

ПЕРМСКИЙ
ГОСУДАРСТВЕННЫЙ
НАЦИОНАЛЬНЫЙ
ИССЛЕДОВАТЕЛЬСКИЙ
УНИВЕРСИТЕТ

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**ТЕРМИНОЛОГИЧЕСКИЙ ИНЖИНИРИНГ
НА ИНОСТРАННОМ ЯЗЫКЕ**

**ОСВАИВАЕМ ТЕРМИНОЛОГИЮ
СПЕЦИАЛЬНОСТИ «ФАРМАЦИЯ»**



Пермь 2020

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ

Федеральное государственное бюджетное
образовательное учреждение высшего образования
«ПЕРМСКИЙ ГОСУДАРСТВЕННЫЙ
НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ»

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ОСВАИВАЕМ ТЕРМИНОЛОГИЮ СПЕЦИАЛЬНОСТИ «ФАРМАЦИЯ»

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Издание предназначено для студентов очного отделения магистратуры факультета современных иностранных языков и литератур, обучающихся по направлению «Терминологический инжиниринг на иностранном языке» и является дополнением к основной учебной литературе.

В пособии осуществляется формирование терминологической компетенции в ходе обучения студентов терминологии «Фармация» на английском языке. Каждый раздел знакомит обучающихся с терминологией раздела в ее контекстном употреблении, помогает отработать правильное произношение и способы транскрибирования; способствует достижению автоматизма при переводе терминов раздела, развитию орфографической грамотности, навыков чтения и пониманию дефиниций терминов, узнаванию терминов среди множества знаков, развитию умения составлять двух- и трехсловные термины и применять термины в профессиональной коммуникации.

Формирование компетенций происходит в увлекательной форме, включающей как типичные задания на множественный выбор, сопоставление и заполнение пропусков, так и нестандартные для учебных пособий, ориентированных на студентов высших учебных заведений, задания на поиск слов во множестве букв, составление слов и предложений из перепутанных элементов и решение кроссвордов.

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UNIT 1. WHAT IS PHARMACY?



www.statecollege.com/news/Health/how-insurance-determines-pharmacy-coverage,1465102/

BEFORE YOU READ

1. Can you give your own definition – what is pharmacy? ·
2. Explain what the following people do: a clinical research associate, a formulation scientist, a laboratory technician, a line worker, a pharmacovigilance manager.
3. Why is pharmacy so important?
4. Prove that we can not live without pharmacy. ·
5. What famous scientists who made a great contribution to pharmacy do you know?
6. Speak about the influence of pharmacy on human society. ·

EXTEND YOUR VOCABULARY KNOWLEDGE

1. Complete the sentences using the following words.

Here is an update on this project.

You are probably aware that...

As far as you know, ...

The main reason ...

As far as ... is concerned, ...

1. I am writing to you is to get your input on a new product. 2. ____, we plan to market a new prescription drug for headaches. But first, 3. ____. The feasibility study has 4. ____ just been successfully completed. 5. ____ it will be marketed in Perm first. 6. ____ your input b, we need the financial data from your department as soon as it is possible.

2. Watch the video and answer the following questions.



<https://www.youtube.com/watch?v=Evi1CLWWyWk>

- Who is a pharmacist?
- How can a pharmacist help?
- What is a pharmacist responsible for?
- What problems can a young pharmacist have?
- What does a pharmacist learn every day?
- What people did a pharmacist get to talk all the time?
- What do pharmacists say about their study at the college?

Boost your vocabulary

3. Look through the list of terms and definitions, choose two or three of definitions and ask your partner to guess what term you mean.

1. Pharmacy	a. the experts on drug therapy and the primary health professionals who optimize use of medication for the benefit of the patients
2. Pharmacy practice	b. any chemical that is used as a medicine
3. Pharmacists	c. an establishment in which pharmacy (in the first sense) is practiced
4. Chemist's	d. relating to herbs, or made from herbs
5. Drugs	e. science and technique of preparing and dispensing drugs
6. Confectionery	f. sweets or chocolate
7. Herbal	g. includes more traditional roles such as compounding and dispensing medications



<https://www.pinterest.ru/pin/427771664596545262/>

4. Revise your grammar. Translate the sentences paying attention to the Infinitive and the Infinitive constructions.

1. Pharmacy is often said to be the important science, as it connects many other sciences.

2. Alchemists discovered many of the chemical processes while trying to change ordinary metals into gold.

3. The word "pharmacy" is also used to define the place where medicines are compounded, dispensed and sold.

4. The title "pharmacist" is conferred upon a person who demonstrates that he is scientifically and professionally capable to engage in the practice of pharmacy.

5. There was a whole century of research to be done before the work of Marie Curie on radioactivity and of Ernest Rutherford and Niels Bohr on atomic structure finally proved that Dalton was correct.

6. It is necessary to notice the influence of chemistry on pharmacy in general and its position in society.

7. To become a pharmacist one should, achieve knowledge of different subjects, such as physics, chemistry, botany, etc.

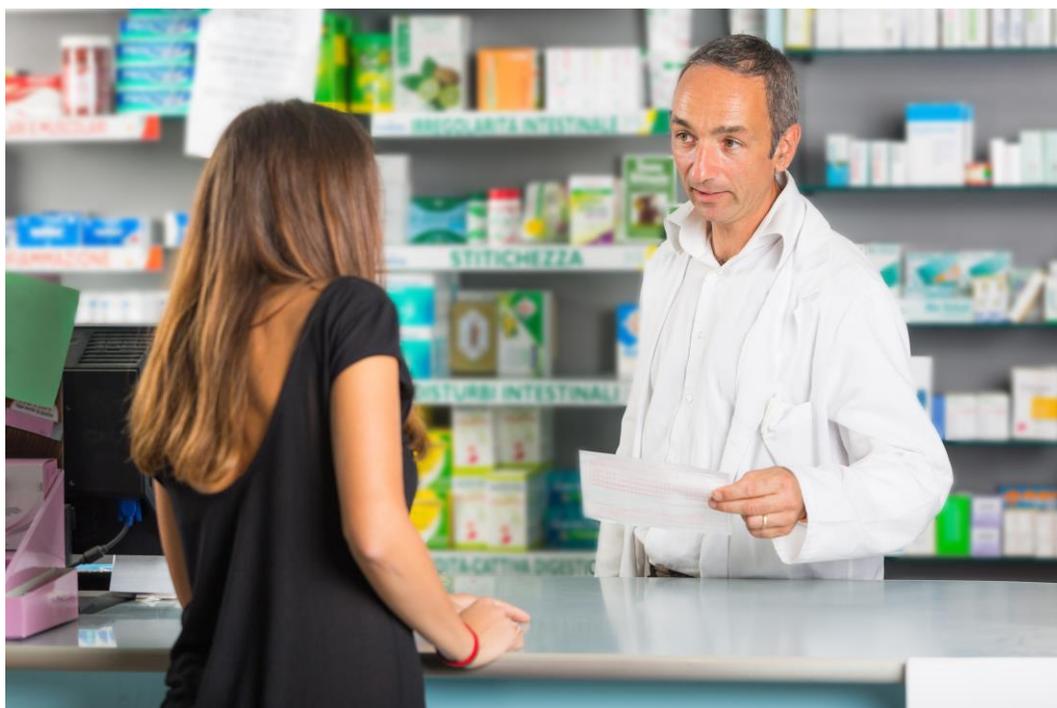
8. Through the study of chemistry we try to learn and understand the principles and laws that control the activity of all matter.

5. Listening 1



Listen to the dialogue and give the right answer.

thePoint.lww.com/diaz-gilbert



<http://pharmacy-life.co.uk/surge-in-pharmacists-confidence-as-integrated-opportunities-continue/>

1. _____ What is the patient's problem?
 - a. she can't eat
 - b. she is allergic to sun
 - c. she has bumps on her body from the waist down
2. _____ Which part of the body does the patient claim has bumps?
 - a. from the waist down
 - b. her legs only
 - c. her face
3. _____ What does the pharmacist ask the patient?
 - a. how long she had been scratching

b. if she is allergic to any medication

c. how long she was swimming in the ocean

4. _____ What medicine does the pharmacist recommend?

a. betadine in liquid form only

b. Benadryl in liquid form only and a shot of hydrocortisone

c. Benadryl in liquid form because the patient can't swallow tablets, and hydrocortisone cream

5. _____ The pharmacist tells the patient:

a. to call her doctor if the rash and itching continue;

b. that she can continue to swim in the ocean as long as she takes the medication;

c. that her skin will become very dry.

DEVELOP YOUR READING SKILLS

Read the text and do the task given below.



<https://www.researchamerica.org/leveraging-public-opinion-support-science>

PHARMACY

Text 1.

Pharmacy

Pharmacy is the science and technique of preparing and dispensing drugs. It is a health profession that links health sciences with chemical sciences and aims to ensure the safe and effective use of pharmaceutical drugs.

The scope of pharmacy practice includes more traditional roles such as compounding and dispensing medications, and it also includes more modern services related to health care, including clinical services, reviewing medications for safety and efficacy, and providing drug information. Pharmacists, therefore, are the experts on drug therapy and are the primary health professionals who optimize use of medication for the benefit of the patients.

An establishment in which pharmacy (in the first sense) is practiced is called a pharmacy (this term is more common in the United States) or a chemist's (which is more common in Great Britain). In the United States and Canada, drugstores commonly sell medicines, as well as miscellaneous items such as confectionery, cosmetics, office supplies, toys, hair care products and magazines and occasionally refreshments and groceries.

In its investigation of herbal and chemical ingredients, the work of the pharma may be regarded as a precursor of the modern sciences of chemistry and pharmacology, prior to the formulation of the scientific method.

<https://en.wikipedia.org/wiki/Pharmacy>

Pharmacy is also the term for an establishment where pharmacy (in the first sense) is practice (synonym: drugstore). The first pharmacy in Europe (still working) was opened in 1241 in Trier, Germany. The word pharmacy is derived from its root word pharma which was a term used since the 1400–1600s. In addition to pharma responsibilities, the pharma offered general medical advice and a range of services that are now performed solely by other specialist practitioners, such as surgery and midwifery.

www.thefullwiki.org/pharmacy

What is a pharmacy tech?



<http://go.bamasf.com/train-to-be-a-pharmacy-technician-in-high-demand>

Pharmacy technicians help licensed Pharmacists provide medication and other health care products to patients. Technicians usually perform routine tasks to help prepare prescribed medication, such as counting tablets and labeling bottles. They also perform administrative duties, such as answering phones, stocking shelves, and operating cash registers. Technicians refer any questions regarding prescriptions, drug information, or health matters to a pharmacist. Pharmacy technicians work in pharmacies located in hospitals, clinics, and hospitals filling prescriptions written by doctors. Attention to detail is very important. The pharmacy technician is an integral part of the healthcare team. According to the Government's Occupational Outlook Handbook, this career is expected to increase by 25 % through the year 2018! This means that this is a stable career choice. Pharmacy tech's make \$16-\$19 an hour, which means it's a lucrative career choice too!



<https://www.askdrshah.com/blog/homeopathy-holistic-treatment-children/>

What is homeopathic Pharmacy?



The word "pharmakon" is translated as 'drug' and meaning both 'remedy' and 'poison'. The word "pharmacy" is derived from the word "pharmakon". A

pharmacist/chemist dispenses medicines in a pharmacyshop. A pharmacy which stores homeopathic medicines is homeopathic pharmacy

https://www.cnbc.com/2018/06/28/sell-walgreens-because-of-amazon-online-pharmacy-threat-bank-of-ame.html?__source=yahoo%7Cfinance%7Cheadline%7Cstory%7C&par=yahoo&yptr=yahoo

What is physical pharmacy?

physical pharmacy is a branch of pharmaceutics to change the drugs from one state to other state, changes the action by physically with the applications of the theories

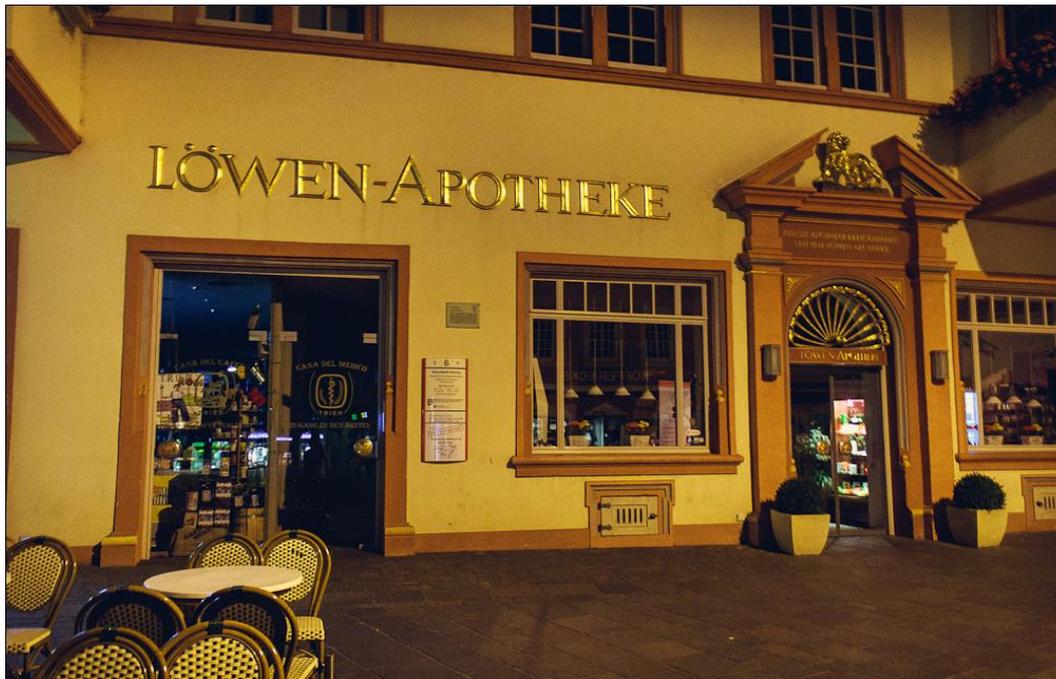
http://finance.answers.com/Q/What_is_the_scope_of_pharmacy

COMPREHENSION

• **Read the text again and decide whether the following statements are true (T) or false (F).**

- Pharmacy is the technique of selling drugs.
- Pharmacy is a health profession that links health sciences with chemical sciences and aims to ensure the safe and effective use of pharmaceutical drugs.
- Pharmacy means «health» in Greek.
- Pharmacists can administer a drug.
- Pharmacy is also the term for an establishment where pharmacy practice.
- The first pharmacy in Europe (still working) was opened in 1241 in Trier, Germany.

• **Match the numbers and the letters. Then write the definitions. Pay attention to the different meaning and usage of the verbs in the middle column of the table.**



<https://polyakusha.livejournal.com/138691.html>

- Make sentences

Pharmacy	sell	more traditional roles such as compounding and dispensing medications
The scope of pharmacy practice	dispenses	a pharmacy
An establishment in which pharmacy (in the first sense) is practiced	is	licensed Pharmacists provide medication and other health care products to patients.
In the United States and Canada, drugstores	is	medicines in a pharmacyshop.
Pharmacy technicians	to change	in 1241 in Trier, Germany.
The word "pharmakon"	was opened	the drugs from one state to other state
A pharmacist/chemist	is translated as	the science and technique of preparing and dispensing drugs.
A pharmacy which stores homeopathic medicines	includes	medicines, as well as miscellaneous items such as confectionery, cosmetics, office supplies, toys, hair care products and magazines and occasionally refreshments and groceries.
physical pharmacy is a branch of pharmaceutics	help	Homeopathic pharmacy
The first pharmacy in Europe	is called	'drug' and meaning both 'remedy'and 'poison'.

• You are going to read an article about pharmaceutical industry. Six sentences have been removed from the article. Choose from the sentences A–G the one which fits each gap (1–6). There is one extra sentence which you do not need to use.



<http://g03.s.alicdn.com/kf/HTB1AFGWHFXXXXXAFXq6xXFXXXj/200164256/HTB1AFGWHFXXXXXAFXq6xXFXXXj.jpg>

Mid-1800s – 1945: From botanicals to the first synthetic drugs

The modern pharmaceutical industry traces its roots to two sources. The first of these were local apothecaries 1. ----- . Rational drug discovery from plants started particularly with the isolation of morphine, analgesic and sleep-inducing agent from opium, by the German apothecary assistant Friedrich Sertürner, 2.----- . By the late 1880s, German dye manufacturers had perfected the purification of individual organic compounds from tar and other mineral sources and had also established rudimentary methods in organic chemical synthesis. The development of synthetic chemical methods allowed scientists to systematically vary the structure of chemical substances, and growth in the emerging science of pharmacology expanded their ability 3.----- .



<http://www.quackonline.net/events/sdc-karachi-conference/comment-page-1/>

Epinephrine, norepinephrine, and amphetamine

By the 1890s, the profound effect of adrenal extracts on many different tissue types had been discovered, 4.----- . The blood pressure raising and vasoconstrictive effects of adrenal extracts were of particular interest to surgeons as hemostatic agents and as treatment for shock, and a number of companies developed products based on adrenal extracts containing varying purities of the active substance. In 1897, John Abel of Johns Hopkins University identified the active principle as epinephrine, 5.---- -. Industrial chemist Jokichi Takamine later developed a method for obtaining epinephrine in a pure state, and licensed the technology to Parke-Davis. Parke-Davis marketed epinephrine under the trade name Adrenalin. Injected epinephrine proved to be especially efficacious for the acute treatment of asthma attacks, and an inhaled version was sold in the United States until 2011 (Primatene Mist).

By 1929 epinephrine had been formulated into an inhaler for use in the treatment of nasal congestion.

While highly effective, the requirement for injection limited the use of epinephrine and orally active derivatives were sought. A structurally similar compound, ephedrine, (actually more similar to norepinephrine,) was identified by Japanese chemists in the *Ma Huang* plant and marketed by Eli Lilly as an oral treatment for asthma. Following the work of Henry Dale and George Barger at

Burroughs-Wellcome, academic chemist Gordon Alles synthesized amphetamine and tested it in asthma patients in 1929. The drug proved to have only modest anti-asthma effects, 6.-----. Amphetamine was developed by Smith, Kline and French as a nasal decongestant under the trade name Benzedrine Inhaler. Amphetamine was eventually developed for the treatment of narcolepsy, and mood elevation in depression and other psychiatric indications. It received approval as a New and Nonofficial Remedy from the American Medical Association for these uses in 1937 and remained in common use for depression until the development of tricyclic antidepressants in the 1960s.

en.wikipedia.org>Pharmaceutical industry



<https://davlenies.ru/preparaty/timolol.html>

- A. which was discovered 200 years ago
- B. that expanded from their traditional role distributing botanical drugs such as morphine and quinine to wholesale manufacture in the mid 1800s
- C. but produced sensations of exhilaration and palpitations
- D. setting off a search both for the mechanism of chemical signalling and efforts to exploit these observations for the development of new drugs
- E. to evaluate the biological effects of these structural changes

F. which he isolated in an impure state as the sulfate salt

G. who named the compound after the Greek god of dreams Morpheus

DEVELOP YOUR SPEAKING SKILLS

Imagine that you work at a pharmaceutical company. Tell about yourself using essential language phrases.



ingliz-tili.uz/tag/there-isthere-are/

Introducing yourself

I'm/My name is...

I am from ...

I've been with the company for... years.

I am ... (nationality), but originally I come from ... (country).

I am married / single.

I am based at ... (name of company/institute) in ... (city).

Educational background

My professional background is in ... (field).

I got/received/obtained my ... (degree) in ... (subject).

Experience I used to work at ... (company/institute) in their... department.

Experience

I then worked for ... (company/institute) and later for ... (company/institute).

I started as a ... (position) and worked my way up to ... {position}.

I did research on ...

I was on the team that...

I was involved in ...

I am the ... (position).

I am responsible for...

We are currently working on ...

At the moment, I am working on a project to ...



<http://interior-idesign.ru/upload/iblock/286/286cbb63c0202cb1c729a0d2ac3b849e.jpeg>

GRAMMAR FOCUS



Word–Building Learn and practice the word formation.

Word formation is one of the major mechanisms for the extending of the vocabulary.

A usual way of making words in English is by adding combination of letters to basic words, at the beginning (prefixes) or at the end (suffixes) of the word.

I. The suffix –ist

Complete the sentences.

'Pharmacy is a pharmacist
Biology is a biologist
Chemistry is a _____
A person who studies and applies _____ is a sociologist
Biochemistry is a _____
_____ is a psychologist
Archaeology is a _____
_____ is a ecologist
Agronomy is a _____

II. The suffix –(i)an
History is a historian.
Mathematics is a _____

III. The suffix –ion

This suffix converts a verb into a noun.

VERB NOUN

To react	reaction
to apply	application
to recognize	recognition

IV. The prefixes in– and un–

These prefixes are used to make an adjective negative, e.g. innocence, unalterable.



<http://blog.topenglish.com.br/wp-content/uploads/2015/11/x-dicas-para-praticar-ingles-no-seu-dia-a-dia608-e1448379149560.jpg>

Exercise 1.

Form nouns from the following verbs:

to illustrate

to apply

to correct

to distract;

to connect;

to dissolate;

to fluctuate.

Exercise 2.

Form verbs from the following nouns:

evolution;

decision;

reduction

deposition

cooperation;

recognition

population.

Exercise 3

Using in- make the following negative:

correct;

ordinate

direct;

visible

essential.

Exercise 4

Using un- make the following negative:

usual;

able;
stable;
reliable;
successful;
critical;
imaginative;
true.

Word Scrambles



Unscramble the words

- sdeo
- mfro
- asnctiibtoi
- dgur
- nigacesal
- yprtaehcoa
- csodmnpuo
- hpamryacgool
- tceeff
- etxtcar
- dbool
- espuresr
- daraeln
- ptuyir
- ddieefniti

- aevcit
- cshetim
- emhtdo
- oatibn
- seta

Test 1



The History of Pharmacy

The earliest known compilation of medicinal substances was the Sushruta Samhita, an Indian Aurvedic treatise attributed to Sushruta in the 6th century BC. However, the earliest text as preserved dates to the 3rd or 4th century AD.

Many Sumerian (late 6th millennium BC – early 2nd millennium BC) cuneiform clay tablets record prescriptions for medicine.

Ancient Egyptian pharmacological knowledge was recorded in various papyri such as the Ebers Papyrus of 1550 BC, and the Edwin Smith Papyrus of the 16th century BC.



Dioscorides, De Materia Medica, Byzantium, 15th century

In Ancient Greece, Diocles of Carystus (4th century BC) was one of several men studying the medicinal properties of plants. He wrote several treatises on the topic. The Greek physician Pedanius Dioscorides is famous for writing a five volume book in his native Greek Περὶ ὕλης ἰατρικῆς in the 1st century AD. The Latin translation De Materia Medica (Concerning medical substances) was used a basis for many medieval texts, and was built upon by many middle eastern scientists during the Islamic Golden Age.

Pharmacy in China dates at least to the earliest known Chinese manual, the Shennong Bencao Jing (The Divine Farmer's Herb-Root Classic), dating back to the 1st century AD. It

was compiled during the Han dynasty and was attributed to the mythical Shennong. Earlier literature included lists of prescriptions for specific ailments, exemplified by a manuscript "Recipes for 52 Ailments", found in the Mawangdui, sealed in 168 BC.

In Japan, at the end of the Asuka period (538–710) and the early Nara period (710–794), the men who fulfilled roles similar to those of modern pharmacists were highly respected. The place of pharmacists in society was expressly defined in the Taihō (718). Ranked positions in the pre-Heian Imperial court were established; and this organizational structure remained largely intact until the Meiji Restoration (1868). In this highly stable hierarchy, the pharmacists—and even pharmacist assistants—were assigned status superior to all others in health-related fields such as physicians and acupuncturists. In the Imperial household, the pharmacist was even ranked above the two personal physicians of the Emperor.

There is a stone sign for a pharmacy with a tripod, a mortar, and a pestle opposite one for a doctor in the Arcadian Way in Ephesus near Kusadasi in Turkey. The current Ephesus dates back to 400 BC and was the site of the Temple of Artemis, one of the seven wonders of the world.

In Baghdad the first pharmacies, or drug stores, were established in 754, under the Abbasid Caliphate during the Islamic Golden Age. By the 9th century, these pharmacies were state-regulated.

The advances made in the Middle East in botany and chemistry led medicine in medieval Islam substantially to develop pharmacology. Muhammad ibn Zakar (Rhazes) (865–915), for instance, acted to promote the medical uses of chemical compounds. Abu al-Qasim al-Zahrawi (Abulcasis) (936–1013) pioneered the preparation of medicines by sublimation and distillation.

http://en.wikipedia.ru/wiki/Pharmaceutical_Science

Task 1.

Match the following words and phrases to their definitions:

a) Substance, b) property, c) physician, d) prescription, e) ailment,

- an illness
- a piece of paper on which a doctor writes the details of the medicine or drugs that someone needs
- a medical doctor, especially one who has general skill and is not a surgeon
- material with particular physical characteristics:
- a quality in a substance or material, especially one that means that it can be used in a particular way

Task 2.

Answer the following questions.

- What was the earliest known compilation of medicinal substances?
- What did many Sumerian cuneiform clay tablets record?
- Where was Ancient Egyptian pharmacological knowledge recorded?
- Who studied the medicinal properties of plants in Ancient Greece?
- What is Pedanius Dioscorides famous for?
- What is the earliest record of Chinese pharmaceutical knowledge?
- What role did early pharmacists play in Japan?
- What is depicted on a stone in the Arcadian Way in Ephesus?
- When were drug stores established in Baghdad?
- What led medicine in medieval Islam substantially to develop pharmacology?

Task 3.

Match the expressions with their translation.

1	compilation of medicinal substances	a	записывать рецепты на лекарства
2	cuneiform clay tablets	b	фармакологические знания
3	record prescriptions for medicine	c	По поводу медицинских веществ
4	pharmacological knowledge	d	списки рецептов
5	several treatises on the topic	e	лечебные свойства растений
6	Concerning medical substances	f	сборник лекарственных веществ
7	medicinal properties of plants	g	конкретные заболевания
8	lists of prescriptions	h	несколько трактатов по теме
9	specific ailments	i	области, связанные со здоровьем
10	health-related fields	j	клинописные глиняные таблички

Task 4.

Fill in the gaps

Pharmacy is 1_____ that links 2_____ with the chemical sciences, and it is charged with ensuring 3_____. 4._____ practice includes more traditional roles such as compounding and dispensing medications, and it also includes more modern services 5_____, including clinical services, reviewing medications for safety and efficacy, and providing drug information. Pharmacists, therefore, are 6._____ and are the primary health professionals who 7._____ to provide patients with 8_____. 8. 9._____ is also applied to an establishment 10_____.

- a. optimize medication use
- b. the safe and effective use of medication
- c. the scope of pharmacy
- d. related to patient care
- e. used for such purposes
- f. the health profession
- g. positive health outcomes
- h. the term
- i. the the experts on drug therapy
- j. he health sciences

Task 5.

Make sentences.

- collection of pharmaceutical substances/ The first known/ written by Sushruta/ an Indian Aurvedic treatise/ was/ the Sushruta Samhita, /in 600 BC.
- dates/ The earliest/ to the 3rd century AD./ preserved text/
- prescriptions/ Many/ for medicine./ record/ Sumerian cuneiform clay tablets/
- was recorded/ Ancient Egyptian/ in various papyri./ pharmacological knowledge/
- Diocles of Carystus/ the medicinal properties of plants./studied/
- on pharmacy./Diocles of Carystus/ several treatises/ wrote/
- The Greek physician/ in his native language./ is famous/ for writing/ Pedanius **Dioscorides/ a five volume book/**

Task 6.

Make these words negative

Regular, connect, correct, usual, able, visible, possible.

Task 7.

Make nouns.

Mix, recognize, apply, react, solve, dissolve, form.

UNIT 2. PHARMACEUTICAL LABORATORY



<http://www.nck.dk/>

Discussion.

• **Have you ever visited or worked in pharmaceutical laboratory? Tell about your experience.**

• **Problem solving task and topics for discussion with your partner.**

- Can medicines be developed without testing?
- How are they usually tested?
- Who are the objects of testing?
- Are you for or against experiments on animals? Explain why?
- Are the experiments on people possible? In what situations?
- Can you say that testing of drugs in laboratory help t avoid risks absolutely?
- What conditions should be kept to test new drugs?
- When a new drug can be released?



<http://ipcma.tsu.ru/ru/node/126>

EXTEND YOUR VOCABULARY KNOWLEDGE



- **Choose the correct answer. You may use encyclopedia and Internet resources to find necessary information.**

API is

- application programming interface
- apple programming interface
- apotheker programming interface
- aid programming interface
- analytical testing services include
- chemical analysis
- bioanalytical testing
- physiological testing
- medical analysis
- Pharmaceutical Testing includes
- Volume, purity, blood analysis
- Potency, volume, blood pressure
- potency, purity, microbial and fungal identification
- Volume, potency, blood analysis

- pharmaceutical test equipment is based upon
- blood analysis
- blood pressure
- X Ray print
- testing applications

- Pharmaceutical test equipment includes
- tablet testing equipment
- X Ray
- Tomograph
- Pharmaceutical laboratory



Coca-Cola was invented by a pharmacist named John Pemberton. He carried the jug of the new product down the street to Jacob's Pharmacy where it was sampled and pronounced "excellent" and placed on sale for 5 cents a glass as a soda fountain drink.



Another pharmacist, Charles Alderton, invented Dr. Pepper. Pepsi was also invented by a pharmacist, as was Vernor's Ginger Ale by Detroit pharmacist James Vernor.

<https://www.pharmacytimes.com/contributor/beth-lofgren-pharmd-bcps/2015/12/8-interesting-pharmacy-facts>

Smallest atom: Hydrogen (H)

Largest atom: Cesium (Cs)

Heaviest atom: Uranium (U); isotope 238

Element of lowest boiling point: Helium (He); -269°C (4 K)

Element of highest boiling point: Rhenium (Re); 5596°C (5869 K)

Most dense element: Osmium

Most abundant elements in the universe: H and He

Most abundant element on the earth: Oxygen

Most abundant element in the human body: Oxygen

Read the text and choose the appropriate headings 1–6 for A–E passages.
There is one extra heading you don't need to use:

- Pharmaceutical services
- How to choose pharmaceutical equipment.
- Pharmaceutical phases
- Pharmaceutical laboratories and equipment.
- Newsworthy Advancements
- Pharmaceutical Testing.
- Pharmaceutical test

Pharmaceutical & Drug Discovery Laboratory Equipment



<https://syrris.com/applications/drug-discovery-and-development/>

- There are many key developmental phases, services, and processes within pharma and drug discovery laboratories. Pharmaceutical development includes (but is not limited to) formulation, such as API, preformulation, screening, etc; preclinical development, such as pharmacology services, ADME-Tox, biomarker testing, and more.
- Services include analytical testing services, such as method development/validation, bioanalytical testing, assay development, clinical trials services, raw material testing services, etc.; and contract pharma services, such as CRO services/outsourcing, contract packaging, contract manufacturing, etc.

- Whether you are performing the testing on site or utilize services from a pharmaceutical testing company, the various studies and validations include: potency, purity, pH, microbial and fungal identification, antimicrobial effectiveness testing, dissolution, stability testing, sterility testing, endotoxin testing, biological testing (screenings, assays, SDS/PAGE), uniformity, preservation and more!

- What are the various types of laboratory and analytical pharmaceutical test equipment? Whether your need is from biomolecular interaction analysis to particle characterization, pharmaceutical test equipment is largely varied based upon the various testing applications.

- Pharmaceutical test equipment includes, but is not limited to: tablet testing equipment, such as friability testers, dissolution samplers; refractometers; powder handling equipment; or freeze dryers.

- What are the key considerations when choosing pharmaceutical test equipment? Depending on your specific testing requirements, considerations when choosing pharmaceutical test equipment not only include regulatory compliance and cost, but also analysis time and throughput. High-quality testing allows for achieving regulatory approval in shorter time periods, while reducing costs and improved turnaround testing.

- Sub-visible particles, also known as SVP, have been a concern for the pharmaceutical industry for their biopharmaceutical side effects. SVP aggregates occur in development due to changes in temperature or mechanical stimulation. Improvements in aggregation analysis systems in the market enable improved QC and screening, all with intent to eliminate SVP aggregates in early stages of development.

<https://www.labcompare.com/Pharmaceutical-Lab-Equipment/>

Tell your partner about Pharmaceutical Laboratory Equipment using information from the text and helpful expressions given below

- As we know...
- Actually...
- As it has been declared in the text ...
- As regards to me ...
- In my opinion ...
- To tell you the truth...
- According to the text I consider ...



VIDEO CLASS

«Arkopharma Pharmaceutical Laboratories – Manufacturing area overview »

Video 2



https://www.youtube.com/watch?time_continue=8 **HYPERLINK**

Watch the episode about Arkopharma Pharmaceutical Laboratories and fill in the gaps.

- Laboratory presses _____ plants a year.
- They obtain a total powder also called “totum” with _____.
- No cross contamination thanks to_____.
- _____of preparations & blends of liquids and pastes / year.
- Analysis from the purchase of raw materials to _____.

GRAMMAR FOCUS

Активный залог используется, когда подлежащее воспроизводит действие без посторонней помощи.

Предложение в активном залоге: He wrote this prescription a day ago. (Past Simple).

Перевод: Он написал этот рецепт день назад.

Пассивный залог применяется, когда над подлежащим производится какое-либо действие. Кто или что именно совершил это действие неважно или неизвестно, главное – результат.

Предложение в пассивном залоге: This prescription was written a day ago. (Past Simple)

Перевод: Этот рецепт был написан день назад.

Почти любой активный залог можно переиначить в пассивный и наоборот, например:

Активный залог: She always tells us very interesting facts about drugs.

Пассивный залог: Very interesting facts about drugs are always told by her.

Перевод: Очень интересные факты о лекарствах всегда рассказываются ей.

I have made these tablets.

These tablets have been made by me.

Эти таблетки созданы мной.

PASSIVE VOICE			
	Simple	Continuous	Perfect
	to be V3	to be being V3	To have been V3
Present	am is are } V3	am is are } being V3	have has } been V3
Past	was were } V3	was were } being V3	had been V3
Future	Shall will } be V3	-----	will have been V3

<http://eng911.ru/rules/grammar/aktivnyj-i-passivnyj-zalog.html>

- **Open the brackets using the correct form of the Passive Voice.**

1. A very significant contribution to the world pharmaceutical science (to make) by Arabic people.

2. Formulation, such as API, preformulation, screening, etc; preclinical development, such as pharmacology services, ADME-Tox, biomarker testing (to include) in Pharmaceutical development.

3. The raw materials (to compound) into drugs.

4. The new substances to make drug formulations (to find) 5 years ago.

5. The drug documentation (to complete) tomorrow.

6. The promotion and distribution of drugs (to plan) now.

7. The testing on living subjects (to organize) already.

8. The active ingredients (to contain) advertised regularly.

READING

a. Read about the interesting facts and scientific explanations and explain WHAT? WHERE? WHY?



<https://www.rock-cafe.info/suggest/pharmaceuticals-laboratories-706861726d61636575746963616c73.html>

Pharmacy Laboratories was founded as an economic activity. Originally the basic object of the operation of Pharmacy Laboratories was the production and sale of

dermocosmetics for the face skin. Soon the company launched the first two of its own food supplement products in tablets.

The dynamic development of the company started, when in the company's offer were the first products based on the unconventional positioning and effective trade-marketing used by the company (e.g. Comar tablets, Antiperspirant tablets, Lips liquid against aphthae). In the wider portfolio we included new products for problems of the skin of the mouth and oral cavity mucosa and aimed at a broad group of customers, characterized by efficiency, high quality and reasonable price.

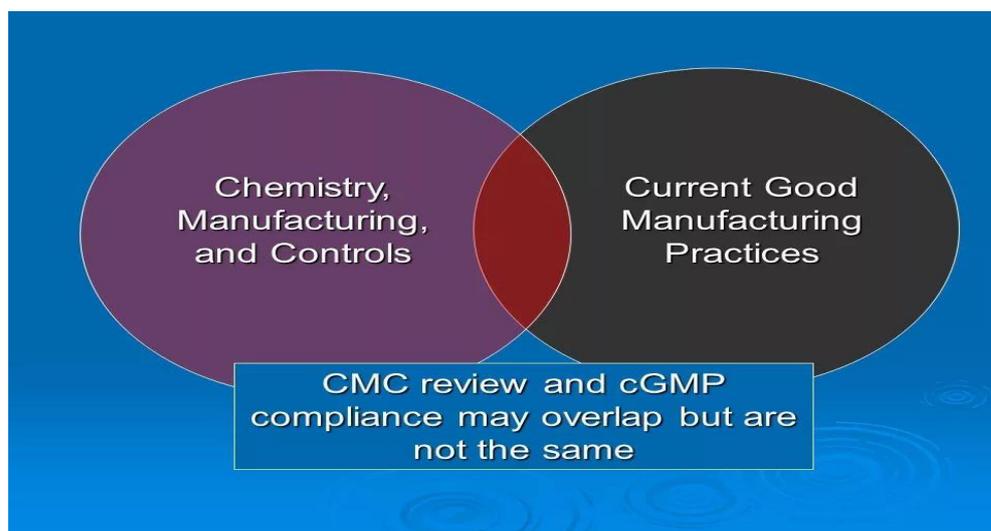
Development of the company allowed to introduce the new brands (line Mamma, Allerin, Rectostop, Amarin) and a fundamental change in manufacturing strategy. Previously outsourced contract manufacturing grew into its own machinery to enable the production and blistering tablets, confection mass cosmetics and liquid forms, which were also associated with obtaining permits and systems of quality assurance and hygienic conditions of production.

Following the needs of the clients and ensure of the highest quality and safety of the products the company expands its product line to include medical devices, as well as implements and updates the implemented quality management systems. The further development of the company is focused on consistent recognition of current needs of market and adapt to them, as well as offering secure life-enhancing products at a reasonable price.

Pharmacy Laboratories' mission is to provide high quality innovative products.

<http://pharmacylaboratories.com/en/about-company>

b. Before reading text C discuss the following problem solving topics with your partner and compare your opinion with the information given below.



<https://slideplayer.com/slide/4616870>

1. How did chemistry, manufacturing and controls (CMC) development strategies and Good Manufacturing Practice (GMP) laboratory services influence on your life?
2. What does regulatory–driven CMC laboratory services inshore?
3. What does their development teams offer?
4. How is development accelerated?
5. How large is the laboratory experience?

Chemistry, manufacturing and controls (CMC) development strategies and Good Manufacturing Practice (GMP) laboratory services to support your drug development requirements

Chemistry, manufacturing and controls (CMC) development strategies and Good Manufacturing Practice (GMP) laboratory services play a key role in helping you to reach your next milestone. GMP and CMC contract laboratory services should help you to expose sources of risk early in development and provide sufficient information to assure the identity, quality, purity, strength and stability of the drug product to meet regulatory requirements and specifications. When you prepare for an important submission, GMP analytical packages must demonstrate consistency and reliability of the manufacturing process which can involve specialist analytical expertise. To achieve the desired characteristics for the dosage form within project timelines, you will need formulation development knowledge, followed by clinical trial supply manufacturing that is both fully GMP compliant and monitors all areas of risk to ensure product quality.



Regulatory–driven CMC laboratory services

We provide regulatory-driven, phase-appropriate, CMC laboratory and GMP pharmaceutical laboratory services. Our expertise ensures sufficient information for your Investigational New Drug (IND), Abbreviated New Drug Application (ANDA) and New Drug Application (NDA) filings. This is achieved through analysis services, preformulation and solid state characterisation, method development and validation, stability studies, pharmaceutical impurity analysis, extractables and leachables and GMP batch release testing. Our scientists are adept at applying advanced technology in GMP compliant analytical development programs.

Integrated formulation, GMP analysis and clinical trial supply manufacturing

Our formulation development scientists are experienced across a range of dosage forms including orally inhaled and nasal drug products (OINDP), oral, solid, liquid and transdermal or topical. Strategic integration of formulation development with analytics ensures a detailed understanding of the pharmaceutical materials, their compatibility, physical properties and stability. Our development teams offer cost-effective GMP Manufacturing Services for clinical trials aligned with IND or Common Technical Document CTD support which includes raw material characterization, sourcing, scale-up and pilot batch manufacturing to ensure product quality.

Pharmaceutical knowledge to accelerate your development

With an experienced eye on current regulatory guidance, our formulation and analytical scientists work with you to utilize exactly the right techniques to deliver the data you need to take the next step for both small molecule pharmaceuticals or biopharmaceuticals. With over 20 years of experience, our Total Quality Assurance expertise can help you to achieve the appropriate quality and regulatory standards at each stage of development.

7. Listening 2



Listen to the extract about the Periodic Table of Elements and mark the following statements with T (True) or F (False).

https://www.youtube.com/watch?v=J6R-BXO_zEI

- The customer wants something for headache.
- The customer has a running nose.
- The customer is allergic to cats.
- The medicine is not available without a prescription.
- The medicine is antibiotic.
- The medicine costs 5 £.
- The pharmacist advises the customer to go to the hospital if he doesn't get better.

8. DEVELOP YOUR SPEAKING SKILLS

You have read enough about pharmaceutical laboratory. Test your comprehension. Summarize information and make a report about any laboratory you like using supporting material given below. Take some time to look it over and make sure you understand all the terms and the relations between them. Good Luck.

Give a description of pharmaceutical laboratory equipment.

You should know what services include.

Describe in your own words what the various studies and validations include whether you are performing the testing on site.

Explain what are the different types of laboratory.

Define what pharmaceutical test equipment includes.

Explain what are the key considerations when choosing pharmaceutical test equipment.

Describe SVP.

DISCUSSION QUESTIONS

Choose any question you like and know well and hold a discussion with the group about it.

- Explain why some drugs need to be sold only with the prescription.
- Why do you need to have a uniform on when you work in a laboratory?
- Why some drugs need to be tested more than the others.
- You know that animals are often used for pharmaceutical tests in a laboratory. Is it right or not? Can we do tests without using them?
- Can the drugs be made out of laboratory?
- What do you think of natural materials for drugs and synthetic ones? Which of them are more useful and which are more effective?

SKILL PRACTICE: WRITING SCIENCE FAIR PROJECT

What if ... ?

Imagine that one day, out of nowhere, one of the drug classes (antibiotics, hormones, pain killers) suddenly starts to disappear from the pharmacies. Depending on the drug, the results could be catastrophic. Choose one of the drug classes; then write a fictionalized “firsthand” account of the day these drugs disappeared. (An example: the day pharmacies lost their pain killers). In order to accomplish this end, you will need to research some of the basic uses of the drug classes, for example, where do they appear? How are they used by scientists, pharmacists, surgeons, doctors, and so on? Where are their presences crucial? How would life be different without them? Would life even be able to survive? When your projects are complete, try to make presentation of your dramatic work.

GRAMMAR FOCUS

Learn and practice the word formation. Word formation is one of the major mechanisms for the expansion of the vocabulary. The following information and exercises facilities extend your vocabulary acquisition.

- The suffix –ion (–ation, –ition)

This suffix forms nouns from verbs with the meaning of: process or result of doing something. Thus operation means: process or result of operating. Other nouns formed in this way are: «addition» (process or result of adding) from (to) add, «subtraction» from subtract, «division» from divide, «multiplication» from multiply.

Exercise:

Using – ation, make nouns from the following verbs:

apply

adapt

specialize

compute

calculate

isolate

combine

explain

investigate

- The suffix –ment

This suffix forms nouns from the corresponding verb, e.g. «measurement» from the verb (to) measure.

Exercise:

By adding –ment, form nouns from the following verbs:

equip

move

adjust

establish

attach

improve

state

- The suffix–ity

This suffix forms nouns from the corresponding adjectives, e.g. «activity» from the adjective active; «probability» from probable, and «simplicity» from simple.

Exercise A:

Form nouns from the following:

alkaline

relative

potential

complex

equal

reliable

acid.

Note: the adjective able becomes «ability».

Exercise B:

Applying the principle given in the Note above, make adjectives corresponding to the following nouns: availability; adaptability; stability; responsibility.

- The prefix–suffix–en

This is used either as a prefix to adjectives (or occasionally nouns) to form a verb (e.g. «enable», «enlarge», etc.) or more commonly as a suffix, e.g. «widen» (fromwide).

Exercise C:

By adding –en, form verbs from the following:

length

strength

tight

weak

loose

short

deep

height

Test 2



https://metode.org/wp-content/uploads/2017/02/Metode76_dones_laboratori_farmacia.jpg

Pharmaceutical Quality Control Labs

GUIDE TO INSPECTIONS OF PHARMACEUTICAL QUALITY CONTROL LABORATORIES

The pharmaceutical quality control laboratory serves one of the most important functions in pharmaceutical production and control. A significant portion of the CGMP regulations (21 CFR 211) pertain to the quality control laboratory and product testing. Similar concepts apply to bulk drugs.

This inspection guide supplements other inspectional information contained in other agency inspectional guidance documents. For example, Compliance Program 7346.832 requiring pre-approval NDA/ANDA inspections contains general instructions to conduct product specific NDA/ANDA inspection audits to measure compliance with the applications and CGMP requirements. This includes pharmaceutical laboratories used for in-process and finished product testing.

The specific objective will be spelled out prior to the inspection. The laboratory inspection may be limited to specific issues, or the inspection may encompass a comprehensive evaluation of the laboratory's compliance with CGMP's. As a minimum, each pharmaceutical quality control laboratory should receive a comprehensive GMP evaluation each two years as part of the statutory inspection obligation.

In general these inspections may include

- the specific methodology which will be used to test a new product
- a complete assessment of laboratory's conformance with GMP's
- a specific aspect of laboratory operations

FDA Inspection Guides are based on the team inspection approach and our inspection of a laboratory is consistent with this concept. As part of our effort to achieve uniformity and consistency in laboratory inspections, we expect that complex, highly technical and specialized testing equipment, procedures and data manipulations, as well as scientific laboratory operations will be evaluated by an experienced laboratory analyst with specialized knowledge in such matters.

District management makes the final decision regarding the assignment of personnel to inspections. Nevertheless, we expect investigators, analysts and others to work as teams and to advise management when additional expertise is required to complete a meaningful inspection.

Team members participating in a pre-approval inspection must read and be familiar with Compliance Program 7346.832, Pre-Approval Inspections/Investigations. Relevant sections of the NDA or ANDA should be reviewed prior to the inspection; but if the application is not available from any other source, this review will have to be conducted using the company's copy of the application.

Team members should meet, if possible, prior to the inspection to discuss the approach to the inspection, to define the roles of the team members, and to establish goals

for completion of the assignment. Responsibilities for development of all reports should also be established prior to the inspection. This includes the preparation of the FDA 483.

The Center for Drug Evaluation and Research (CDER) may have issued deficiency letters listing problems that the sponsor must correct prior to the approval of NDA/ANDA's and supplements. The inspection team is expected to review such letters on file at the district office, and they are expected to ask the plant for access to such letters. The team should evaluate the replies to these letters to assure that the data are accurate and authentic. Complete the inspection even though there has been no response to these letters or when the response is judged inadequate.

<https://www.fda.gov/inspections-compliance-enforcement-and-criminal-investigations/inspection-guides/pharmaceutical-quality-control-labs-793>

Task 1.

Match the following words and phrases to their definitions:

a) serve, b) regulations, c) bulk, d) to supplement, e) compliance

- something or someone that is very large
- the act of obeying an order, rule, or request:
- an official rule or the act of controlling something
- a period of time in a job or activity
- to add something to something to make it larger or better

Task 2.

Answer the following questions.

- What does the pharmaceutical quality control laboratory serve?
- What does a significant portion of the CGMP regulations pertain to?
- What does the inspection guide supplement?
- What will be spelled out prior to the inspection.
- What may the inspections include?
- What are FDA Inspection Guides based on?
- Who makes the final decision regarding the assignment of personnel to inspections?
- What must team members participating in a pre-approval inspection do?
- What should be established prior to the inspection?
- What may the Center for Drug Evaluation and Research have issued?

Task 3.

Match the expressions with their translation.

1	regulations	a	сыпучий
2	pertain	b	пищевая добавка
3	bulk	c	заключать
4	supplement	d	подтверждение
5	compliance	e	единообразие
6	spell out	f	нормы
7	encompass	g	соответствие
8	conformance	h	назначение
9	uniformity	i	точно объяснять
10	assignment	j	касаться

Task 4.

Fill in the gaps

The WHO Expert Committee on Specifications for Pharmaceutical Products adopted in 1999 the guidelines entitled WHO Good practices for national pharmaceutical control laboratories, 1.____. As the other guidelines related to laboratory quality assurance have been updated and subsequent inspections for the compliance with the guidelines 2.____indicated that some sections 3.____, it was considered necessary to prepare a revised text.

These guidelines provide advice on the quality management system within which the analysis of active pharmaceutical ingredients (APIs), excipients and pharmaceutical products should be performed 4.____. Compliance with the recommendations provided in these guidelines 5.____and will facilitate cooperation among laboratories 6.____.

Special attention should be given 7.____. Planning and future budgets should ensure that the necessary resources 8.____, as well as for an appropriate infrastructure and energy supply. Means and procedures should be in place (in case of possible supply problems) to ensure that the laboratory can continue its activities.

9.____are applicable to any pharmaceutical quality control laboratory, be it national, commercial or nongovernmental. However, they do not include guidance for those laboratories10.____, e.g. vaccines and blood products. Separate guidance for such laboratories is available.

a. and mutual recognition of results

b. which were published as Annex 3 of the WHO Technical Report Series, No. 902, 2002

c. to demonstrate that reliable results are obtained

- d. on good practices for national pharmaceutical control laboratories
- e. involved in the testing of biological products
- f. will help promote international harmonization of laboratory practices
- g. are available inter alia for the maintenance of the laboratory
- h. These guidelines
- i. to ensure the correct and efficient functioning of the laboratory
- j. were in need of improvement and clarification

Task 5.

Make sentences.

- of the CGMP regulations / the quality control laboratory / A significant portion / pertain to / and product testing.
- pharmaceutical laboratories / used for / This includes / and finished product testing / in-process.
- should receive / Each pharmaceutical quality control laboratory / each two years / as part / a comprehensive GMP evaluation / of the statutory inspection obligation.
- In general / a new product / will be used / the specific methodology / which / to test / these inspections / may include
- We expect that complex / by an experienced laboratory analyst / with specialized knowledge / in such matters / will be evaluated / as well as scientific laboratory operations
- We expect investigators, / and others to work / management / as teams / and / to advise / analysts /
- of the NDA / Relevant sections / to the inspection / should be reviewed / prior / or ANDA

Task 6.

Make nouns from the following verbs

Educate, explain, examine, populate, imagine, present, explore

Task 7.

Make verbs.

Black, sharp, wide, short, length, strength, tight.

UNIT 3. TYPES OF MEDICATIONS



<https://www.realhealthmedical.com/2019/05/01/are-any-of-these-medications-causing-your-joint-pain/>

BEFORE YOU READ

1. Problem solving task and topics for discussion with your partner.

Who were the first to use drugs?

Why are some medications sold only with a prescription of a doctor but others aren't?

Why do we use Latin names for medications?

Which drugs are used to diagnose diseases?

What do you think of generics?

Can a substance which is not recognized by an official pharmacopoeia be a medication?

What information should a description of a medication include?

EXTEND VOCABULARY KNOWLEDGE

2. Place the letter of the term beside the correct definition.

1	___ A method of introducing a drug into the bloodstream via a hollow hypodermic needle and a syringe	a	drug
2	___ A medicated adhesive patch that is placed on the skin to deliver a medication into the skin	b	insufflation
3	___ A substance or procedure that ends	c	injection

	a medical condition, such as a medication, a surgical operation, a change in lifestyle or even a philosophical mindset that helps end a person's sufferings		
4	___ Any substance that causes a change in a person's physiology or psychology when consumed	d	ingestion
5	___ The process of determining which disease or condition explains a person's symptoms and signs	e	absorption
6	___ A particular abnormal condition that negatively affects the structure or function of part or all of an organism	f	patch
7	___ A route by which substances can enter the body through the skin	g	cure
8	___ The act of blowing something	h	diagnosis
9	___ Human health condition or disease that is persistent or otherwise long-lasting in its effects or a disease that comes with time.	i	disease
10	___ The consumption of a substance by an organism	j	chronic condition

LISTENING 3



https://www.youtube.com/watch?time_continue=6&v=gY-U9F5oTng

Listen to the abstract and fill in the gaps. More than one word is possible:

1. What are "older" antidepressant medications?
2. What do all the antidepressant medications work on?
3. What do the tricyclic antidepressants do?
4. What do the monoamine oxidase inhibitors do?
5. What are the dietary restrictions when using antidepressants?
6. What should the patients do if they get a headache or chest pain?

Refresh your grammar. Fill in the gaps the proper tense

Present Simple

always

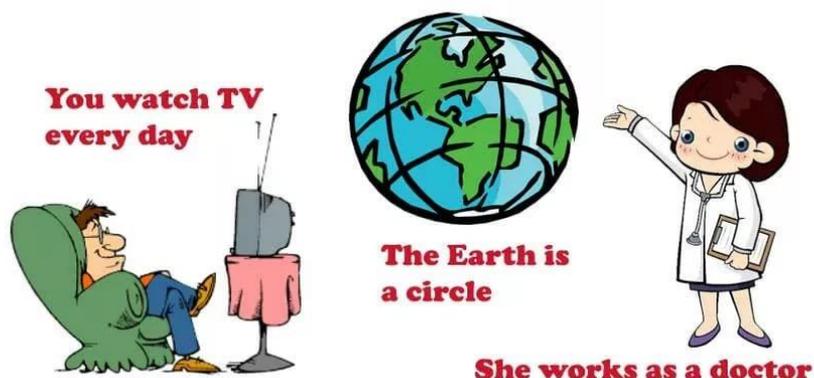
usually

sometimes

generally

never

Present simple примеры



- The pharmaceutical quality control laboratory **serves** one of the most important functions in pharmaceutical production and control.
- A significant portion of the CGMP regulations (21 CFR 211) **pertain** to the quality control laboratory and product testing.
- Similar concepts **apply** to bulk drugs.
- This inspection guide **supplements** other inspectional information contained in other agency inspectional guidance documents.
- For example, Compliance Program 7346.832 requiring pre-approval NDA/ANDA inspections **contains** general instructions to conduct product specific NDA/ANDA inspection audits to measure compliance with the applications and CGMP requirements.

Present Continuous

now

at the moment

around now

Describe the picture



Подлежащее + to be (is, am, are) + глагол(ing) + now
The girls + are + playing + now.

<https://infourok.ru/prezentaciya-k-uroku-po-uchebnomu-predmetu-angliyskiy-yazik-v-om-klasse-na-temu-te-present-continuous-tense-2961803.html>

- Look. The pharmacist is identifying the drug.
- The specific objective is being spelled out prior to the inspection.
- I am going to the drugstore down the street to fill a prescription at the pharmacy.
- They are waiting in line.
- The pharmacist is talking to her.

Present Perfect Simple

before now

from then until now

since

Употребление Present Perfect

Действие произошло (завершилось) **до момента речи**, но мы видим его результат **сейчас**.

The cat **has made** a sandcastle.
Кот **построил** замок.



Упоминание о чем то **опыте**.

*I **have been to** Paris. Я был в Париже.*



<https://en.ppt-online.org/275711>

- The pharmacist **has already given** her a drug.
- They **have taken** drugs. Now they are having rest.
- He **has chosen** the necessary drug.
- The patient **has already ordered** his prescription.
- he **has handed** his prescription to the pharmacist by this time.

Present Perfect Continuous

from then until now

since (without stopping)

Present Perfect Continuous Tense



He **has been sleeping** for five hours.



The kids **have been playing** since morning.

<https://www.englishcafe.co.id/contoh-percakapan-bahasa-inggris-present-perfect-continuous/>

- Since the 19th-century phatmacists have been working out this drug.
- Pharmacy has been connecting many sciences all the period.
- Alchemists have been discovered many of the chemical processes while trying to change ordinary metals into gold.
- He has been studying different subjects, such as physics, chemistry, botany, etc these years.

1. I _____ (work) as a shop assistant but I will stop when I go back to university in October.
 - a. work
 - b. is working
 - c. has worked
2. I _____ (live) in Canada at the moment and _____ (study) at the pharmacy school.
 - a. live/study
 - b. am living/am studying
 - c. have lived/have studied
3. He _____ hardly ever _____ (take) any medicine.
 - a. takes
 - b. is taking

c. has taken

4. The total number of drugs _____ (increase) all the period.

a. increases

b. is increasing

c. has been increasing

5. (Have)_____ any problems with your back?

a. Are having

b. Have had

c. Have been having

6. Countries _____ (struggle) to make quality drugs available.

a. struggle

b. are struggling

c. have been struggling

7. The kettle _____ (boil). Can you turn it off?

a. boils

b. has boiled

c. has been boiling

VIDEO CLASS «Chemical Elements»

Video 3.



https://www.youtube.com/watch?time_continue=123&v=Ir5yI_Av-is

5. Watch an episode about Antihypertensive drugs and match the beginnings with their endings:

1. Thiazide diuretics	a. inhibit angiotension II
2. Block B-receptors	b. dilate blood vessels.
3. Calcium channel blockers	c. are the 1 st line drugs in mild to moderate hypertension.

4. Act Inhibitors	d. is the example of B-Blockers.
5. Angiotension II	e. is the example of ACE Inhibitors.
6. Vasodilators	f. there by decrease Heart rate and G.O.
7. Chlorthiazid	g. is the example of Calcium channel blockers.
8. Propranolol	h. is the example f diuretics.
9. Captopril	i. prevent entry of calcium.
10. Nifidipine	j. cause vasoconstrictions and increase B.P

COMPREHENSION

6. Read the text and decide whether the following statement true (T) or false (F).

Types of Medicine

WWW.THEENGLISHSTUDENT.COM

SYMPTOMS & PROBLEMS

<p>INFECTION?</p>  <p>ANTIBIOTIC</p>	<p>PAIN OR FEVER?</p>  <p>PAIN RELIEVER FEVER REDUCER</p>	<p>COUGH?</p>  <p>COUGH SUPPRESSANT</p>	<p>ALLERGIES?</p>  <p>ANTIHISTAMINE</p>	<p>STUFFY NOSE?</p>  <p>DECONGESTANT</p>	<p>INDIGESTION?</p>  <p>ANTACID</p>
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FORMS OF MEDICINE

 <p>LIQUID / SYRUP THICK LIQUID MEDICINE THAT YOU DRINK</p>	 <p>TABLET USUALLY ROUND AND OVAL IN SHAPE</p>	 <p>CAPSULE MEDICINE CONTAINED INSIDE A SHELL</p>	 <p>LOZENGES A SMALL CANDY-LIKE MEDICINE THAT DISSOLVES IN YOUR MOUTH</p>	 <p>CREAM / OINTMENT MEDICINE THAT LOOKS LIKE LOTION YOU APPLY ON SKIN</p>	 <p>DROPS LIQUID MEDICINE YOU 'DROP' INTO EYES, EARS</p>	 <p>SPRAY LIQUID MEDICINE THAT YOU SPRAY INTO YOUR NOSE OR ON SKIN</p>
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OVER THE COUNTER VS. PRESCRIPTION DRUGS
 PRESCRIPTION DRUGS THAT CAN ONLY BE PURCHASED WITH A CONSENT FROM A DOCTOR AND PURCHASED THROUGH A PHARMACIST.
 OVER-THE-COUNTER DRUG (OTC) CAN BE BOUGHT WITHOUT PRESCRIPTION.

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**This guide is a general presentation of English vocabulary to speakers of other languages related to different kinds and forms of medicine. Please always follow instructions or consult you doctor before taking any medication. The creator of this image does not bear any responsibly related to usage of these drugs.

<https://www.realhealthmedical.com/2019/05/01/are-any-of-these-medications-causing-your-joint-pain/>

<https://www.pinterest.ru/pin/443182419556801814/>

Types of medicines

1. No medicines come only in one type.
2. The active part of the medicine is combined with a liquid to make it easier to take or better absorbed.

3. There is one type of tablets.
4. All the capsules need to be swallowed whole so the medicine is not absorbed until the stomach acid breaks down the capsule shell.
5. Creams, lotions or ointments are applied directly onto the skin.
6. Drops are often used where the active part of the medicine works best if it reaches the affected area directly.

Most medicines come in a variety of types or formats. Be aware, though, that some medicines (particularly rare or unusual ones) only come in one type. Also, some may be more effective in one type than another.

Preparations

In the UK, medicines often come in some of the following preparations:

Liquid

The active part of the medicine is combined with a liquid to make it easier to take or better absorbed. A liquid may also be called a 'mixture', 'solution' or 'syrup'. Many common liquids are now available without any added colouring or sugar.

Tablet

The active ingredient is combined with another substance and pressed into a round or oval solid shape. There are different types of tablet. Soluble or dispersible tablets can safely be dissolved in water.

Capsules

The active part of the medicine is contained inside a plastic shell that dissolves slowly in the stomach. Some capsules can be taken apart so the contents can be mixed with a favourite food. Others need to be swallowed whole so the medicine is not absorbed until the stomach acid breaks down the capsule shell.

Other types of medicine include the following:

Topical medicines

These are creams, lotions or ointments that are applied directly onto the skin. They come in tubs, bottles or tubes depending on the type of medicine. The active part of the medicine is mixed with another substance that makes it easy to apply to the skin.

Suppositories

The active part of the medicine is combined with another substance and pressed into a 'bullet shape' so it can be inserted into the rectum (back passage). Suppositories must not be swallowed.

Drops

These are often used where the active part of the medicine works best if it reaches the affected area directly. They tend to be used for **eye, ear or nose**.

Inhalers

The active part of the medicine is released under pressure directly into the lungs. Young children may need to use a 'spacer' device to take the medicine properly. Inhalers can be difficult to use at first so your pharmacist will show you how to give them.

Injections

There are various types of injection, differing in how and where it is injected. Subcutaneous or SC injections are given just under the surface of the skin. Intramuscular or IM injections are given into a muscle. Intrathecal injections are given into the fluid around the spinal cord. Intravenous or IV injections are given into a vein. Some injections can be given at home but most are given at your doctor's surgery (GP) or in hospital.

Implants or patches

Some medicines are absorbed by the body through the skin, such as nicotine patches for help in giving up smoking or contraceptive implants.

Buccal or sublingual tablets or liquids

These look similar to normal tablets or liquids but they are not swallowed. Buccal medicines are held in the cheek so that the mouth lining absorbs the active ingredient. Sublingual medicines work in the same way but are put underneath the tongue. Buccal and sublingual medicines tend only to be given in very specific circumstances.

Final words

When your doctor is prescribing medicine, remember to ask about the different formats available. If you know from experience that your child prefers tablets to liquids, please tell your doctor. Wherever possible, he or she will prescribe the

medicine in a format that makes it easier for your child to take it. You can also discuss this with your pharmacist when you hand in the prescription.

<https://www.gosh.nhs.uk/conditions-and-treatments/health-dictionary>

7. Extend your knowledge in classification of medicines. Which classes of drugs according to their use do you know? Use the following key words and expressions: is used for, to stop, to prevent, to reduce, to rise, to normalize. Give examples.

Classification of drugs.

One of the key classifications is between traditional small molecule drugs; usually derived from chemical synthesis, and biologic medical products; which include recombinant proteins, vaccines, blood products used therapeutically (such as IVIG), gene therapy, and cell therapy (for instance, stem cell therapies).

Pharmaceuticals or drugs or medicines are classified in various other groups besides their origin on the basis of pharmacological properties like mode of action and their pharmacological action or activity, such as by chemical properties, mode or route of administration, biological system affected, or therapeutic effects. An elaborate and widely used classification system is the Anatomical Therapeutic Chemical Classification System (ATC system). The World Health Organization keeps a list of essential medicines.

A sampling of classes of medicine includes:

1. Antipyretics: reducing fever (pyrexia/pyresis)
2. Analgesics: reducing pain (painkillers)
3. Antimalarial drugs: treating malaria
4. Antibiotics: inhibiting germ growth
5. Antiseptics: prevention of germ growth near burns, cuts and wounds
6. Mood stabilizers: lithium and valpromide
7. Hormone replacements: Premarin
8. Oral contraceptives: Enovid, "biphasic" pill, and "triphasic" pill
9. Stimulants: methylphenidate, amphetamine
10. Tranquilizers: meprobamate, chlorpromazine, reserpine, chlordiazepoxide, diazepam, and alprazolam
11. Statins: lovastatin, pravastatin, and simvastatin

Pharmaceuticals may also be described as "specialty", independent of other classifications, which is an ill-defined class of drugs that might be difficult to administer, require special handling during administration, require patient monitoring during and immediately after administration, have particular regulatory requirements restricting their use, and are generally expensive relative to other drugs.

<https://en.wikipedia.org/wiki/Medication>

8. Write down the classes of these drugs.

Paracetamol, Rantidine, Amoxicilin, Codeine, Peniciline, Insulin, Humira, Crestor, Nexium, Remicade.

9. Give 3 examples of each class of medicines.

Antipyretics, Analgesics, Antibiotics, Antibiotics, Antiseptics, Mood stabilizers, Hormone replacements, Oral contraceptives, Stimulants, Tranquilizers, Statins.

10. Pronounce the following.

Acetylsalicylic acid, isobutylphenylpropionic acid, atorvastatin, Daclahep, Chemlet, Mitotax. Xtane. Zyceva. Triomune. Capegard.

11. Give the Russian equivalents.

The neutron activation analysis
raw material
vegetal origin
organoleptic characters
manipulated product
multielemental technique
irradiated by neutrons
the batch production of medicines
magistral and officinal preparations
Cosmetic Sanitizing

12. Read the equation using the verbs in the box and two models of reading.

Read following formulas of drugs. Say their names.

C₁₃H₂₀N₂O

C₉H₈O₄

C₁₉H₂₀N₂O

C₃₃H₃₄N₄O₆

C₁₀H₁₅BrO

C₅₉H₉₀O₄

C₅₅H₈₆O₂₄

C₃₃H₃₅FN₂O₅

C₅₅H₈₆O₂₄

C₁₃H₂₁NO₃

13. Try to interpret a chemical formula of drugs.

Example 1. How many atoms of each element are there in one formula unit of ammonium sulfide?

Ammonium Sulfide is $(\text{NH}_4)_2\text{S}$ Remember that a subscript pertains only to the element that precedes it, unless it precedes parenthesis, in which case it is a multiplier for each element in the parenthesis.

$(\text{NH}_4)_2\text{S}$ 2 atoms of nitrogen; 8 atoms of hydrogen; and 1 atom of sulfur.

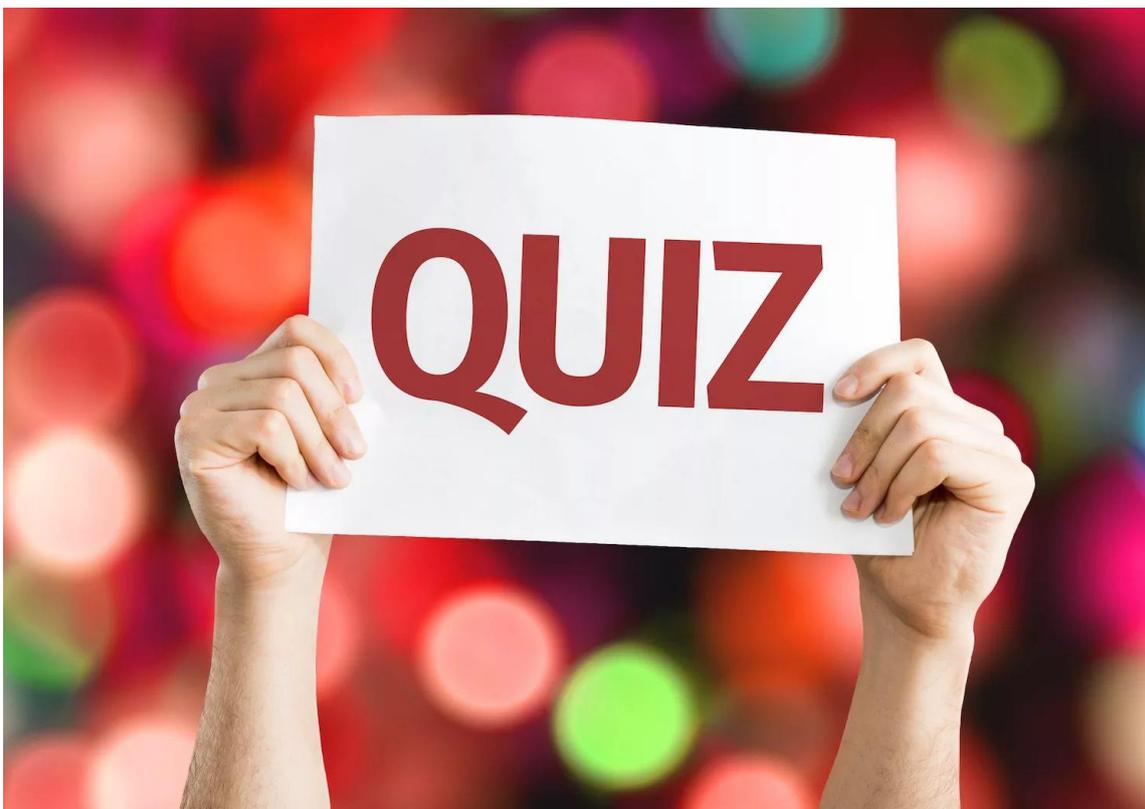
Example 2. How many atoms of each element are there in one formula unit of barium nitrate? Barium Nitrate = $\text{Ba}(\text{NO}_3)_2$ Now, the subscript 3 pertains only to the oxygen, but the subscript 2 becomes a multiplier for each element in the parenthesis. Therefore; $\text{Ba}(\text{NO}_3)_2$ 1 atom of barium; 2 atoms of nitrogen; and 6 atoms of oxygen.

Gliclazide	$\text{C}_{15}\text{H}_{21}\text{N}_3\text{O}_3\text{S}$
Glibenclamide	$\text{C}_{23}\text{H}_{28}\text{ClN}_3\text{O}_5\text{S}$
Glibornuride	$\text{C}_{18}\text{H}_{26}\text{N}_2\text{O}_4\text{S}$
Gliquidone	$\text{C}_{27}\text{H}_{33}\text{N}_3\text{O}_6\text{S}$
Glisoxepide	$\text{C}_{20}\text{H}_{27}\text{N}_5\text{O}_5\text{S}$
Glycropyramide	$\text{C}_{11}\text{H}_{14}\text{ClN}_3\text{O}_3\text{S}$
Glimepiride	$\text{C}_{24}\text{H}_{34}\text{N}_4\text{O}_5\text{S}$
Afloqualone	$\text{C}_{16}\text{H}_{14}\text{FN}_3\text{O}$
Cloroqualone	$\text{C}_{16}\text{H}_{12}\text{Cl}_2\text{N}_2\text{O}$
Halofuginone	$\text{C}_{16}\text{H}_{17}\text{BrClN}_3\text{O}_3$

DEVELOP YOUR SPEAKING SKILLS



<https://bloggingfairtrade.com/10-benefits-of-good-online-courses-to-improve-communication-skills/>



<https://www.coindesk.com/quiz-this-weeks-bitcoin-news?amp>

16. Pharmaceutical quiz

Self-Check Quiz (you are allowed to use hints given below)

1. A change in which one or more substances are converted into new substances is a _____
 - a. physical change
 - b. nuclear reaction
 - c. chemical change
 - d. chemical fusion

2. In which of the following titration “oxidation-reduction” (Redox) step can be expected:
 - a. acid-base titration
 - b. ceriometry
 - c. Gay-Lussac method
 - d. gravimetry

3. The system of measurement in which liquid is measured in drams is the ____.

- a. apothecary system
- b. household system
- c. metric system
- d. imperial system

4. One cubic centimeter is equal to:

- a. 1 minum
- b. 1 ml
- c. 1mg
- d. 1L

5. Which of the following is not a liquid dosage form?

- a. Suspension
- b. Tincture
- c. Pulvule
- d. Syrup

6. A dosage form where particles of a drug are completely dissolved in a liquid is called a:

- a. emulsion
- b. tincture
- c. suspension
- d. solution

7. The preparation of a specific dosage form for a patient with specific needs is called:

- a. product formulation
- b. bulk compounding
- c. extemporaneous compounding
- d. bulk manufacturing

8. An ophthalmic preparation would be placed in the:

- a. nose
- b. mouth
- c. ear
- d. eye

8. Parenteral preparations must be prepared:
- using aseptic techniques
 - in the absence of light
 - under sanitary conditions
 - quickly
9. Which of the following types of tablets goes underneath the tongue?
- Sublingual tablets
 - Tablets for oral use
 - Buccal tablets
 - Tablets for dissolution

GRAMMAR FOCUS Word-Building



Learn and practice the word formation.

Word formation is one of the major mechanisms for the expansion of the vocabulary. The following information and exercises facilities extend your vocabulary acquisition.

I. The suffix-al

This forms adjectives from the corresponding nouns, e.g. 'practical' practice, 'theoretical' from theory. Adjectives from the names of sciences ending in-ics also take this suffix, e.g. mathematics –mathematical.

Note: theory – theoretical; geometry – geometrical; hypothesis – hypothetical; technique – technical; machine – mechanical; centre – central; air – aerial; cycle – cyclical.

II. The prefixinter- This is added to verbs and derivatives to give the extra meaning of: between, among, one with the other, e.g.interconnection, interaction.

Exercise A:

Form adjectives from the following:

dependent; related; national.

Exercise B:

Form verbs from the following, using the prefix inter– in all cases:

act; breed; change; connect.

The suffix –ize

This forms verbs from nouns and adjectives, and has the meaning: to cause to be or have, or: to subject to a process of, e.g. analogizing is equivalent to: subjecting (the problem) to a process of analogy.

Note: frequently spelt –ise

Exercise C:

By adding –ize form verbs from the following:

standard; special; local; pressure; theory; sterile; popular; familiar; neutral; optimum.

Note: analyse, from analysis; paralyse, from paralysis; minimize, from minimum; maximize, from maximum; and utilize, from use. In technical literature this suffix is sometimes used with the names of persons or places associated with certain processes, e.g. macadamize (road engineering), pozzuolize (geology and engineering), and pasteurize (food technology).

III. The prefix dis–

This is attached to words, mainly verbs and their derived adjectives and nouns, to give a negative or opposite meaning, e.g.: disconnect the opposite of to connect; disorganized, meaning not organized, etc.

Exercise:

Add the prefix dis– to form opposites of the following: (nouns):

ability; advantage; appearance; order; use. (verbs): agree; like; prove; integrate. (adjective): similar.

TEST 3

THE DIFFERENT TYPES OF ANXIETY MEDICATION



There are many types of medication that can be used to treat anxiety disorders, which include benzodiazepines, a traditional anxiety drug and newer options like beta-blockers and antidepressants. These medications are very effective and provide temporary relief of the anxiety disorder. However, you should beware of the side effects caused by anxiety medication. Once you start taking anxiety medication, it becomes difficult to stop them, which makes you an addict of the medication, but it relieves the anxiety quickly. To decide the right medication for you, visit a doctor and weigh the benefits of the recommended medication against its drawback. Here are the main types of anxiety medicine:

Tranquilizers / benzodiazepines

These anxiety drugs slow down your central nervous system and therefore relieve the anxiety. They have a calming and relaxing effect, which makes them very popular. They are the most prescribed drugs for anxiety. The tranquilizers can also be used as muscle relaxants as well as sleeping pills. These drugs include:

- Valium (diazepam)
- Ativan (clonazepam)
- Xanax (alprazolam)
- Klonopin (clonazepam)

These drugs act very fast bringing relief in thirty minutes.

Despite the potential of benzodiazepines, they have their side effects, which include Blurred or double vision, Clumsiness, slow reflexes, Slurred speech, Impaired judgment and thinking, Confusion and disorientation, Memory loss, forgetfulness, Drowsiness, lack of energy, Dizziness, lightheadedness, Depression,

Nausea and stomach upset. Tranquilizers also causes depression and long-term intake increases the risk of suicidal feelings and thoughts as well as depressive symptoms. Moreover, Tranquilizers can cause numbness and emotional blunting. Benzodiazepines relieves anxiety but blocks feelings of pain and pleasure.

Anxiety medication also causes paradoxical excitement which include irritability, agitation and increased anxiety. More severe effects include Hallucinations, Mania, Aggressive or impulsive behavior, Hostility and rage. Although rare, these affects are very dangerous but more common in the elderly, people with disabilities and children.

Antidepressant medications for anxiety

The risk of abuse and dependency when using antidepressants are smaller, thus antidepressants are preferred to Tranquilizers. However, antidepressants take a longer time to relieve the symptoms of anxiety so they would not help instantly. They can take up to six weeks to relieve the anxiety. They are therefore not recommended when one is in panic attack. The use of antidepressants is limited to treatments that need ongoing treatment such as anxiety problems.

The most recommended antidepressants are the SSRIs such as:

- Celexa
- Prozac
- Paxil
- Lexapro
- Zoloft

The common side effects of antidepressants are sexual dysfunction, Nausea, Dizziness, Nervousness, Weight gain, Sleepiness, Stomach upset and Headaches

Bupirone (BuSpar)

This is a new anxiety medication. It acts by decreasing dopamine and increasing serotonin in your brain. Bupirone acts slower than the traditional anxiety drugs taking up to two weeks to start relieving the anxiety. However, its advantage over the traditional anxiety drugs is that it is not sedating, it is not addictive , it has minimal withdrawal effects and it does not impair coordination and memory. Its side effects are Dry mouth, Headaches, Constipation, Dizziness, Diarrhea, Drowsiness and Nausea.

Beta blocker medications for anxiety

This is a type of medication that is used in treating heart problems and blood pressure. However, they can also be used as anxiety medication. Beta blocker acts by blocking norepinephrine effects enabling them to control anxiety physical symptoms

such as a trembling voice and shaky hands. Their side effects include nausea and sleepiness.

There you have the types of anxiety medications most commonly prescribed.

<http://typeslist.com/types-of-anxiety-medication/>

Task 1.

Match the following words and phrases to their definitions:

a) Anxiety disorders, b) tranquilizers, c) forgetfulness, d) mania, e) dopamine

• a group of mental disorders characterized by significant feelings of anxiety and fear

• refers to a drug which is designed for the treatment of anxiety, fear, tension, agitation, and disturbances of the mind:

• an organic chemical of the catecholamine and phenethylamine families

• the quality of being forgetful

• a group of mental disorders characterized by significant feelings of anxiety and fear

• a state of abnormally elevated arousal, affect, and energy level

Task 2.

Answer the following questions.

- Which types of medications can be used to treat anxiety disorders?
- How fast do anxiety drugs act?
- Which side effects do anxiety drugs usually have?
- What do the most severe side effects include?
- What is the difference between antidepressants and tranquilizers?
- What are the most recommended antidepressants?
- How does buspirone act?
- What are beta blocker medications?
- What are their side effects?
- What are the most popular anxiety drugs in Russia?

Task 3.

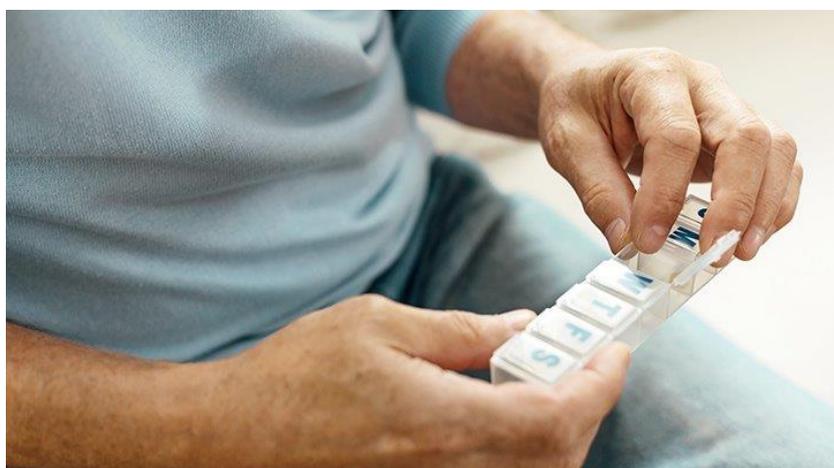
Match the expressions with their translation.

1	Anxiety disorders	a	a drug that affects skeletal muscle function and decreases the muscle tone
2	Beta blockers	b	The quality of becoming annoyed very easily
3	relief	c	any acute or throbbing pain felt throughout the skull
4	drawback	d	an unpleasant effect of a drug that happens in addition to the main effect
5	Muscle relaxant	e	to cause a person or animal to be very calm or go to sleep by giving them a drug
6	Side effects	f	a disadvantage or problem
7	irritability	g	group of <u>mental disorders</u> characterized by significant feelings of <u>anxiety</u> and <u>fear</u>
8	headache	h	immediately
9	instantly	i	a feeling of happiness that something unpleasant has not happened
10	sedating	j	a class of medications that are predominantly used to manage abnormal heart rhythms

Task 4.

Fill in the gaps

The medication your doctor prescribes for your anxiety will depend on your symptoms and type of anxiety disorder.



Each anxiety disorder 1_____, but Ken Duckworth, MD, the medical director for the National Alliance on Mental Illness and an assistant professor of psychiatry at Harvard Medical School in Boston, says many people with these disorders can benefit from this three-pronged approach: psychotherapy, exercise, and medication.

Each person may need 2_____, and in different orders. "There's no magic in the treatment of anxiety," says Dr. Duckworth.

"Some people will get better with psychotherapy alone, 3_____. Anxiety and depression can decrease motivation to exercise, but medication may give you the energy to do it." Also, says Duckworth, a patient may need more than one medication.

There are several types of medications 4_____.

- Antidepressants
- Benzodiazepines
- Bupropion
- Hydroxyzine
- Beta-blockers

Within each of these categories, there are subgroups of drugs 5_____.

According to the American Academy of Family Physicians, antidepressants are often used 6_____. SSRIs, or selective serotonin reuptake inhibitors in particular, are the kind of antidepressants that are most often prescribed. They help make serotonin, a neurotransmitter that helps maintain mood, become more available to the brain.

These medications often take six to eight weeks, or longer, 7_____.

"They're super effective in treating anxiety disorders," says Beth Salcedo, MD, medical director of The Ross Center for Anxiety & Related Disorders 8_____. It's not known exactly how SSRIs work on serotonin to alleviate anxiety, says Dr. Salcedo, 9_____.

It's important 10_____. Talk to your doctor if you're concerned about the side effects of a medication, or if the drug you're taking doesn't seem to be helping with your symptoms.

<https://www.everydayhealth.com/anxiety/guide/medications/>

- a. a different combination of these three elements
- b. has different symptoms

- c. while some people might need medication to help them concentrate better on the therapy
- d. as the first line of treatment
- e. used to treat anxiety disorders
- f. that work differently and have their own benefits, risks, and possible side effects
- g. to be fully effective
- h. to follow your doctor's instructions when taking any prescription drug
- i. and board president of the Anxiety and Depression Association of America
- j. but what is known is that they're not addictive

Task 5.

Make sentences.

1. by heart-pounding panic / you'll do just about anything to get relief. / When you're overwhelmed, / paralyzed by fear, or exhausted from yet another sleepless night spent worrying,
2. that when anxiety is disabling, / And there's no question / medication may help.
3. always / But are drugs / the best answer?
4. including traditional anti-anxiety drugs / are used in the treatment of anxiety disorders / Many different types of medications, / such as benzodiazepines (typically prescribed for short-term use) and newer options like SSRI antidepressants (often recommended as a long-term anxiety solution).
5. can provide temporary relief, / These drugs / but they also come with side effects and safety concerns — some significant.
6. also / not a cure / They are.
7. about their long-term effectiveness. / there are many questions / In fact,
8. benzodiazepines lose their therapeutic anti-anxiety effect / According to the American Academy of Family Physicians, / after 4 to 6 months of regular use.
9. reported in *JAMA Psychiatry* / found that the effectiveness of SSRIs in treating anxiety / And a recent analysis / has been overestimated, / and in some cases is no better than placebo.
10. it can be very difficult / / What's more, / that can be worse than your original problem. / to get off anxiety medications including rebound anxiety

Task 6.**Make nouns from the following verbs**

Prescribe, depend, benefit, decrease, exercise, prescribe, treat, concern, concentrate, addict.

Task 7.**Make adjectives**

Tradition, effect, nerve, calm, emotion, paradox, impuls, danger, minimum.

UNIT 4. IN A PHARMACY



<https://moscowcityparty.ru/wp-content/themes/pridezz/index5.php?yhs=brendale-chemworld-chemist>

BEFORE YOU READ

1. Problem solving task and topics for discussion with your partner.

1. What a pharmacist is, what a pharmacist does, and what type of salary and career opportunities you can expect as a pharmacist.
2. What reasons make you choose to be a : interest, curiosity; risk excitement; moral inclination sense of community; good health; diligence and being good with the hands?

EXTEND YOUR VOCABULARY KNOWLEDGE

2. Place the letter of the term beside the correct definition.

Definition	Term
1. _____ is a shop where you can buy medicines, make-up, and other things such as chocolate	medicine
2. _____ is treatment for illness or injury	a small solid piece of medicine that a person swallows without chewing
3. _____ is a treatment for pain or illness in which thin needles are positioned just under the surface of the skin at special points around the body	drugstore
4. _____ a small solid piece of medicine that a person swallows without chewing	cough
5. _____ an act of forcing air out of your lungs through your throat with a short, loud sound, often unwillingly	acupuncture

3. Find out with your partner different types of medicines. Give your own definition and discuss:

1. Why people use them
2. How they work
3. What are their side effects.

VIDEO CLASS



Video 4.

<https://www.youtube.com/watch?v=hAUNC8pRCXM>

4. Watch an episode about pharmacy. After watching it answer the following questions:

1. What kind of medication does patient ask for?
2. What is the problem?

3. Does she have a temperature?
4. Is she allergic to any drugs?
5. What is the dosage?
6. How much is the medication?

DEVELOP YOUR READING SKILLS

At a pharmacy

Speak about the work of pharmacy. ·

Do you agree with the following 'Modern life is impossible without pharmacies'. If not, give your arguments.



<https://yandex.ru/collections/user/dmitrychvw/>

Pill Savvy: What to Consider

Do you have to wait for service? You're less likely to wait at an independent pharmacy than at another type of store, according to our survey. Only 3 percent of customers at independent pharmacies reported that they waited a long time at the pharmacy counter to be helped; 18 percent said the same of pharmacy chains.

And members who used an independent pharmacist were far more likely to say that the pharmacy went out of its way to fill prescriptions faster: Forty-one percent of people said that happened at independent pharmacies vs. just 20 percent at pharmacy chains.

Are your medications in stock? Overall, 21 percent reported that a drug they needed was out of stock in the past year. As a group, independents were more likely than other types of pharmacies to fill the prescription later that same day or the next.

How much will you pay? Members who went to independent pharmacies were also more likely to report that the pharmacist suggested a lower-cost drug—21 percent—while only 9 percent reported chain pharmacists offering them a lower-price option. Worse, national chains tended to have some of the highest out-of-pocket prices. While prices at independents fell in the middle, CR members said they found the lowest prices at Costco (you don't have to be a Costco member to fill prescriptions at the pharmacy). CR secret shoppers found that some independent and grocery store pharmacies can offer even lower prices than Costco—you'll just need to call around in your area and ask for their "cash" or retail price. See more below on how to save money on your meds. If you have health insurance, double-check your plan to be sure you're getting the lowest prices at your pharmacy. Some plans—through Medicare Part D or an employer—have negotiated discounts with "preferred" pharmacies or mail-order plans.

Does your pharmacy offer discounts? Many stores offer deals on commonly prescribed generics for people who pay for the prescription outright rather than using insurance: \$4 for a 30-day supply or \$10 for three months' worth. But check the fine print. There may be a small fee to sign up, and not all discount programs are open to people on Medicare, Medicaid, and Tricare (the health plan for the military). And aside from those \$4 and \$10 deals, we found that the discounted prices at retail pharmacy chains were often still higher than the out-of-pocket price you pay at Costco.

Does your pharmacy offer preventive care? Rules vary by state, but many drugstores now offer vaccinations for chickenpox, the flu, hepatitis A and B, human papillomavirus (HPV), measles, pertussis (whooping cough), pneumonia, polio, shingles, and tetanus. Stores that provide travel immunizations, including Target and Walgreens, also cover vaccines for meningitis, typhoid, and other diseases.

Some pharmacies offer health and wellness programs. For example, Walgreens will perform a weight analysis based on waist circumference, body mass index, and body composition (percentage of body fat and skeletal muscle), as will some independents. Kroger pharmacies and others offer smoking-cessation programs. If you try one, be sure that the pharmacist is certified and trained to provide such counseling, and let your doctor know that you've entered the program.

Do you need personalized services? Do you ever forget to take medications? Some independent pharmacies place pills in individualized packets so that knowing which pills to take at which times is easy. Walmart and Rite Aid do something similar if you ask for the service, as does an online pharmacy called [PillPack](#). Need customized medication? Most independents offer compounding to tailor medication

for specific needs. They can make a medication without a certain dye for a patient with an allergy, for example, or create a liquid version of a drug for a patient who has trouble swallowing pills. Independents may also specialize in stocking certain medical items such as walkers, canes, oxygen, and ostomy supplies.

Bonus: They know you. A whopping 53 percent of members said independent pharmacists knew their name. Only 14 percent of people could say the same of chain pharmacies.

<https://www.consumerreports.org/cro/pharmacies/buying-guide/index.htm>

SPEAKING SKILLS DEVELOPMENT

What do Pharmacists in a drug store do?

Imagine you are a pharmacist in a drug store. What would you tell someone interested in becoming a pharmacist about your job? Please share information about your career so that someone thinking about becoming a pharmacist can make an informed decision.

What do you do as a pharmacist?

What is the best/worst part of your job?

What training did you need?

Was it easy/difficult to find a job as a pharmacist?

Are you happy being a pharmacist? Prove it.

What advice would you give someone interested in pharmacy?

Pharmacists, also known as **chemists** or **druggists**, are health professionals who practice in pharmacy, the field of health sciences focusing on safe and effective medication use. Pharmacists undergo university-level education to understand the biochemical mechanisms and actions of drugs, drug uses, therapeutic roles, side effects, potential drug interactions, and monitoring parameters. This is mated to anatomy, physiology, and pathophysiology. Pharmacists interpret and communicate this specialized knowledge to patients, physicians, and other health care providers.

Among other licensing requirements, different countries require pharmacists to hold either a Bachelor of Pharmacy, Master of Pharmacy, or Doctor of Pharmacy degree.

The most common pharmacist positions are that of a community pharmacist (also referred to as a *retail pharmacist*, *first-line pharmacist* or *dispensing chemist*), or a hospital pharmacist, where they instruct and counsel on the proper use and adverse effects of medically prescribed drugs and medicines. In most countries, the profession is subject to professional regulation. Depending on the legal scope of

practice, pharmacists may contribute to prescribing (also referred to as "pharmacist prescriber") and administering certain medications (e.g., immunizations) in some jurisdictions. Pharmacists may also practice in a variety of other settings, including industry, wholesaling, research, academia, military, and government.

<https://en.wikipedia.org/wiki/Pharmacist>

LISTENING "IN A DRUG STORE"



Listening 3.

Listen to the dialogue

Find the translation of Russian phrases

Listen to the phrases. Drag the English phrases from the list below and drop them into the corresponding fields.

Phrase 1

Phrase 2

Phrase 3

Phrase 4

Phrase 5

Phrase 6

Phrase 7

Phrase 8

Phrase 9

- a. The total sum is 312 roubles.
- b. I'll give you nasal spray.
- c. I recommend you to buy this antiviral drug.
- d. I have a running nose and a sore throat.
- e. Could you please recommend me some good medicine?
- f. Use it twice a day: in the morning and in the evening.
- g. Do you have a high temperature?
- h. During 3 days at the very least.
- i. Take one pastille every 4 hours.

DEVELOP YOUR SPEAKING SKILLS

6. Look through the pharmacist' duty discuss with your partner and rearrange them in order of importance. May be some duties are missed. Mention your own ideas.

Main duties pharmacists perform some or all of the following duties:

Prepares medications by reviewing and interpreting physician orders; detecting therapeutic incompatibilities.

- Dispenses medications by compounding, packaging, and labeling pharmaceuticals.

- Controls medications by monitoring drug therapies; advising interventions.

- Completes pharmacy operational requirements by organizing and directing technicians' work flow; verifying their preparation and labeling of pharmaceuticals; verifying order entries, charges, and inspections.

- Provides pharmacological information by answering questions and requests of health care professionals; counseling patients on drug therapies.

- Develops hospital staff's pharmacological knowledge by participating in clinical programs; training pharmacy staff, students, interns, externs, residents, and health care professionals.

- Complies with state and federal drug laws as regulated by the state board of pharmacy, the drug enforcement administration, and the food and drug administration by monitoring nursing unit inspections; maintaining records for controlled substances; removing outdated and damaged drugs from the pharmacy inventory; supervising the work results of support personnel; maintaining current registration; studying existing and new legislation; anticipating legislation; advising management on needed actions.

- Protects patients and technicians by adhering to infection-control protocols.

- Maintains safe and clean working environment by complying with procedures, rules, and regulations.

- Maintains pharmacological knowledge by attending educational workshops; reviewing professional publications; establishing personal networks; participating in professional societies.

- Contributes to team effort by accomplishing related results as needed.

<https://hiring.monster.com/employer-resources/job-description-templates/pharmacist-job-description/>

7. Look though the explanation «What is drug store»? and give your own one.

a store that sells medicines and usually other goods, esp. products relating to cleaning and caring for the body

DEVELOP YOUR READING SKILLS

What medicine can be bought without a doctor's prescriptions in emergency situations?

Of course if you are feeling ill the first thing to do is visit a doctor. We don't advise you self-prescribe but if you are short on time and not about to keel over, Russian pharmacies do sell medicines you can buy without a prescription.

I think I caught a cold. What's the best treatment?

First of all, if you are just a little under the weather perhaps you can try folk medicine: Tea with lemon and ginger or honey – this will help you fall asleep under a warm blanket.

If this doesn't help, Russian pharmacies stock medicines with paracetamol that will cool you down and relieve a cold's symptoms - perfect if you are taking a flight or trying to get through a day's work. All medicines should have the directions of use written in English as well as Russian. If you start feeling any worse make sure to visit a doctor though.

Among the most popular powders are the world recognized Theraflu and the Russian-made Coldrex and AntiGrippin. Aspirin can also be bought without a prescription.

There are tablets containing ibuprofen to relieve inflammation. Ingavirin or Amiksin will help to fight a virus.

If your nose is blocked there are many nasal sprays to choose from: Sea aqua (Aquamaris), Otrivin, Tizin, and one of the cheapest, Rinonorm – to name but a few.

If you have a sore throat or a cough, there are also sprays such as Tantum Verde, Geksoral, and Lyugol. While there are dozens of great tablets for resorption: Doctor Mom, Gramidin, Strepsils, Falimint, Imudon - and simple candies with salvia are frequently recommended by Russian doctors.

I think I've eaten something bad. What can soothe my stomach?

There are also lots of medicines for this delicate case.

First of all, Russia produces a great medicine called activated charcoal. Russians love these really cheap black tablets and take them for all types of stomach problems, as they absorb everything. They also help acclimatize your belly to foreign water and food while traveling.

Charcoal is also one of the most popular methods to prevent a hangover! Russians usually take charcoal before drinking alcohol or in the morning if they feel bad (Enterosgel is also helpful but costs more and not everyone can bear its texture).

Now pharmacies also sell an advanced version of this medicine – white charcoal. It's a bit more expensive, but you only need to take two of three tablets while the black variety requires one tablet for every 10 kg of bodyweight.

If you've overeaten there are great tablets called Mezim which help with digestion.

In case of heartburn there's nothing better than Renni or Gastal.

Diarrhea!? There's Smekta (ask for the ready to take stuff) which has an absorption function and covers the stomach, relieving pain. If you just want to immediately stop diarrhea, Imodium or Loperamid help. But we don't advice to take them a lot – they just block the bowel muscles for a while – and all the bad stuff you have is preserved inside you...nice.

By the way, Russians usually only eat chicken broth with croutons and drink tea if they have an upset belly.

I have a headache or period pain...

There are lots of different painkillers (analgesics). One of the most common is Nurofen or a Russian medicine called Nekst. Spasmalgon helps fight spasms. From Soviet times Russians used to take Analgin or Zitramon for headaches.

There are also stronger medicines that we don't advise taking in the long run without consulting a doctor: Ketorol, Nise (especially for articulation pain), and Pentalgin (for pulled back and neck muscles).

For periods, sanitary pads and tampons are usually shown in the pharmacy's storefront, so you can point to whatever you need (or just grab it, as some pharmacies have a supermarket system).

I fell while skating on Red Square: Now I have bruises and pulled muscles!

If you feel a strong pain, you should visit a doctor. To treat bruises Russians use iodine (it's now sold as a stick) so you can apply it to damaged skin. Iodine is also good for disinfecting small gashes (be careful, it will sting). Badyaga gel and Traumel are also useful.

There's also a Zelenka stick, the Russian version of iodine, but it can make all your clothes and hands green - and it's almost impossible to wash out.

For pulled muscles there is Fastum gel and Voltaren. All of them are painkillers.

Your brief pharmacy phrasebook:

Can I have something for a headache? – *Mozhno mnechnonibudotgolovnoyboli?* (Можно мне что-нибудь от головной боли)

Activated (white) charcoal, please! – *Pachku aktivirovanogo (belogo) uglya, pozhaluista* (Пачку активированного (белого) угля, пожалуйста)

Do you have something for a sore throat? – *U vas yestchtonibudotboli v gorle?* (У вас есть что-нибудь от боли в горле?)

Plaster – *plastyr'* (Пластырь)

Band – *bint* (Бинт)

Cold – *prostuda* (Простуда)

Cough – *kashel* (Кашель)

Menstrual pads – *prokladki* (Прокладки)

Just to be clear, we don't recommend self-prescribing any medicines - it's always better to see a doctor.

<https://www.rbth.com/lifestyle/327543-medicines-buy-russian-pharmacy>

Quiz

#1

Which of the following classes of antibiotics does **gentamicin** belong to?

- A. Aminoglycosides
- B. Cephalosporins
- C. Fluoroquinolones
- D. Macrolides

#2

Cefaclor is a cephalosporin antibiotic used to treat bacterial infections. A physician has ordered: Cefaclor 450mg tid. The drug is available as a 7.5 % suspension. What volume should be given for each dose?

- A. 15mL
- B. 12mL
- C. 8mL
- D. 6mL

#3

The **Poison Prevention Packaging Act of 1970** requires locking caps on most prescriptions. If a customer requests a non-locking cap on a drug not exempt from the act, what is required?

- A. Approval from the patients Doctor
- B. Approval from the Pharmacist on duty
- C. The patients signature
- D. All of the above

#4

How much 75 % ethanol is needed to make 300ml of 30% ethanol?

- A. 80mL
- B. 120mL
- C. 180mL
- D. 240mL

#5

Everyday pharmacy operations are regulated by various State and Federal laws. Of the following, which agency issues and monitors licenses for pharmacy technicians?

- A. Pharmacy Technician Certification Board (PTCB)
- B. Drug Enforcement Agency (DEA)
- C. Food and Drug Administration (FDA)
- D. State Board of Pharmacy (BOP)

#6

A vial contains 2g of an oral antibiotic in powder form. The medication must be reconstituted to 200mg/tsp for a patient. How much diluent must be added?

- A. 200mL
- B. 100mL
- C. 50mL
- D. None of the above

#7

You need to prepare a Heparin IV bag of 25,000 units in D5W 500mL. Your pharmacy usually uses 2.5mL of 10,000iu/mL to make these bags, but the only available strength of Heparin in your pharmacy is 10,000iu/10mL. What volume of Heparin needs to be added to the IV bag?

- A. 10mL
- B. 15mL
- C. 25mL
- D. 50mL

#8

The Dr. Has ordered to add 5g of a Drug "V" to 1L NS. and infuse at a rate of 500mg/hour. The device delivers 15 gtt/ml. how many gtt/min. will the device need to be set to?

- A. 16gtt/min
- B. 25gtt/min
- C. 37gtt/min
- D. None of the above

#9

A patient is ordered to receive an infusion of D5NS over several hours. D5NS contains 5gm of dextrose and 900mg of NaCl per 100mL. How many 1L bags are required if the infusion is to run at 70mL/hr from 1400 until 0600?

- A. 4 Bags
- B. 3 Bags
- C. 2 Bags
- D. 1 Bag

#10

Which of the following drugs, when prescribed in the US, may not have any refills on the same script?

- A. Xanax®
- B. Ativan®
- C. Percocet®
- D. Vicodin®

GRAMMAR FOCUSE



Let's learn and practice the word formation. Word formation is one of the major mechanisms for the expansion of the vocabulary. The following information and exercises facilities extend your vocabulary acquisition.

I. The suffix –ify

This forms verbs from the corresponding adjectives, e.g. intensify, meaning: to make intense.

Exercise:

Form verbs from the following adjectives: intense; pure; simple; rare; liquid; solid; united (there is a change of spelling for liquid and united).

Note: This suffix can also be added to nouns, e.g. exemplify, meaning: to form an example; typify: to form a type of something; and the geological and sociological term stratify: to form strata (layers).

II. The suffix –ly

This extremely common suffix forms adverbs from the corresponding adjectives, e.g. inevitably, from the adjective inevitable, greatly, from great, etc.

Exercise:

Pick out further examples of adverbs ending in –ly appearing in the texts given in the unit , and identify the adjectives from which they have been formed.

III. The suffix–less

This common suffix is added to nouns to form adjectives, having the meaning of: without, not having, e.g. unless meaning: of no use.

Exercise A: Form adjectives from the following nouns by adding –less. Give the meaning of each adjective you form: class; color; effort; job; limit; motion; power; purpose; root; water; weight.

VI. The prefixes over–and under– Over–placed in front of a word gives the idea of excess, e.g. overcrowding means excessive crowding; to overstress means to lay too much stress on. It's opposite under–, gives the idea of insufficiency or inadequacy, as in under–nourishment, meaning lack of sufficient nourishment.

Exercise A: Put over– in front of the following words, and explain the expressions thus formed: to load; to heat; acceleration; production; population; to supply; to cultivate

Exercise B: Put under– in front of the following words, and explain the expressions thus formed: to estimate; to feed (nourish); industrialization; size; weigh.

VI. The suffix –ness The suffix forms abstract nouns from adjectives, e.g. forgetfulness, effectiveness, and usefulness. Exercise A: Form abstract nouns from the following: clear; cool; cold; damp; dark; direct (indirect); exact; flat; full; heavy; quick; rough; shallow; sharp; short; slow; steady (unsteady); steep; thick; thin; tight; weak; light.

VII. The prefix dis–

This is attached to words, mainly verbs and their derived adjectives and nouns, to give a negative or opposite meaning, e.g.: disconnect the opposite of to connect; disorganized, meaning not organized, etc.

Exercise A: Add the prefix dis– to form opposites of the following: (nouns): ability; advantage; appearance; order; use. (verbs): agree; like; prove; integrate. (adjective): similar.

Test 4.

Read the text and do the tasks.

British Pharmacy in Istanbul (1833-1965)

According to the oldest records, the British Pharmacy was founded in Istanbul in 1833 by a pharmacist with Italian roots, Noel Canzuch. It was located in Beyoglu, at No. 178 in the Grand Rue, which was a district famous for its embassies and commercial shops. The pharmacy was the first large-scale drug manufacturer of that day in Istanbul, hence the most famous one. The reason why the name 'British Pharmacy' was chosen is not obvious today; it may be because of this pharmacy's reputation for serving 11 embassies including the British Embassy. Noel Canzuch laid the foundation of this very famous and long-running pharmacy. He had 3 sons, Francois, Joseph and Natale, who would all become pharmacists in the future. Although the exact date is unknown, after his death the pharmacy was the responsibility of the older brother Francois for some years. During his term, he developed the pharmacy and increased its existing reputation. Apart from his pharmacy work, Francois also wrote some articles for The Journal de la Societe de Pharmacie de Constantinople. After Francois' death in 1897, the pharmacy work was carried on by his extroverted younger brother, Joseph Canzuch, who was an outstanding pharmacist with entrepreneurial skills. Joseph was a member of the Societe des Pharmaciens de Paris and Societe d'Hygiene de France. He also attended the International Medical Congress in London in 1881 and was awarded a 'diplome de merite' for his special preparation 'Elixir Toni - Digestif de J. Canzuch'. It is interesting that some publications (Sandalci 1991, 46) mention his graduation from the London School of Pharmacy, although we have not found any information confirming this. In fact, our research into the Society's exam participants in the 1880s, using the archives of the Library of the RPSGB, has not provided the slightest clue about it. Hence it might be that he studied pharmacy in London, came back to Istanbul and then became the pharmacist of the British Pharmacy. During these years, as mentioned above, the pharmacy was very famous for serving as the pharmacy for 11 embassies and producing numerous pharmaceutical preparations like Liqueur de Cola Cacao, Elixir de Pepto Kola, Crème de Glyscrine Rose. Balsamine Orientale. Granules Dynamophores, Lotion du Dr. Wilson. Sirop du Dr. Leon and so forth. It is possible to claim that Joseph received the title of the Ottoman Empire's Imperial Honours (Mecid-i Nisani & Nisan-i Osmani), was solely responsible for the hard work needed to make this pharmacy well known all across the country.

Some advertisements from the British Pharmacy, especially those dated 1888-1890, reveal that there "was a huge rivalry between two pharmacies using the same

name: British. For this reason, the advertisements of the British Pharmacy, directed by Joseph, strongly emphasised that they did not have any other branch in Istanbul. Recent research indicates that a conflict occurred between the two brothers, Joseph and Natale, before the 1890s, after which Natale decided to set up his own pharmacy with a similar name. English Pharmacy (Pharmacie Anglaise) first at No.47 in Nisantasi Street and later at No.4. Hamidiye Street in the Bahçekapu district. Upon Natale's death in 1904, his English Pharmacy was bought by Apik Karis Utucuyan. After the other brother Joseph's death in Athens in 1911, his nephew Vincent Gianetti became fully responsible for the pharmacy, perhaps because Joseph did not have any children. Vincent endeavoured to set up a new laboratory as well as to develop the existing pharmacy. He took part in the Pharmaceutical Society of Istanbul and was elected as a member of the Pharmacy Legislation Committee there.¹⁶ His brother, Sylvio Gianetti, a chemist, joined him in 1913.

https://www.researchgate.net/publication/260761510_A_brief_history_of_the_British_pharmacy_in_Istanbul/link/5474e3cd0cf2778985ac48f7/download

Task 1.

Match the following words and phrases to their definitions:

a) *foundation*, b) *extroverted*, c) *entrepreneurial*, d) *award*, e) *mention*

- to speak about something quickly, giving little detail or using few words
- to give money or a prize following an official decision
- an energetic person who enjoys being with other people
- an occasion when an organization, state, etc. is established
- relating to someone who starts their own business or is good at seeing new opportunities to make money

Task 2.

Answer the following questions.

1. When was the British Pharmacy in Istanbul founded?
2. Where did Noel Canzuch come from?
3. Where was the British Pharmacy located?
4. Why was it called 'British Pharmacy' ?
5. How did Francois Canzuch develop the pharmacy?
6. What did he write?
7. What was the British Pharmacy famous for in the 1880s?
8. What is known about Joseph Canzuch?
9. How did the English pharmacy appear?
10. What was Vincent's contribution?

Task 3.

Match the expressions with their translation.

1	large-scale	a	долгосрочный
2	drug manufacturer	b	соперничество
3	obvious	c	крупномасштабный
4	long-running	d	общительный
5	rivalry	e	подчеркнуть
6	term	f	предприимчивый
7	extroverted	g	Производитель лекарств
8	entrepreneurial	h	препарат
9	preparation	i	Время, период
10	emphasise	j	очевидно

Task 4.

Fill in the gaps

Commerce of drugs in United Kingdom was initially regulated by the Guild of Peppers since 1180, they were in charge of the assurance of the items that were. In 1345 some members of the Guild of Peppers 1. _____, that was in charge of assurance of the quality of food and drugs, their role related drugs business was replaced by Worshipful Society of Apothecaries (one of the 110 Livery companies) that operated since 1617 and its members were in charge of train as apprentice for 7 years the future new members until they became free man and get the "freedom" of being apothecary's apprentices.

Silvanus Bevan received 7 years of training 2. _____ (that developed salbutamol in 1966 and now is part of GlaxoSmithKline).

The Pharmaceutical Society of Great Britain was founded in 1841. The Pharmacy Act 1868 limited the sale of poisons and dangerous drugs to qualified pharmacists and druggists.

The advent of the NHS had an immediate beneficial effect on the pharmaceutical industry. In 1960 there were proposals that the private patients of general practitioners should be enabled to receive their drugs free on the health service, but they were not implemented.

The supply of drugs in the hospital service represented about one-tenth by value of the supply through the retail pharmaceutical service in 1965.

The Pharmaceutical Society of Great Britain was replaced by the Royal Pharmaceutical Society and the General Pharmaceutical Council in September 2010.

There was a reduction of more than a quarter in the number of pharmacies in the community between 1963 and 1979. According to the Pharmaceutical Services Negotiating Committee at that time over 4,000 pharmacies in England and Wales dispensing less than 24,000 prescriptions per annum were losing money on NHS services.

As measured in defined daily doses per 1,000 inhabitants per day the UK had a moderate rate of consumption of antibiotics in 2015 with a rate of 20.5, double that of the Netherlands, but half that of Turkey. [5]

The Health Survey for England 2016 showed that 48 % of adults in the country had taken at least one prescribed medicine in the past week, and 24 % had taken three or more. 10 % were using antidepressants. A total of 1.1 billion prescriptions were dispensed in England in 2016 – 47 % more than 2006.

https://en.wikipedia.org/wiki/Pharmacy_in_the_United_Kingdom

- founded Worshipful Company of Grocers that operated until 1617
- and later he cofounded Allen & Hanburys in 1715

Task 5.

Make sentences

of the CGMP regulations / the quality control laboratory / A significant portion / pertain to / and product testing.

pharmaceutical laboratories / used for / This includes / and finished product testing / in-process.

should receive / Each pharmaceutical quality control laboratory / each two years / as part / a comprehensive GMP evaluation / of the statutory inspection obligation.

In general / a new product / will be used / the specific methodology / which / to test / these inspections / may include

We expect that complex / by an experienced laboratory analyst / with specialized knowledge / in such matters / will be evaluated / as well as scientific laboratory operations

We expect investigators, / and others to work / management / as teams / and / to advise / analysts /

of the NDA / Relevant sections / to the inspection / should be reviewed / prior / or ANDA

Task 6.

Make nouns from the following verbs

Educate, explain, examine, populate, imagine, present, explore

Task 7.

Make verbs.

Black, sharp, wide, short, length, strength, tight.

Audio scripts

Dialogue

Patient: Hi, I was wondering if you could give me some advice. I was swimming in the ocean today, and when I got out, I noticed that I had all of these red bumps from my waist down.

Pharmacist: Do they itch?

Patient: Yeah, and I can't stop scratching them.

Pharmacist: I can see from your scratch marks. You only went into the water up to your waist? Did you feel a sting?

Patient: Yeah, come to think of it, I did. That's why I left the water.

Pharmacist: Well, it looks like you have a bumpy rash caused by a jelly fish sting.

Patient: A jelly fish sting? What should I do to get rid of this itch?

Pharmacist: Are you allergic to any medications?

Patient: Not that I know of, but I don't think so.

Pharmacist: I would recommend Benadryl tablets and hydrocortisone cream. You'll find them in aisle 5.

Patient: I have a hard time swallowing tablets and pills. Does Benadryl come in a liquid?

Pharmacist: Sure. You can get it in liquid form. Follow the directions for both the Benadryl and the hydrocortisone cream. And if the itching and rash continue, call your doctor.

Patient: Thank you so much.

Pharmacist: No problem. Glad to be of help.

Dialogue

Patient: Hello! I would like something for allergies. I've got a headache and I can't breath.

Pharmacist: What are you allergic to, sir?

Patient: I don't know. I'm a bit allergic to cats. That's all. What would you advise me to take?

Pharmacist: I would share you a good medicine that is available without a prescription. Here you are.

Patient: Is it an antihistamine?

Pharmacist: That's right.

Patient: I'll take it. How much is it?

Pharmacist: 5 pounds. If you don't get better you should go to the hospital and get yourself examined by a doctor. Good bye, sir. Get well soon.

	- Здравствуйте. [zdrastvooyti]	- Hello.
	- У меня насморк и болит горло. Вы не могли бы мне посоветовать лекарство? [oo minya nasmark i balit gorla. Vi ni magli bi mnnye pasavuyetavat likarstva?]	- I have a running nose and a sore throat. Could you please recommend me some good medicine?
	- У вас есть температура? [oo vas yest timpiratoora?]	- Do you have a high temperature?
	- Да. [da]	- Yes.
	- Я дам вам спрей от насморка. Его нужно использовать один раз утром и один раз вечером. [ya dam vam spreya ot nasmarka. yivo noojna ispolzavat odin ras ootram i odin ras vyechiram]	- I'll give you a nasal spray. You should use it once in the morning and once in the evening.
	- Ясно. [yasna]	- It's clear.
	- И пастилки от боли в горле. Принимать по одной пастилке каждые 4 часа. И ещё я вам рекомендую вот этот противовирусный препарат. Его нужно принимать по одной капсуле 3-4 раза в день, в течение как минимум 3 дней. [i pastilki ot boli v gorlye. prinimat po adnoy pastilkye kajdiye chetiri chisa. i yischo ya vam rikamindooyoo vot etat prativaviroosniy priparat. Yivo noojna prinimat po adnoy kapsoolye tri-chitiri raza v dyen, f tichenii kak minimum tryoh dnyey]	- And sore throat pastilles. Take one pastille every 4 hours. And I also recommend you to buy this antiviral drug. Take one capsule 3-4 times a day, during 3 days at the very least.
	- Хорошо, я его тоже возьму. [harasho. ya yivo toje vazmo]	- OK. I'll take it too.
	- Так, итого у вас получается 312 рублей. [tak, itavo oo vas paloochaitsa trista dvinatsat rooblyey]	- The total sum is 312 roubles.
	- Большое вам спасибо. [balshoje vam spasiba]	- Thank you very much.
	- На здоровье! [na zdarovyey]	- You're welcome*.

Quiz answers

QUIZ 1

Q#	Ans.
#1	B
#2	C
#3	C
#4	A
#5	D
#6	C
#7	C
#8	C
#9	B
#10	D

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