать	shut [ʃʌt]	shut [ʃʌt]	shut [ʃʌt]
74	петь	sing [sɪŋ]	sang [sæŋ]	sung [sʌŋ]
75	тонуть; погружать(ся)	sink [sɪŋk]	sank [sæŋk]	sunk [sʌŋk]
76	сидеть; заседать	sit [sɪt]	sat [sæt]	sat [sæt]
77	спать	sleep [sli:p]	slept [slept]	slept [slept]
78	говорить, разговаривать	speak [spi:k]	spoke [spouk]	spoken [spoukn]
79	тратить, расходовать	spend [spend]	spent [spent]	spent [spent]
80	распространять (ся)	spread [spred]	spread [spred]	spread [spred]
81	стоять; ставить	stand [stænd]	stood [stud]	stood [stud]
82	красть, воровать	steal [sti:l]	stole [stoul]	stolen [stouln]
83	1) ударять(ся); 2) бастовать	strike [straɪk]	struck [strʌk]	struck [strʌk]
84	клясться; ругать(ся)	swear [swɛə]	swore [swɔ:]	sworn [swɔ:n]
85	плыть, плавать	swim [swɪm]	swam [swæm]	swum [swʌm]
86	брать; принимать	take [teɪk]	took [tuk]	taken [teɪkn]
87	учить, преподавать	teach [ti:ʧ]	taught [tɔ:t]	taught [tɔ:t]
88	рвать(ся)	tear [tɛə]	tore [tɔ:]	torn [tɔ:n]
89	говорить; рассказывать	tell [tel]	told [tould]	told [tould]
90	думать; полагать	think [θɪŋk]	thought [θɔ:t]	thought [θɔ:t]
91	бросать, кидать	throw [θrou]	threw [θru:]	thrown [θroun]
92	понимать, постигать	understand [ˌʌndəˊstænd]	understood [ˌʌndəˊstud]	understood [ˌʌndəˊstud]
93	носить (одежду)	wear [wɛə]	wore [wɔ:]	worn [wɔ:n]
94	выиграть, победить	win [wɪn]	won [wʌn]	won [wʌn]
95	писать	write [raɪt]	wrote [rout]	written [ˊrɪtn]

Appendix 2

TABLE OF TENSES

Active Voice

ASPECT		SIMPLE	CONTINUOUS	PERFECT	PERFECT CONTINUOUS
MEANING		a common aspect	a process	priority	priotiry + process
		When?	*At what time?*	*By what time?*	*Since what time? How long?*
Period of time		*usually, often, always, seldom, every day (week, month, year)*	*now, at the moment, at present*	*ever, never, just, already, yet, by 3 p.m., lately, recently*	*since 3 p.m., for a long time, for a month*
Present	+	V, Vs	am / is + Ving / are	have / has + Ved, V_3	have / has +been + Ved, V_3
	?	do / does … V	inversion	inversion	inversion
	-	do / does +not +V	am / is + not + Ving / are	have / has +not + Ved, V_3	have / has + not + been + Ving
Period of time		*yesterday, last week (month, year), long ago, in 2014*	*yesterday at 3 p.m., yesterday from 6 to 7, when you came, while*	*yesterday by 3 p.m., before something happened*	*since 3 p.m., for some time in the past*
Past	+	Ved, V_2	was / were + Ving	had + Ved, V_3	had + been + Ving
	?	did … V	inversion	inversion	inversion
	-	did + not +V	was / were + not + Ving	had +not +Ved, V_3	had + not + been + Ving
Period of time		*tomorrow, nex wekk (month, year)*	*tomorrow at 3 p.m., tomorrow from 6 to 7, when you come, while*	*tomorrow by 3 p.m., by some time in the future*	*tomorrow by 3 p.m., by some time in the future*
Future	+	will + V	will + be + Ving	will + have + Ved, V_3	will + have + been + Ving
	?	inversion	inversion	inversion	inversion
	-	won't +V	won't + be + Ving	won't + have + Ved, V_3	won't + have + been + Ving

Passive Voice

ASPECT		SIMPLE	CONTINUOUS	PERFECT
Present	+	am / is / are + Ved, V_3	am / is / are + being + Ved, V_3	have / has + been + Ved, V_3
	?	inversion	inversion	inversion
	-	am / is / are + not + Ved, V_3	am / is / are + not + being + Ved, V_3	have / has + not + been + Ved, V_3
Past	+	was / were + Ved, V_3	was / were + being + Ved, V_3	had + been + Ved, V_3
	?	inversion	inversion	inversion
	-	was / were + not + Ved, V_3	was / were + not + being + Ved, V_3	had + not + been + Ved, V_3
Future	+	will + be + Ved, V_3	-	will + have + been + Ved, V_3
	?	inversion		inversion
	-	won't + be + Ved, V_3		won't + have + been + Ved, V_3

Appendix 3

Verb Patterns

Verbs + the '-ing' form

admit	*признавать*	**doING**
adore	*обожать*	
appreciate	*высоко ценить*	
avoid	*избегать*	
consider	*рассматривать*	
delay	*задерживать*	
deny	*отрицать*	
detest	*ненавидеть*	
dislike	*не любить*	
enjoy	*очень любить*	
finish	*заканчивать*	
forgive	*прощать*	
can't help	*не могу не*	
can't stand	*терпеть не могу*	
imagine	*представлять себе*	
it involves	*это подразумевает*	
keep	*продолжать*	
like	*нравиться*	
look forward to	*ждать с нетерпением*	
love	*любить*	
mind	*возражать*	
miss	*скучать*	
postpone	*откладывать*	
practise	*практиковаться*	
prefer	*предпочитать*	
prevent	*не допустить*	
risk	*рисковать*	
suggest	*предлагать*	
understand	*понимать*	

Verbs + the '-ing' formor **the *to*-infinitive**
(with no change in meaning)

begin	*начинать*	**TO** do/do**ING**
start	*начинать*	
continue	*продолжать*	

Verbs + the *to*-infinitive

advise	*советовать*	**TO** do
agree	*соглашаться*	
choose	*выбирать*	
decide	*решать*	
expect	*ожидать*	
hope	*надеяться*	
learn	*учиться*	
manage	*удаваться*	
offer	*предлагать*	
promise	*обещать*	
refuse	*отказываться*	
seem	*казаться*	
teach	*обучать*	
want	*хотеть*	
would hate	*мне бы не хотелось*	
would like	*мне бы хотелось*	
would love	*мне бы очень хотелось*	
would prefer	*я бы предпочел*	

Verbs + the infinitive without *to*

let	*позволять*	**do**
make	*заставлять*	
help	*помогать*	
can	*уметь, мочь*	
could	*мог бы*	
may	*можно*	
might	*можно было бы*	
must	*должен*	
should	*следует*	

Verbs + the '-ing' formor **the *to*-infinitive**
(with a change in meaning)

remember	*помнить*	**TO** do/do**ING**
forget	*не помнить*	
stop	*прекращать*	
try	*пытаться*	

Test Questions

Term 3

1. Describe the structure of the respiratory system and its organs
2. Speak on the functions of the respiratory system
3. Characterize the process of respiration and its main stages.
4. Define infectious diseases and list the most common of them.
5. Describe the main symptoms of infectious diseases.
6. Explain how to treat and prevent infectious diseases.
7. Give a definition of flu and explain how it spreads.
8. List the main symptoms and complications of the flu.
9. Describe the main methods of treatment and prevention of flu.
10. Talk about the structure of the cardiovascular system and its main functions.
11. Describe types and structure of the blood vessels.
12. Characterize the main parts of the human circulatory system. Name the subsystems of the systemic circulation.
13. Talk about the anatomical structure of the heart.
14. Describe the main functions of the heart in the cardiovascular system.
15. List the main parameters of heart function and their role in diagnosis of heart diseases.
16. List the heart diseases you know. Give a definition of myocardial infarction and describe its main symptoms.
17. Describe the main causes and risk factors of myocardial infarction.
18. Describe the course and treatment of myocardial infarction.
19. Speak on the structure of the main organs of the gastrointestinal tract.
20. List and describe the main functions of the gastrointestinal tract.
21. Characterize the main processes taking place in the gastrointestinal tract.
22. Give a definition of gastritis and list its main causes.
23. Describe the most common causes of gastritis and methods of its diagnosis.
24. Explain how to treat gastritis. Comment on the prognosis for patients with gastritis.

Term 4

25. Describe the structure and list the main functions of the immune system.
26. Characterize different types of immunity.
27. Give a definition of immunisation. List and characterize the main types of vaccines.
28. Talk about different types of allergy.
29. List the main symptoms of allergy.
30. Define anaphylactic shock and describe its symptoms.
31. Describe the structure and the main functions of the endocrine system.
32. Explain how the main endocrine glands work.
33. Define diabetes mellitus and list its main causes.
34. Characterize different types of diabetes.
35. Speak on the symptoms and complications of diabetes.
36. Describe structure and physiology of the nervous system.
37. Talk about the main organs of the nervous system and their functions.
38. List and characterize the main disorders of the nervous system.
39. Describe the structure of the brain. List functions of the main parts of the brain.
40. Speak on the disorders of the cerebral circulation.
41. Define the skin and list its main functions.
42. Characterise different types of dermatitis.
43. Explain what causes skin diseases and how they are treated.
44. Describe the structure of the urinary system.
45. List the main functions of the urinary system.
46. Speak on the most kidney diseases and their causes.
47. Describe the main symptoms of the kidney diseases.
48. Characterise the main methods of treatment of kidney diseases.

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