

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ
«ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

Методичні вказівки з англійської мови для студентів 1 курсу
спеціальності 226 «Фармація, промислова фармація»

English learner guide for 1st year students
226 «Pharmacy, industrial pharmacy»

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ПЕРЕДМОВА

Методичні вказівки з англійської мови призначено для студентів 1 курсу, що навчаються за спеціальністю 226 «Фармація, промислова фармація». Метою дисципліни є формування комунікативної компетенції, а саме здатності й готовності студентів до міжособистісного та міжкультурного спілкування з носіями англійської мови в галузі даної спеціальності.

Методичні вказівки складаються з 8 тем пов'язаних з фармацією, фармацевтами, фармацевтичними відкриттями: Історія фармації, Аптека Санта Марія Новела, Гіппократ, Відкриття пеніциліну, Анестезія, Асептика й антисептика, Вітамін, Плацебо.

Кожна тема включає текст науково-популярного характеру й завдання до нього. Метою передтекстових завдань є актуалізація знань студентів і підготовка до сприйняття тексту. Система післятекстових вправ спрямована на розуміння тексту, на закріплення набутих раніше знань з лексики (уживання іменників і дієслів у правильній формі), на закріплення граматики (Active and Passive voice, Comparative and Superlative forms, Present Simple, Present Continuous, Present Perfect, Past Simple, Past Continuous, Past Perfect, Sequence of Tenses), а також на розвиток мовлення студентів. Знання лексики закріплюються за допомогою кросвордів. Завдання до вправ подано англійською мовою.

Подані методичні вказівки можуть бути використані як матеріали з розвитку мовлення при підготовці студентів першого курсу, що вивчають англійську мову.

TOPIC 1

DO YOU KNOW THAT?

1. The first drug reference book in England was created in 1618.
2. The first hospital pharmacy in America opened in 1752.
3. Coca-Cola was invented by a pharmacist.
4. The most expensive drug costs more than \$70,000.
5. The first commercial drug was mass-produced in 1883.

WHAT ELSE DO YOU KNOW ABOUT PHARMACY?

HISTORY OF PHARMACY



Today, we don't think twice about walking into a pharmacy to pick up a prescription or some over-the-counter medication, but pharmacies have a long and interesting history that dates as far back as 2100 B.C.

The term «Pharmacy» is defined as, «the art and science of preparing and dispensing drugs and medicines». While the term «Pharmacy» has only been around since around 1645, the concept of prescriptions and mixing medicine for others dates back thousands of years.

The oldest known «prescription» dates back to ancient Mesopotamia circa 2100-2600 BC. The clay tablet lists ingredients for a variety of salves and washes to treat multiple ailments. Ingredients include mustard, fig, myrrh, and snakeskins and were to be dissolved in a liquid like wine, beer, or milk. While this might not sound like the most effective remedy, people have been making note of the world around us and ingredients that help with ailments for years.



The first drugstores can be traced back to Baghdad in the eighth century AD. In Europe, public pharmacies finally began appearing in the 13th century. King Frederick II passed a law that officially separated the professions of physicians and

pharmacists, creating professional regulation for both in 1240. This was a major step in establishing pharmacists as separate from medical doctors.

In 1618, the first complete collection of approved drugs in English, the London Pharmacopoeia, was published. And by the mid-1700s, pharmaceutical science and practice had begun in America, after a hospital pharmacy was co-founded by Benjamin Franklin in Philadelphia.

The Pennsylvania Hospital was founded in 1751 in Philadelphia which at that time was the fastest growing city in the colonies. It primarily took care of the poor and homeless suffering from physical and mental illnesses. Benjamin Franklin himself played a key role in bringing the vision for this hospital to life, and is reported to have said, «I do not remember any of my political maneuvers, the success of which gave me at the time more pleasure».

EXERCISE 1. Read the words and translate them into your native language.

pharmacy		washes	
prescription		ingredient	
over-the-counter medication		remedy	
drug		drugstore	
medicine		physician	
salve		pharmacist	
ailment		maneuver	

EXERCISE 2. Complete the crossword.

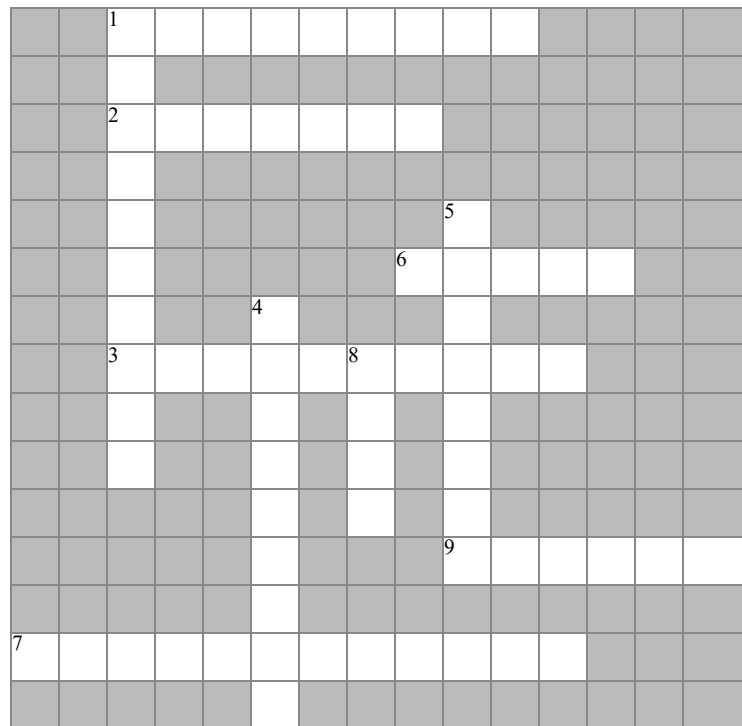
ACROSS:

1. A doctor.
2. An illness.
3. A component.
6. An ointment.
7. An instruction written by a medical practitioner.
9. A medicine or treatment.

DOWN:

1. A person who is professionally qualified to prepare and dispense medicinal drugs.
4. A retail store where medicines are sold.

5. A movement requiring skill and care.
8. A medicine which has a physiological effect.



EXERCISE 3. Insert the verbs into the sentences: found, can be trace, think, play, include, dissolve, pass, separate, define, begin, publish, pick up.

1. We don't ... twice about walking into a pharmacy to ... a prescription.
2. The term «Pharmacy» is ... as, «the art and science of preparing and dispensing drugs and medicines».
3. Ingredients ... mustard, fig, myrrh, and snakeskins and were to be ... in a liquid like wine, beer, or milk.
4. The first drugstores ... back to Baghdad in the eighth century AD.
5. In Europe, public pharmacies finally began appearing in the 13th century.
6. King Frederick II ... a law that officially ... the professions of physicians and pharmacists.
7. In 1618 the first complete collection of approved drugs in English was
8. By the mid-1700s, pharmaceutical science and practice had begun in America.
9. The Pennsylvania Hospital was ... in 1751.
10. Benjamin Franklin himself ... a key role in bringing the vision for this hospital to life.

EXERCISE 4. Read the sentences and tick which is (T) true or (F) false.

1. Pharmacies have a long and interesting history that dates as far back as 3100 B.C.
2. The term «Pharmacy» has only been around since around 1645.
3. The oldest known «prescription» dates back to ancient Egypt circa 2100-2600 BC.
4. The concept of prescriptions and mixing medicine for others dates back hundreds of years.
5. People have been making note of the world around us and ingredients that help with ailments for years.
6. In Europe, public pharmacies finally began appearing in the 12th century.
7. The first drugstores can be traced back to Baghdad in the eighth century AD.
8. A hospital pharmacy was co-founded by Benjamin Franklin in Philadelphia.
9. The Pennsylvania Hospital primarily took care of the rich people.
10. In 1751 Philadelphia was the fastest growing city in the colonies.

EXERCISE 5. Rewrite the sentences in the passive.

1. In the early 1900s Terry Williams, a young pharmacist invented the mascara.
2. Leonardo da Vinci painted Mona Lisa.
3. An American woman Josephine Cochrane invented the dishwasher in 1886.
4. Heinrich Nestle developed the first substitute for mother's milk by mixing cow's milk, wheat flour and sugar.
5. Marion Donovan invented disposable nappies in 1950.
6. Homer wrote the Iliad and Odyssey in the late 8th or early 7th century BC.
7. A factory in Germany makes these cars.
8. James Cameron *directed* "Avatar" in 2009.
9. An Argentinian architect *Cesar Pelli* designed the Petronas Towers.
10. Our body produces this substance when we are in love.

EXERCISE 6. Discuss these questions with a partner.

1. When did pharmacy history start?
2. Who discovered pharmacy? Who was the first pharmacist?
3. What is the evolution of pharmacy?
4. What was the first pharmacy called? How did pharmacy get its name?
5. What is the main purpose of pharmacy?
6. What is the symbol of pharmacy?
7. Why is the snake a symbol of pharmacy?

8. What color represents pharmacy?
9. Which is the oldest pharmacy in the world?

EXERCISE 7. Look at the picture. Describe the process of pharmacy development. Try to sequence your language and make your details easier to read by using language like: firstly, first of all, secondly, after that, from this, where, following that, subsequently, before that, in turn, then.

HISTORY OF PHARMACY

The evolution of the profession of pharmacy can be divided into five historical periods:

1. ANCIENT ERA-The beginning of time to AD 1600
2. EMPIRIC ERA-1600-1940
3. INDUSTRIALIZATION ERA-1940-1970
4. PATIENT CARE ERA-1970-present
5. BIOTECHNOLOGY AND GENETIC ENGINEERING ERA-The new horizon

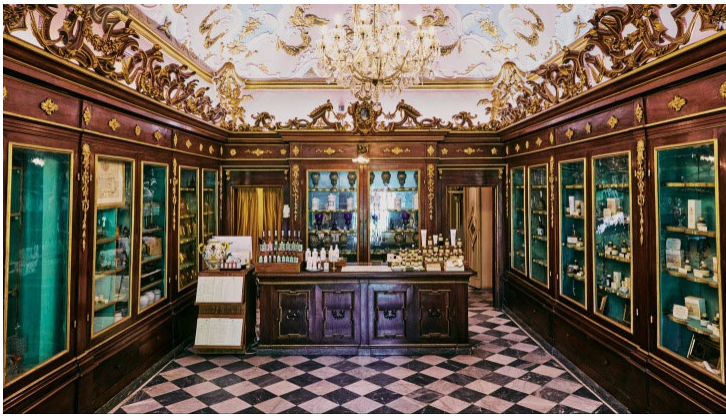
TOPIC 2

DO YOU KNOW THAT?

1. American's first licensed pharmacist opened a drugstore that provided traditional medicine as well as Voodoo remedies.
2. Alcohol is the most commonly used drug.
3. Prescription drugs kill more people than illegal drugs.
4. Coca leaves are actually used as herbal medicine.
5. Some spices can give people a high.

WHAT ELSE DO YOU KNOW ABOUT DRUGS?

THE SANTA MARIA NOVELLA PHARMACY



The Santa Maria Novella Pharmacy is probably the oldest still-operating pharmacy in the world, and certainly the oldest in Italy. It was established in 1221, when the Dominican monks from the adjacent Basilica of Santa Maria

Novella began growing herbs to make balms, salves and medicines for their infirmary. The superior quality of their products became widely known, and in the 17th century, the pharmacy opened its doors to the public.

Today the pharmacy still uses the traditional preparation methods, and still carries products using the original recipes of the monks. Especially of note is the Aceto dei Sette Ladri, or «Seven Thieves Vinegar». These smelling salts got their unusual name from a band of seven men who robbed corpses during the plague. They were said to have doused themselves in the strong vinegar to protect themselves from the plague (bad smells, or «miasma», were believed to be the cause of illness.)

Another specialty of the pharmacy is their production of Carta D'Armenia («Armenian Paper») since at least the 16th century. It's a paper incense which is soaked in a mixture of infusions of resins and oriental spices, and burns without a flame, scenting the air.

The pharmacy itself is housed in the extraordinary original building, the rooms of which are complete with vaulted ceilings, ornate gilding, frescoes, walnut

cabinetry, glass-stoppered decanters full of colorful potions, marble floors, glass-stained windows, bronze statues, and antique apothecary scales and mortars. There is also a small museum, with somewhat irregular hours, which features antique terracotta apothecary jars; however the best antiques are already on display in the shop itself.

The staff is able to answer questions and provide suggestions based on your preferences. There are product lists in a wide variety of languages, and a large computerized display allows customers to explore the offerings and read the history of each product. They will want to educate you one by one on each scent of cologne, with all the different subtle notes, like wine. The soaps are easier to view and smell; the violet soap is a particular treat. The prices are very high but so is the quality. It's worth a visit to see the interior alone – it was a former papal residence and is ornate and lovely.

EXERCISE 1. Read the words and translate them into your native language.

monk		incense	
balm		flame	
infirmary		scales	
recipe		mortar	
corpse		jar	
plague		preference	
miasma		scent	

EXERCISE 2. Complete the crossword.

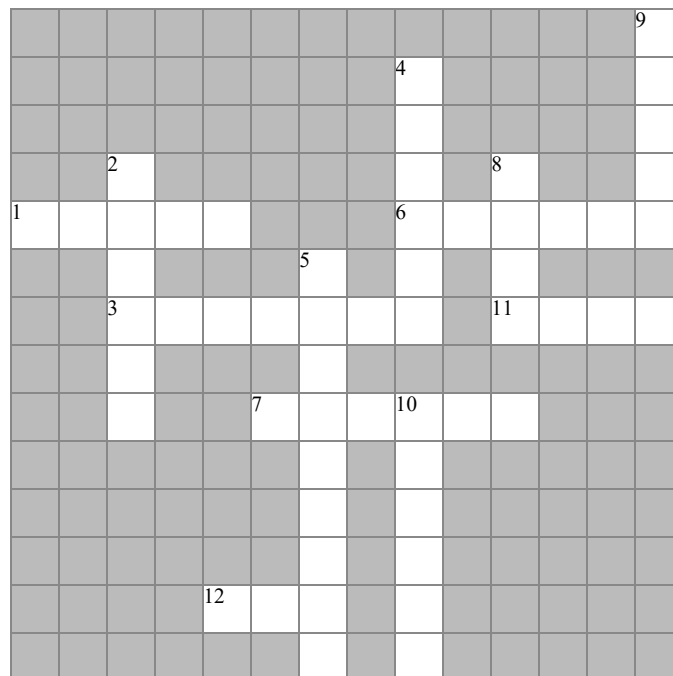
ACROSS:

1. A distinctive smell.
3. A gum, spice, or other substance that is burned for the sweet smell it produces.
6. A contagious disease, typically with the formation of buboes.
7. An unpleasant smell.
11. A member of a religious community of men.
12. A wide-mouthed cylindrical container made of glass or pottery.

DOWN:

2. A set of instructions for preparing a dish, including a list of the ingredients.
4. A dead body.

5. A hospital.
8. A fragrant cream or liquid used to heal or soothe the skin.
9. A hot glowing body of ignited gas.
10. An instrument for weighing, originally a simple balance.



EXERCISE 3. Insert the verbs into the sentences: explore, be able to answer, be established, get, rob, become, carry, be housed, provide, allow, educate, see, burn.

1. The Santa Maria Novella Pharmacy ... in 1221.
2. The superior quality of their products ... widely known.
3. Today the pharmacy still ... products using the original recipes of the monks.
4. «Seven Thieves Vinegar» ... their unusual name from a band of seven men who ... corpses during the plague.
5. «Armenian Paper» ... without a flame, scenting the air.
6. The pharmacy itself ... in the extraordinary original building
7. The staff ... questions and ... suggestions.
8. A large computerized display ... customers to ... the offerings.
9. They will want to ... you on each scent of cologne, with all the different subtle notes.
10. It's worth a visit to ... the interior alone.

EXERCISE 4. Read the sentences and tick which is (T) true or (F) false.

1. The Santa Maria Novella Pharmacy is the oldest pharmacy in Italy.

2. Dominican monks began growing herbs for their hospital.
3. In the 15th century the pharmacy opened its doors to the public.
4. Today the pharmacy doesn't use the traditional preparation methods.
5. Thieves doused themselves in the strong vinegar to protect themselves from the plague.
6. Another specialty of the pharmacy is their production of «American Paper».
7. The pharmacy itself is housed in the ordinary new building.
8. There is also a big museum which features antique terra-cotta apothecary jars.
9. The best antiques are already on display in the shop itself.
10. There are product lists in Italian and English languages.

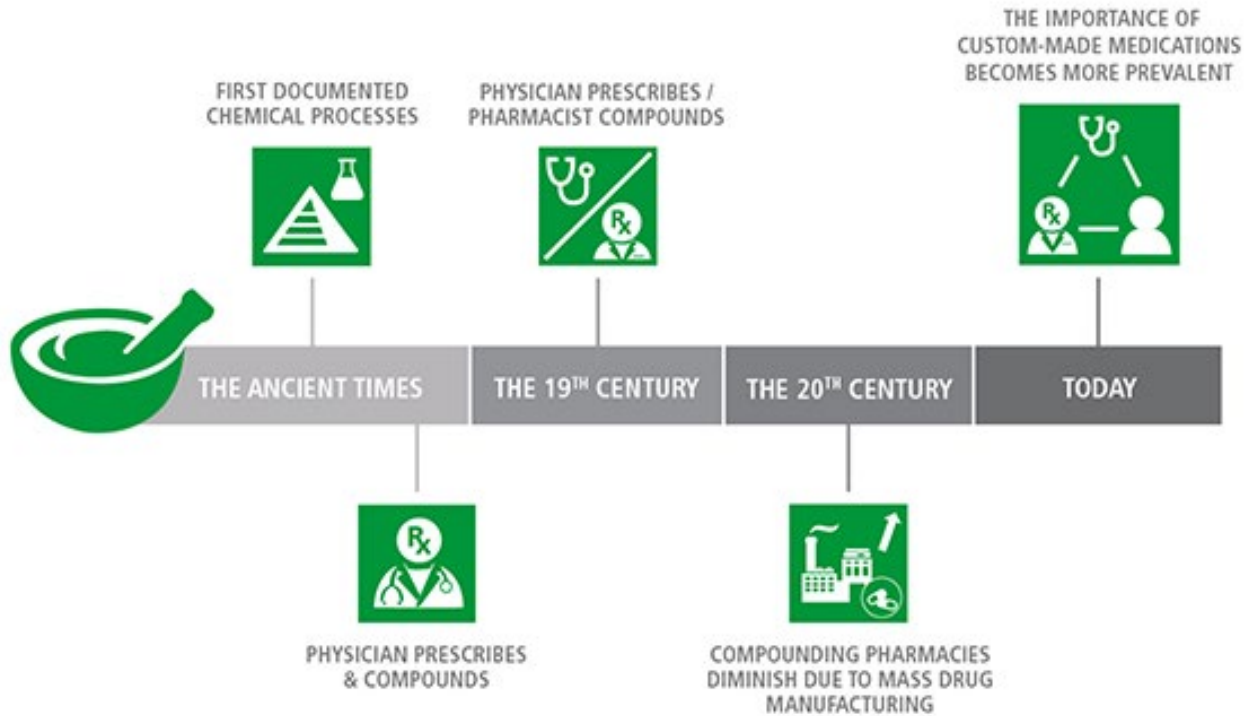
EXERCISE 5. Complete the sentences with the correct comparative form of the adjective / adverb.

1. Jacob eats ... than his sisters. (healthily)
2. The weather got ... in the evening. (bad)
3. Jane drives ... than her sister. (carefully)
4. The fact that the world is ... than we are accustomed to see it, tell a new series. (wide).
5. Dark matter may be ... than the big bang. (old)
6. Ostrich Emu slightly ... than African. (small)
7. There are a lot of stars ... than our own Sun. (large)
8. Google Maps has made travel ... than ever before. (easy)
9. How much ... than you is she? (young)
10. May the next year be ... than the one that's ending. (good)

EXERCISE 6. Discuss these questions with a partner.

1. Where is the oldest pharmacy in the world?
2. What is Santa Maria Novella famous for?
3. Where are Santa Maria Novella products made?
4. Which European country is best for pharmacist?
5. Who owns Santa Maria brand?
6. Who was the founder of Ukrainian pharmacy?
7. How many pharmacies are there in Ukraine?
8. Where is the oldest pharmacy in Ukraine?

EXERCISE 7. Look at the picture. Describe the process of pharmacy development. Try to sequence your language and make your details easier to read by using language like: firstly, first of all, secondly, after that, from this, where, following that, subsequently, before that, in turn, then.



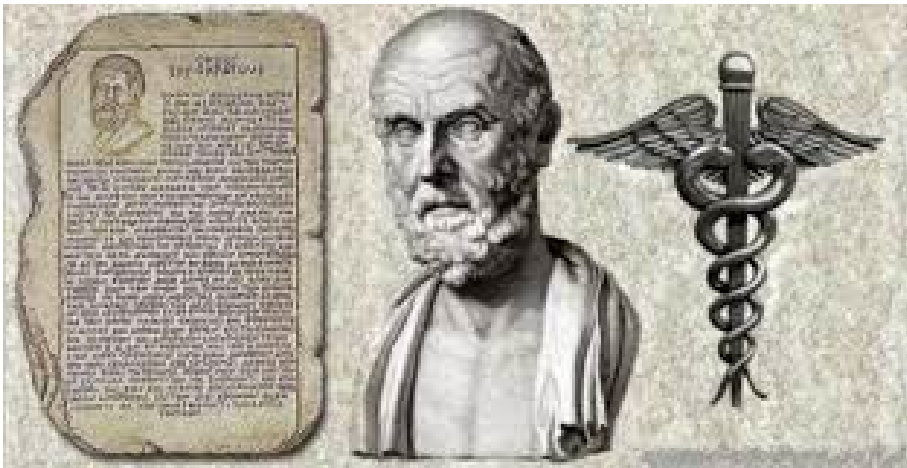
TOPIC 3

DO YOU KNOW THAT?

1. Hippocrates was the first to separate medicine from superstitions.
2. Hippocrates believed that illness must have a physical and a rational explanation and rejected the then current views that a disease could be the result of disfavor of the gods or possession by evil spirits.
3. Hippocrates believed that the body must be treated as a whole and not just a series of parts.
4. Hippocrates based his treatment on the healing power of nature: a good diet, cleanliness, fresh air and rest.
5. Hippocrates was the first to characterize illnesses as acute, chronic, endemic and epidemic.
6. Hippocrates incorporated a number of new medical terms including relapse, crisis, resolution, and exacerbation.

WHAT ELSE DO YOU KNOW ABOUT HIPPOCRATES?

HIPPOCRATES



Hippocrates of Kos was a Greek physician who lived from about 460 B.C. to 375 B.C. At a time when most people attributed sickness to superstition and the wrath of the gods,

Hippocrates taught that all forms of illness had a natural cause. He established the first intellectual school devoted to teaching the practice of medicine. For this, he is widely known as the «father of medicine».

Approximately 60 medical documents associated with his name, including the famous Hippocratic Oath, have survived to this day. These documents were eventually gathered into a collection known as the Hippocratic Corpus. While Hippocrates may not have written all of them himself, the papers are a reflection of his philosophies. Through Hippocrates' example, medical practice pointed in a new

direction, one that would move toward a more rational and scientific view of medicine.

Hippocrates is often credited with developing the theory of the four humors, or fluids. **Yellow bile** is related to the choleric disposition and the qualities of hot and dry. It is associated with fire, summer, the gallbladder and childhood. **Black bile** is related to the melancholic disposition and the qualities of cold and dry. It is associated with earth, winter, the spleen and old age. **Blood** is connected to the sanguine disposition and the qualities of hot and moist. It is linked to air, spring, the heart and adolescence. **Phlegm** is related to the phlegmatic disposition and the qualities of cold and moist. It is connected to water, the brain and maturity. Differences due to age, gender, emotions and disposition could be attributed to the interactions of the humors, according to the NIH exhibition. Heat stimulated action; cold depressed it. Someone with a choleric disposition was courageous, but phlegm caused cowardice. Youth was hot and moist; age was cold and dry.

According to the ancient theory, the key to good health was to keep the humors in balance; an excess or deficiency in one or more of the humors were associated with disease. Food was one of the most important ways to help balance the ratio of these humors. In fact, one of Hippocrates' most famous quotes is, «Let food be thy medicine and medicine be thy food». Although these practices and the concept of the four humors may sound strange and unscientific today, these ideas represented the first step away from the predominantly supernatural view of sickness and a step toward a new idea that illness is related to the environment and what is going on inside the body.

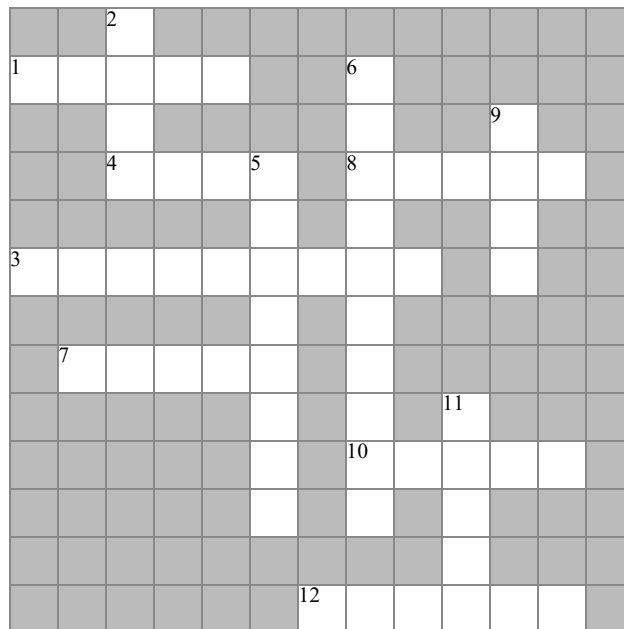


Today, many medical school graduates still recite modern variations of «The Hippocratic Oath» Doctors still hold sacred its principles: treat the sick to the best of one's ability, keep them from harm and injustice, preserve patient privacy and teach the secrets of medicine to the next generation.

EXERCISE 1. Read the words and translate them into your native language.

superstition		bile	
wrath		phlegm	
cause		maturity	
oath		deficiency	
reflection		harm	
humor		injustice	
fluid		quote	

EXERCISE 2. Complete the crossword.



ACROSS:

1. Extreme anger.
3. Lack of fairness or justice.
4. Physical injury.
7. A mood or state of mind.
8. A substance that has no fixed shape; a liquid.
10. A person or thing that gives rise to an action, phenomenon, or condition.
12. The thick viscous substance.

DOWN:

2. A solemn promise.
5. The state, fact, or period of being mature.

6. A lack or shortage.
9. A bitter greenish-brown alkaline fluid which aids digestion.
11. A quotation from a text or speech.

EXERCISE 3. Insert the verbs into the sentences: establish, teach, hold, preserve, survive, help balance, write, keep, attribute, recite, treat, represent.

1. Most ancient people ... sickness to superstition and the wrath of the gods.
2. Hippocrates ... that all forms of illness had a natural cause.
3. Hippocrates ... the first intellectual school devoted to teaching the practice of medicine.
4. Approximately 60 medical documents associated with his name have ... to this day.
5. While Hippocrates may not have ... all of them himself, the papers are a reflection of his philosophies.
6. Food was one of the most important ways to ... the ratio of these humors.
7. These ideas ... the first step away from the predominantly supernatural view of sickness and a step toward a new idea.
8. Today, many medical school graduates still ... modern variations of «The Hippocratic Oath».
9. Doctors still ... sacred its principles: ... the sick to the best of one's ability, ... them from harm and injustice, ... patient privacy and teach the secrets of medicine to the next generation.

EXERCISE 4. Read the sentences and tick which is (T) true or (F) false.

1. Hippocrates was an ancient physician who lived from about 460 B.C.
2. Hippocrates is widely known as the «father of philology».
3. Documents were gathered into a collection known as the Hippocratic Corpus.
4. Hippocrates is often credited with developing the theory of the five humors.
5. According to the ancient theory, the key to good health was to keep the humors in balance.
6. An excess or deficiency in one or more of the humors was associated with health.
7. One of Hippocrates' most famous quotes is, «Let food be thy medicine and medicine be thy food».
8. These practices and the concept of the four humors sound scientific today.

9. Many medical school graduates still recite original variations of «The Hippocratic Oath».
10. Doctors still hold sacred its principles.

EXERCISE 5. Complete the sentences with the superlative of an adjective.

1. The last five years were the ... for the last 140 years. (hot)
2. Antarctic is not only the ... place on Earth but the (cold, dry)
3. Greek olive is the ... in the world. (good)
4. Sir Isaac Newton is one of the ... scientists in history. (important)
5. Cambridge is one of Britain's ... cities. (famous)
6. The Great Wall of China is the ... buildings on Earth. (long)
7. Tell us about the ... project that you worked on. (interesting)
8. The ... known speed of propagation is the speed of light. (fast)
9. What is the ... part of your job and why? (difficult)
10. This gives you the ... level of security. (high)

EXERCISE 6. Discuss these questions with a partner.

1. Why is Hippocrates famous?
2. What are the 4 humors of Hippocrates?
3. What did Hippocrates believe about medicine?
4. What did Hippocrates think was the cause of disease?
5. What did Hippocrates invent?
6. What is Hippocrates philosophy?
7. What diseases did Hippocrates discover?
8. Who is the father of drugs?
9. Who is the world best pharmacist?

TOPIC 4

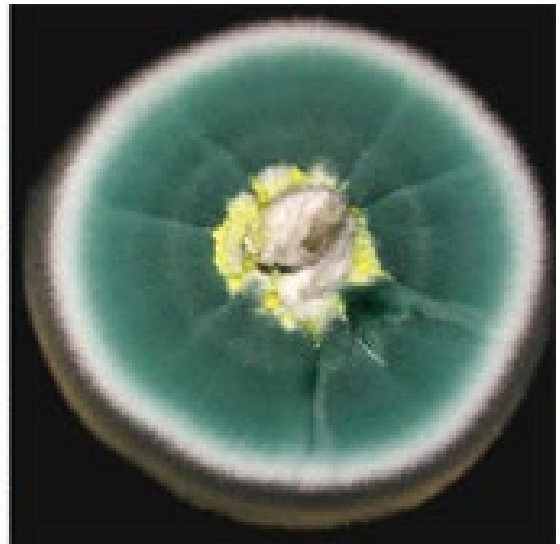
DO YOU KNOW THAT?

1. Most of our existing antibiotics were found in the dirt – with the help of pilots and missionaries.
2. Discovery of new antibiotics has slowed, while bacteria are growing resistant to existing drugs.
3. The very use of antibiotics increases the mutation rate of bacteria.
4. Antibiotic resistance is a natural phenomenon, but overusing antibiotics makes the problem much worse.
5. Antibiotic use in livestock and antibacterial soaps are also driving resistance.

WHAT ELSE DO YOU KNOW ABOUT ANTIBIOTICS?

DISCOVERY OF PENICILLIN

Penicillin was first discovered in 1928 and is now the most widely used antibiotic in the world. It all started with a mold that developed on a staphylococcus culture plate. Since then, the discovery of penicillin changed the course of medicine and has enabled physicians to treat formerly severe and life-threatening illnesses such as bacterial endocarditis, meningitis, pneumococcal pneumonia, gonorrhea and syphilis.



Sir Alexander Fleming, a Scottish researcher, is credited with the discovery of penicillin in 1928. At the time, Fleming was experimenting with the influenza virus in the Laboratory of the Inoculation Department at St. Mary's Hospital in London. Often described as a careless lab technician, Fleming returned from a two-week vacation to find that a mold had developed on an accidentally contaminated

staphylococcus culture plate. Upon examination of the mold, he noticed that the culture prevented the growth of staphylococci. Published reports credit Fleming as saying: «One sometimes finds what one is not looking for. When I woke up just after dawn on Sept. 28, 1928, I certainly didn't plan to revolutionize all medicine by discovering the world's first antibiotic, or bacteria killer. But I guess that was exactly what I did».

Though Fleming stopped studying penicillin in 1931, his research was continued and finished by Howard Flory and Ernst Chain, researchers at University of Oxford who are credited with the development of penicillin for use as a medicine in mice. Penicillin made a difference during the first half of the 20th century. The first patient was successfully treated for streptococcal septicemia in the United States in 1942. However, supply was limited and demand wasn't high in the early days of penicillin.

Penicillin helped reduce the number of deaths and amputations of troops during World War II. According to records, there were only 400 million units of penicillin available during the first five months of 1943; by the time World War II ended, U.S. companies were making 650 billion units a month. To date, penicillin has become the most widely used antibiotic in the world. *(by Katie Kalvaitis)*

EXERCISE 1. Read the words and translate them into your native language.

mold		deaths	
culture		amputations	
dawn		endocarditis	
research		meningitis	
patient		pneumonia	
supply		gonorrhoea	
demand		sypilis	

EXERCISE 2. Complete the crossword.

ACROSS:

1. The action of surgically cutting off a limb.
3. To ask for forcefully.
4. A stock or amount of something available for use.
6. The cultivation of bacteria, tissue cells, etc. in an artificial medium.

8. An infection that inflames the air sacs in one or both lungs.

DOWN:

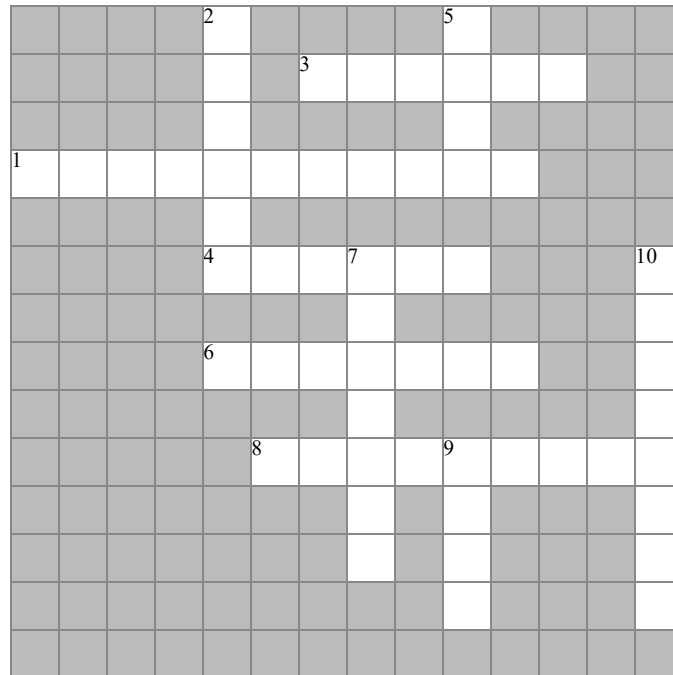
2. The actions or facts of dying or being killed

5. The first appearance of light in the sky before sunrise.

7. A person receiving medical treatment.

9. A furry growth of minute fungi, especially on food or other organic matter.

10. The systematic study of materials in order to reach new conclusions.



EXERCISE 3. Insert the verbs into the sentences: make, develop, start, enable, change, return, experiment, notice, develop, become, prevent, treat, help, continue, finish.

1. It all ... with a mold that ... on a staphylococcus culture plate.

2. The discovery of penicillin ... the course of medicine and has ... physicians to treat formerly severe and life-threatening illnesses.

3. At the time, Fleming was ... with the influenza virus.

4. Fleming ... from a two-week vacation to find that a mold had ... on an accidentally contaminated staphylococcus culture plate.

5. He ... that the culture ... the growth of staphylococci.

6. Penicillin ... a difference during the first half of the 20th century.

7. The first patient was successfully ... for streptococcal septicemia in 1942.

8. The research was ... and ... by Howard Flory and Ernst Chain

9. Penicillin ... reduce the number of deaths and amputations.

10. To date, penicillin has ... the most widely used antibiotic in the world.

EXERCISE 4. Read the sentences and tick which is (T) true or (F) false.

1. Penicillin was first discovered in 1928.
2. The discovery of penicillin has enabled physicians to treat life-threatening illnesses such as flu, herpes, rubella, hepatitis.
3. Howard Flory and Ernst Chain are credited with the discovery of penicillin.
4. Upon examination of the mold, he noticed that the culture prevented the growth of viruses.
5. Fleming didn't plan to revolutionize all medicine by discovering the world's first antibiotic.
6. Fleming continued studying penicillin in 1931.
7. Howard Flory and Ernst Chain developed penicillin for use as a medicine in mice.
8. Penicillin made a difference during the second half of the 20th century.
9. The first patient was successfully treated in Oxford in 1942.
10. There were only 400 million units of penicillin available during the first five months of 1943.

EXERCISE 5. Complete each sentence with one of the words: because, because of, so that, so.

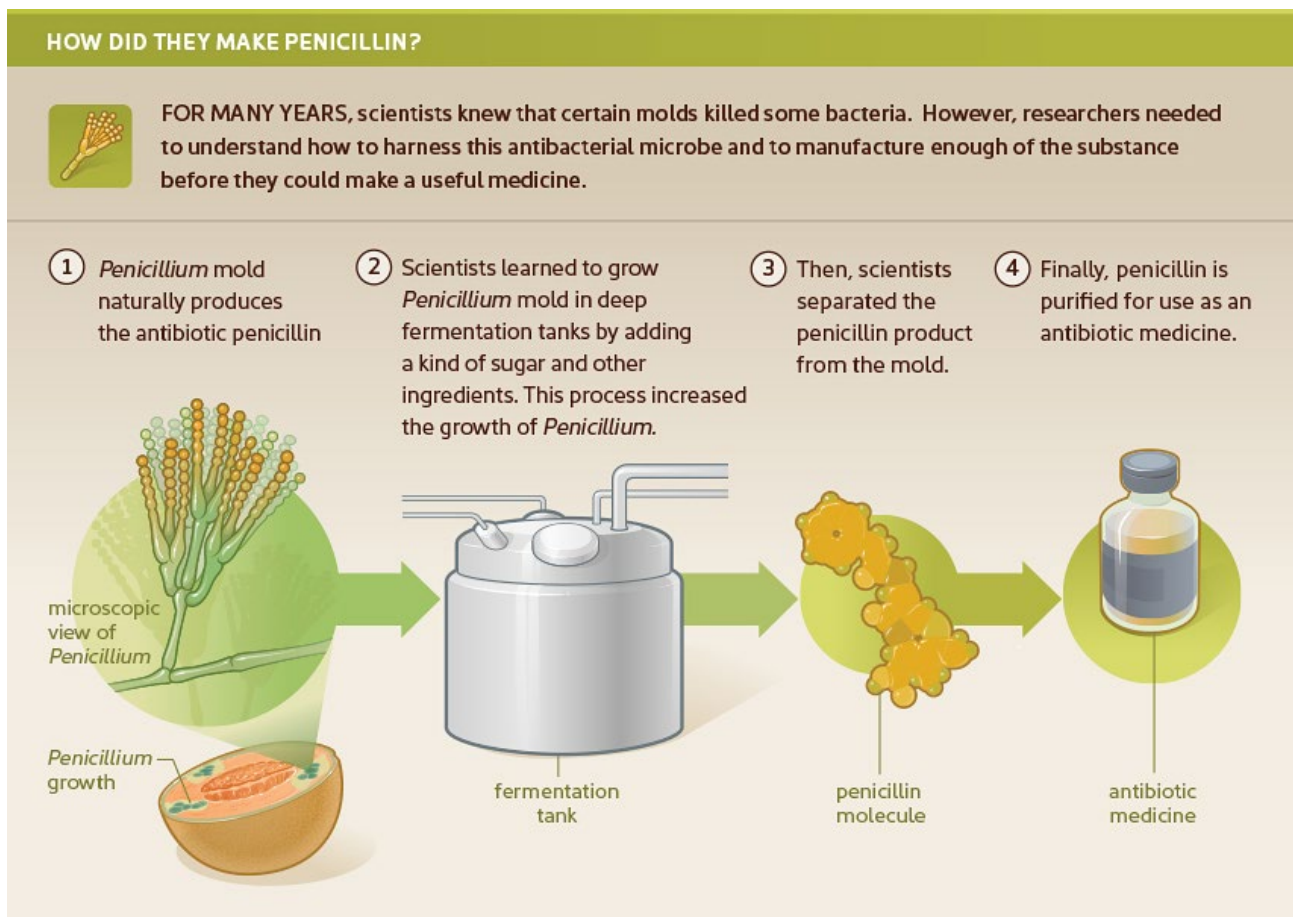
1. The risk of developing a second tumor ... radiation therapy is very low.
2. Carbon fiber is not rusty ... the safety of the carbon fiber part is better than steel part.
3. All the restaurants were full ... it was a public holiday.
4. He worked hard ... he would get this job.
5. Don't cry ... it ended, smile ... it happened.
6. Recently he nearly lost his job ... drinking.
7. The street looked very beautiful ... I took a photograph.
8. She wears pneumatic boots ... she can jump very far.
9. I do it ... I believe that's important.
10. If fragments of bones protruding outside, put it may not be necessary ... the risk of entry of microbes in the tissues.

EXERCISE 6. Discuss these questions with a partner.

1. How was penicillin first discovered?
2. Who really discovered penicillin?

3. When was penicillin first used on humans?
4. Why is penicillin the greatest discovery?
5. Was penicillin the first antibiotic?
6. How did penicillin change the world?
7. Why is penicillin rarely used today?
8. How many lives did penicillin save?
9. Is penicillin still the best antibiotic?
10. Which bacteria is resistant to penicillin?
11. What can penicillin not cure?

EXERCISE 7. Look at the picture. Describe the process of making penicillin. Try to sequence your language and make your details easier to read by using language like: firstly, first of all, secondly, after that, from this, where, following that, subsequently, before that, in turn, then.



TOPIC 5

DO YOU KNOW THAT?

1. Anesthesiologists have long noticed that smokers often need extra anesthesia.
2. Anesthesia Doesn't Always Put You to Sleep.
3. It's harder for anesthesiologists to provide the best dose of medication and deliver that medication intravenously to patients who are significantly overweight.
4. Certain scents have been shown to help quell the nausea and vomiting that often occurs after anesthesia.
5. General anesthesia may cause memory loss that can last for days, even months.

WHAT ELSE DO YOU KNOW ABOUT ANAESTHESIA?

ANAESTHESIA

Although many individuals administered anaesthetic agents in the decade 1835-1845, they were not widely publicised and did not impact on general medical practice. On 16 October 1846, at Massachusetts General Hospital in Boston, the first public demonstration of ether anaesthesia took place. The anaesthetist was William Morton and the surgeon was John Warren; the operation was the removal of a lump under the jaw of Gilbert Abbott. Present in the room was another surgeon, Jacob Bigelow, who wrote a letter to a friend in London which described the process.



It is difficult to understand today how major this advance was. Before this, surgery was a terrifying last resort in a final attempt to save life. Few operations were possible. Surface surgery, amputation, fungating cancers and 'cutting for stone' (the removal of bladder stones) were really the only areas in which the

surgeon could practice. The inside of the abdomen, chest and skull were essentially 'no go' areas. Speed was the only determinant of a successful surgeon. Most patients were held or strapped down – some would mercifully faint from their agony – many died either on the table or immediately post-surgery. The suffering was intense.

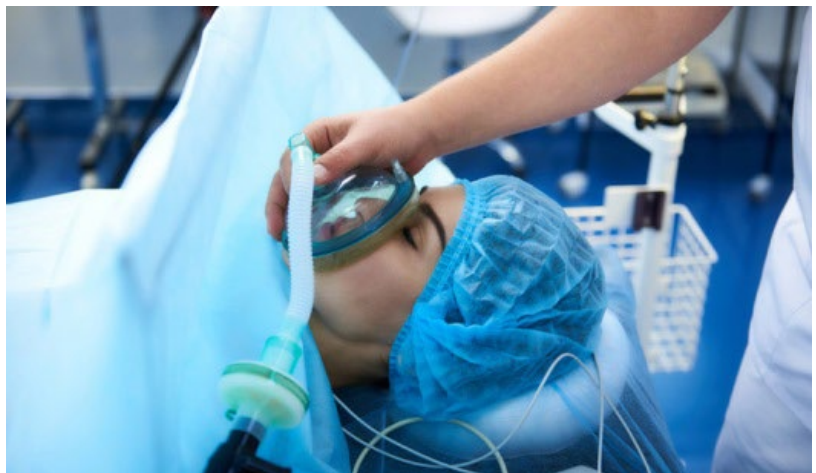
The introduction of anaesthesia changed all of this. Surgery could slow down – become more accurate and could move into 'forbidden areas' of abdomen, chest and

brain. The evolution of surgical practice has been dependent on anaesthesia and the concomitant introduction of antiseptics through Lister's carbolic spray.

The next major advance was the introduction of local anaesthesia – cocaine – in 1877. Then came local infiltration, nerve blocks and then spinal and epidural anaesthesia, which in the 1900s allowed surgery in a relaxed abdomen without the huge 'depth' of anaesthesia required by ether and chloroform. Newer, less toxic, local anaesthetic agents were introduced in the early 1900s.

The next important innovation was the control of the airways with the use of tubes placed into the trachea. This permitted control of breathing and techniques introduced in the 1910s were perfected in the late 1920s and early 1930s. Then came the introduction of intravenous agents. These were barbiturates which enabled the patient to go off to sleep quickly, smoothly and pleasantly and therefore avoided any unpleasant inhalational agents. Then in the 1940s and early 1950s, there came the introduction of muscle relaxants, firstly with curare (the South American Indian poison!) and then over subsequent decades a whole series of other agents. All of these groups of drugs have since been refined so there are now much more potent and less toxic intravenous agents, inhalational agents, local anaesthetics and muscle relaxants.

Anaesthetists are now highly trained physicians who provide a whole range of care for patients – not just in the operating theatre. They are usually consulted in the preoperative period to optimise the patients' condition and they usually run



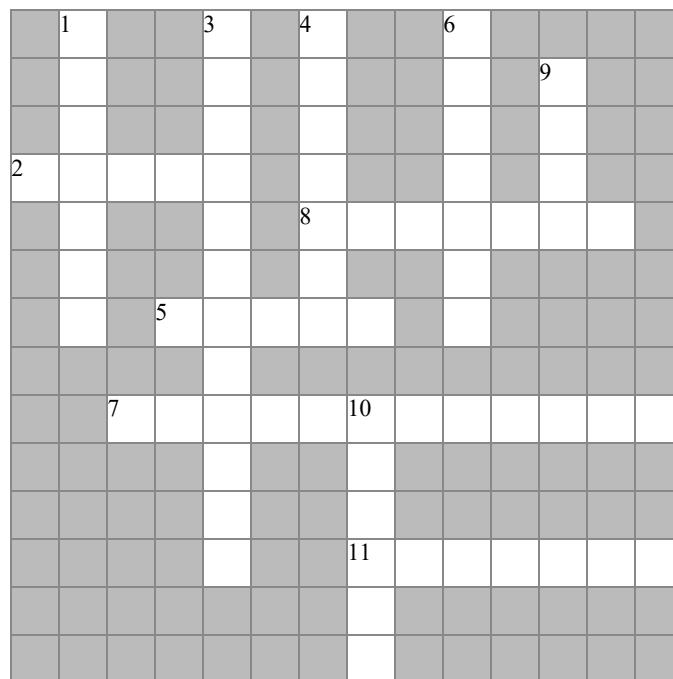
High Dependency and Intensive Care Units.

Anaesthesia is now very safe, with mortality of less than 1 in 250,000 directly related to anaesthesia in most high income countries. Nevertheless, with today's sophisticated monitoring systems and a greater understanding of bodily functions, the anaesthetic profession will continue to strive for improvement over the next 150 years.

EXERCISE 1. Read the words and translate them into your native language.

surgeon		abdomen	
decade		chest	
anaesthetist		skull	
lump		introduction	
jaw		spray	
advance		airways	
attempt		range	

EXERCISE 2. Complete the crossword.



ACROSS:

- 2. A set of different things of the same general type.
- 5. The front surface of a body between the neck and the stomach.
- 7. A formal presentation.
- 8. An effort to achieve or complete a difficult task or action.
- 11. The part of the body containing the digestive and reproductive organs; the belly.

DOWN:

- 1. A development or improvement.
- 3. A medical specialist who administers anaesthetics.
- 4. The passage by which air reaches a person's lungs.
- 6. A medical practitioner qualified to practice surgery.

9. A compact mass of a substance.
10. A period of ten years.

EXERCISE 3. Insert the verbs into the sentences: enable, permit, hold, understand, strap, die, take, allow, consult, strive, change, provide.

1. On 16 October 1846 the first public demonstration of ether anaesthesia ... place.
2. It is difficult to ... today how major this advance was.
3. Most patients were ... or ... down, many ... on the table.
4. The introduction of anaesthesia ... all of this.
5. Epidural anaesthesia ... surgery without the huge 'depth' of anaesthesia.
6. The use of tubes placed into the trachea ... control of breathing.
7. Barbiturates ... the patient to go off to sleep quickly and pleasantly.
8. Anaesthetists are now highly trained physicians who ... a whole range of care for patients.
9. They are usually ... in the preoperative period to optimise the patients' condition.
10. The anaesthetic profession will continue to ... for improvement over the next 150 years.

EXERCISE 4. Read the sentences and tick which is (T) true or (F) false.

1. Anaesthetic agents were widely publicised in the decade 1835-1845.
2. On 16 October 1846 the first public demonstration of ether anaesthesia took place.
3. Before this, surgery was a terrifying last resort in a final attempt to save life.
4. A lot of operations were possible, for example the inside of the abdomen and chest.
5. Speed was the only determinant of a successful surgeon.
6. Few patients died either on the table or immediately post-surgery.
7. The major advance was the introduction of local anaesthesia – cocaine – in 1900.
8. In the 1950s there came barbiturates which enabled the patient to go off to sleep quickly, smoothly and pleasantly.
9. Anaesthetists are now highly trained physicians.
10. Anaesthesia isn't safe now.

EXERCISE 5. Put the verbs in brackets in the Present Simple or in the Present Continuous.

1. The water ... now, so you can put in the pasta. Water ... at 100 degrees. (**boil**)
2. William ... in New York. William ... in Kyiv for a year. (**live**)
3. I ... tea every morning. I ... too much coffee these days. (**drink**)

4. I ... at seven tonight. This plane ... at eight every Monday. (leave)
5. He ... a movie now. He usually ... movies in the evenings. (watch)
6. This cookie ... wonderful. Why ... you ... the salad? (smell)
7. My brother ... very well. He ... a car now. (drive)
8. Right now I ... my garden flowers, but I will be free in half an hour. I ... my garden twice a week. (water)
9. She ... her aunt once a month. She ... her grandparents tomorrow. (visit)
10. Look at him. He ... to help this old man. He ... himself in the literary field. (try)

EXERCISE 6. Discuss these questions with a partner.

1. What is the history of anesthesia?
2. When was anesthesia invented?
3. How was anaesthetic discovered?
4. Why was anesthesia important?
5. What are 3 types of anesthesia?
6. What is the difference between anesthesia and anaesthesia?
7. Do you feel pain in anaesthesia?
8. Is anaesthesia like sleeping?
9. Can you wake up during anesthesia?
10. What are the risks of anesthesia?
11. How long does it take to wake up from anesthesia?

EXERCISE 7. Look at the pictures. Describe the process of anesthesia development. Try to sequence your language and make your details easier to read by using language like: firstly, first of all, secondly, after that, from this, where, following that, subsequently, before that, in turn, then.



History of Anaesthesia

- Pre-1846 - the foundations of anaesthesia
- 1846 - 1900 - establishment of anaesthesia
- 20th Century - consolidation and growth
- 21st Century - the future

TOPIC 6

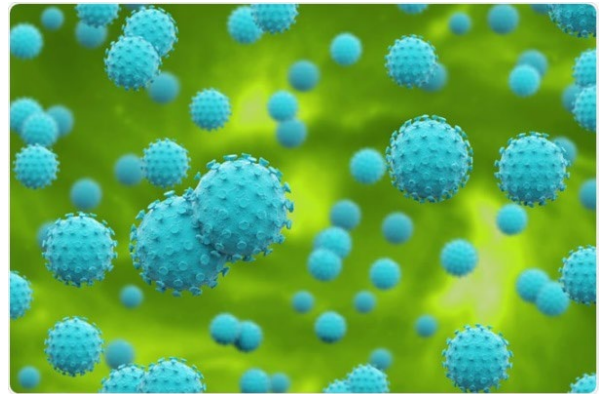
DO YOU KNOW THAT?

1. Your immune system is strong, but many procedures can carry germs into your body past your normal immune defenses.
2. All infectious diseases are caused by germs.
3. One germ can multiply into more than 8 million germs in one single day. That's how fast they spread.
4. Germs can be found literally everywhere: in the air, in water, on food, and on surfaces.
5. Hands spread 1,000 times more germs when they are damp than when they are dry.

WHAT ELSE DO YOU KNOW ABOUT ASEPTIC AND ANTISEPTIC?

ASEPTIC AND ANTISEPTIC

Aseptic techniques were first widely adopted in the late 19th century. Prior to this, the importance of sterilizing an area was known, and antiseptics were used to clean locations, tools, and equipment that needed to be sterile, such as when performing surgery. While antiseptics are concerned with the removal of microorganisms immediately



before, during, and after surgery or other work, asepsis is concerned with the maintenance of sterile conditions through good hygiene procedures.

In the mid-19th century, Louis Pasteur performed several experiments demonstrating the validity of the germ theory and disproving the widely accepted idea of spontaneous generation. Around this time, the development of anesthetics



allowed surgeons to perform longer, more complex surgeries on patients, which also largely increased the risk of infection.

In the 1840s, the Hungarian surgeon Ignaz Semmelweis noted that on maternity wards where doctors who also worked in other areas of the hospital were present, the mortality rates were significantly higher than on those

wards that were operated by midwives only. He introduced hand washing procedures on these wards. The number of deaths due to infection on these maternity wards dropped dramatically following the implementation of this rule.

Antiseptic surgery was largely pioneered by Joseph Lister in the 1860s, when he used phenol (known at the time as carbolic acid) as a disinfectant. He would sterilize the operating theatre and surgical tools with phenol, and even soak bandages in the substance before dressing wounds. Although this was effective, he failed to recognise the importance of asepsis at the time.

Robert Koch, through his work with anthrax and tuberculosis, demonstrated that particular diseases were the result of the presence of specific microorganisms within the body, and so strongly reinforced the work of Louis Pasteur and the idea of asepsis. This led the medical community to stop relying solely on antiseptic techniques and emphasize asepsis as well. They also began to realize the downsides to the use of disinfectants, including the fact that they were highly poisonous, and their entry into a wound was often severely damaging.

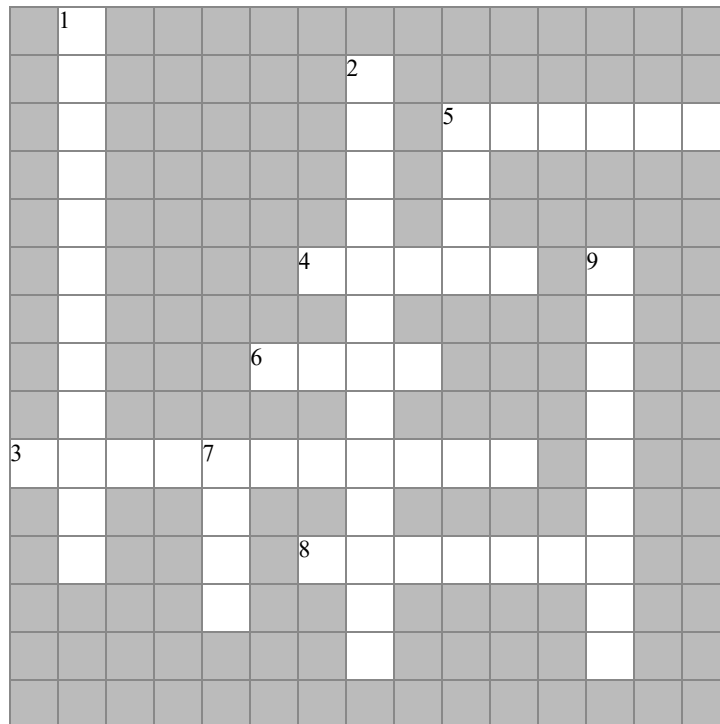
In the later decades of the 19th and early 20th centuries, sterilized surgical gowns and gloves became more commonplace. In 1890 William Stewart Halstead requested that the Goodyear Rubber Company make a pair of thin rubber gloves, initially with the intention that they protect his hands and those of his nurses from the caustic effects of the phenol disinfectant that was still being used.

It became clear that disinfecting the gloves in this way and adhering to aseptic techniques in the operating theatre was a superior method. Autoclaves were also used to disinfect the gloves and gowns. It was not until the 1960s that the first commercially available pre-sterilized gloves were manufactured by the Ansell Company.

EXERCISE 1. Read the words and translate them into your native language.

tool		wound	
equipment		anthrax	
maintenance		presence	
germ		microorganism	
ward		downside	
midwife		gown	
disinfectant		gloves	

EXERCISE 2. Complete the crossword.



ACROSS:

3. The process of preserving a condition.
4. An injury to living tissue caused by a cut, blow, or other impact.
5. A covering for the hands.
6. A microorganism, especially one which causes disease.
8. A person, typically a woman, who is trained to assist women in childbirth.

DOWN:

1. A chemical liquid that destroys bacteria.
2. A microscopic organism, especially a bacterium, virus, or fungus.
5. A long medical clothing.
7. A device or implement.
9. The necessary items for a particular purpose.

EXERCISE 3. Insert the verbs into the sentences: perform, clean, drop, use, manufacture, demonstrate, recognise, soak, realize, concern.

1. Antiseptics were used to ... locations, tools, and equipment.
2. Asepsis is ... with the maintenance of sterile conditions.
3. Louis Pasteur ... several experiments demonstrating the validity of the germ theory.
4. The number of deaths due to infection ... dramatically.

5. Joseph Lister ... phenol as a disinfectant.
6. Joseph Lister ... bandages in the substance before dressing wounds.
7. He failed to ... the importance of asepsis at the time.
8. Robert Koch ... that particular diseases were the result of the presence of specific microorganisms within the body.
9. Medical community began to ... the downsides to the use of disinfectants.
10. The first commercially available pre-sterilized gloves were ... by the Ansell Company.

EXERCISE 4. Read the sentences and tick which is (T) true or (F) false.

1. Aseptic techniques were first widely adopted in the late 18th century.
2. Ignaz Semmelweis performed several experiments disproving the widely accepted idea of spontaneous generation.
3. The development of anesthetics allowed surgeons to perform longer, more complex surgeries on patients, which also largely increased the risk of infection.
4. Louis Pasteur introduced hand washing procedures on maternity wards.
5. The number of deaths due to infection on these maternity wards increased.
6. Antiseptic surgery was largely pioneered by Robert Koch in the 1860s.
7. Joseph Lister would sterilize the operating theatre and surgical tools with phenol.
8. The medical community stopped relying solely on antiseptic techniques and emphasized asepsis as well.
9. Disinfectants weren't highly poisonous, and their entry into a wound wasn't severely damaging.
10. Adhering aseptic techniques in the operating theatre was a superior method.

EXERCISE 5. Put the verbs in brackets in the Past Simple or in the Present Perfect.

1. I ... him for six years. I ... her when I was at school. (know)
2. She ... in Milan from 2012 to 2019. She ... in Rome since 2021. (live)
3. Where's Edward? I ... him for ages. I ... Edward last night. (not see)
4. We ... at primary school from 1996 to 1999. We ... in this class since September. (be)
5. They ... this video yet. They ... a video at the weekend. (not watch)
6. I ... my job three times this year. I ... my job three times last year. (change)
7. Are you going to finish your work before you go to bed? – I ... already it. I ... my work two hours ago. (finish)
8. Mark ... his leg five days ago. He's in hospital. He has been in hospital since he ... his leg. (break)

9. Diana ... some bad news last week. She has been sad since she ... the bad news.
(get)
10. I started school when I was five years old. I ... at school since I ... five years old.
(be)

EXERCISE 5. Discuss these questions with a partner.

1. What is the history of asepsis antiseptics?
2. When was the importance of asepsis first recognized?
3. When was aseptic surgery discovered?
4. Who introduced aseptic?
5. What does aseptic mean in history?
6. When was the first antiseptic used?
7. What is difference between asepsis and antiseptics?
8. What is an example of aseptic?
9. What are the 4 different types of antiseptics used?
10. What are 5 aseptic techniques?
11. Why is it called antiseptic?
12. Is 70% alcohol an antiseptic?

EXERCISE 7. Look at the picture. Describe the sterilization process. Try to sequence your language and make your details easier to read by using language like: firstly, first of all, secondly, after that, from this, where, following that, subsequently, before that, in turn, then.



TOPIC 7

DO YOU KNOW THAT?

1. The most popular vitamins in the western world include multivitamins, vitamin C and magnesium.
2. Taking too many supplements and vitamins can lead to unwanted side effects, such as nausea, diarrhea, and stomach cramps.
3. Long, slow cooking of vegetables can deplete their vitamin content.
4. Vitamin D can be produced in the skin from the sun's energy.
5. Women played an important role in the discovery of many vitamins.

WHAT ELSE DO YOU KNOW ABOUT VITAMINS?

VITAMINS



Vitamins are a 20th-century discovery. While people always felt properties of some foods were important to health before the opening decades of the 1900s, it wasn't until after the turn of the century that these factors were identified and synthesized.

In 1905, an Englishman named William Fletcher became the first

scientist to determine whether the removal of special factors, known as vitamins, from food would lead to diseases. Doctor Fletcher made the discovery while researching the causes of the disease Beriberi. Eating unpolished rice, it seemed, prevented Beriberi while eating polished rice did not. Hence, Fletcher suspected that there were special nutrients contained in the husk of the rice removed during the polishing process that played a role.

In 1906, English biochemist Sir Frederick Gowland Hopkins also found that certain food factors (proteins, carbohydrates, fats and minerals) were important to growth in the human body: his work led to his receiving (together with Christiaan

Eijkman) the 1929 Nobel Prize in Physiology or Medicine. In 1912, Polish scientist Cashmir Funk named the special nutritional parts of food a «vitamine» after «vita», which meant life, and «amine» from compounds found in the thiamine he isolated from rice husks. Vitamine was later shortened to vitamin. Together, Hopkins and Funk formulated the vitamin hypothesis of deficiency disease, which asserts that a lack of vitamins could make you sick.

Throughout the 20th century, scientists were able to isolate and identify the various vitamins found in food. Here is a short history of some of the more popular vitamins.

Elmer V. McCollum and Marguerite Davis discovered **Vitamin A** around 1912 to 1914. In 1913, Yale researchers Thomas Osborne and Lafayette Mendel discovered that butter contained a fat-soluble nutrient soon known as Vitamin A. Vitamin A was first synthesized in 1947.

Elmer V. McCollum also discovered **Vitamin B** (known as biotin, a water-soluble vitamin that helps the body convert carbohydrates, fats, and proteins into energy) sometime around 1915–1916. Casimir Funk discovered **Vitamin B1** (also known as thiamine, a water-soluble B vitamin that plays a critical role in energy metabolism) in 1912. D. T. Smith, E. G. Hendrick discovered **Vitamin B2** (also known as riboflavin, an important role in energy production, cellular function, and metabolism) in 1926. Max Tishler invented methods for synthesizing the essential Vitamin B2. Paul Gyorgy discovered **Vitamin B6** (six compounds which are extremely versatile and primarily work on protein metabolism) in 1934.

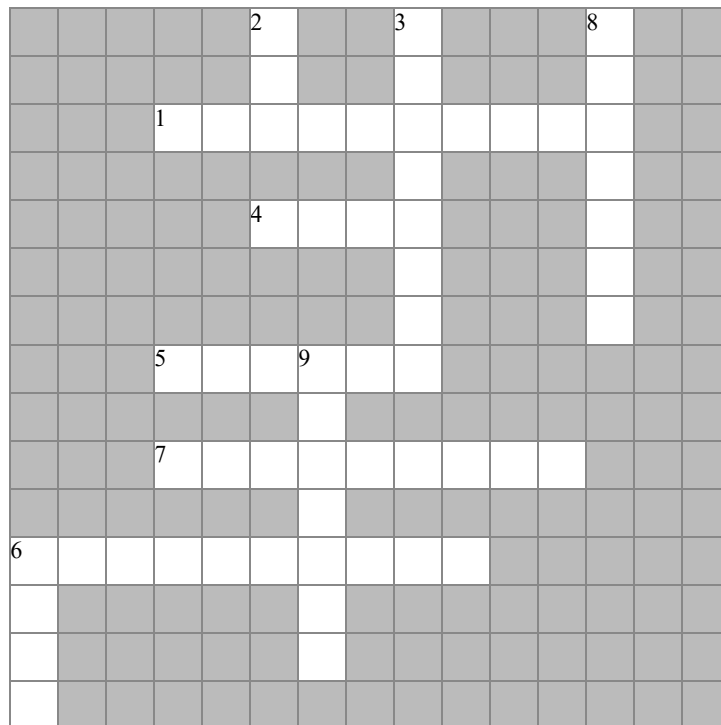
In 1747, Scottish naval surgeon James Lind discovered that a nutrient in citrus foods prevented scurvy. It was re-discovered and identified by Norwegian researchers A. Hoist and T. Froelich in 1912. In 1935, **Vitamin C** (ascorbic acid, required for the biosynthesis of collagen) became the first vitamin to be artificially synthesized. The process was invented by Dr. Tadeusz Reichstein of the Swiss Institute of Technology in Zurich.

In 1922, Edward Mellanby discovered **Vitamin D** (promotes calcium absorption in the gut and enable bone mineralization) while researching a disease called rickets. In 1922, University of California researchers Herbert Evans and Katherine Bishop discovered **Vitamin E** (important anti-oxidant) in green leafy vegetables.

EXERCISE 1. Read the words and translate them into your native language.

protein		hypothesis	
carbohydrates		lack	
discovery		metabolism	
property		scurvy	
removal		gut	
husk		bone	
compound		rickets	

EXERCISE 2. Complete the crossword.



ACROSS:

1. The chemical processes that occur within a living organism.
4. Any of the pieces of hard whitish tissue making up the skeleton in humans.
5. A disease caused by a deficiency of vitamin C
6. A supposition or proposed explanation made on the basis of limited evidence.
7. The action or process of discovering

DOWN:

2. The stomach or belly.
3. An attribute, quality, or characteristic of something.

6. The dry outer covering of some fruits or seeds.
8. The action of taking away something unwanted.
9. A disease of children caused by vitamin D deficiency.

EXERCISE 3. Insert the verbs into the sentences: determine, feel, find, suspect, name, lead, synthesize, formulate, shorten, identify, isolate.

1. People always ... properties of some foods were important to health.
2. William Fletcher ... whether the removal of special factors from food would lead to diseases.
3. Fletcher ... that there were special nutrients contained in the husk of the rice that played a role.
4. Frederick Hopkins also ... that certain food factors were important to growth in the human body.
5. His work ... to his receiving the Nobel Prize in Physiology or Medicine.
6. Cashmir Funk ... the special nutritional parts of food a «vitamine».
7. Vitamine was later ... to vitamin.
8. Hopkins and Funk ... the vitamin hypothesis of deficiency disease.
9. Throughout the 20th century, scientists were able to ... and ... the various vitamins found in food.
10. Vitamin A was first ... in 1947.

EXERCISE 4. Read the sentences and tick which is (T) true or (F) false.

1. Vitamins are a 19th-century discovery.
2. Frederick Gowland Hopkins made the discovery while researching the causes of the disease Beriberi.
3. Eating unpolished rice prevented Beriberi while eating polished rice did not.
4. Fletcher suspected that there weren't special nutrients contained in the husk of the rice removed during the polishing process.
5. Funk alone formulated the vitamin hypothesis of deficiency disease, which asserts that a lack of vitamins could make you sick.
6. Thomas Osborne and Lafayette Mendel discovered that butter contained a fat-soluble nutrient soon known as Vitamin A
7. Casimir Funk discovered Vitamin B1 in 1912.
8. Vitamin B became the first vitamin to be artificially synthesized.

9. Edward Mellanby discovered Vitamin D while researching a disease called scurvy.
10. Herbert Evans and Katherine Bishop discovered Vitamin E in carrot.

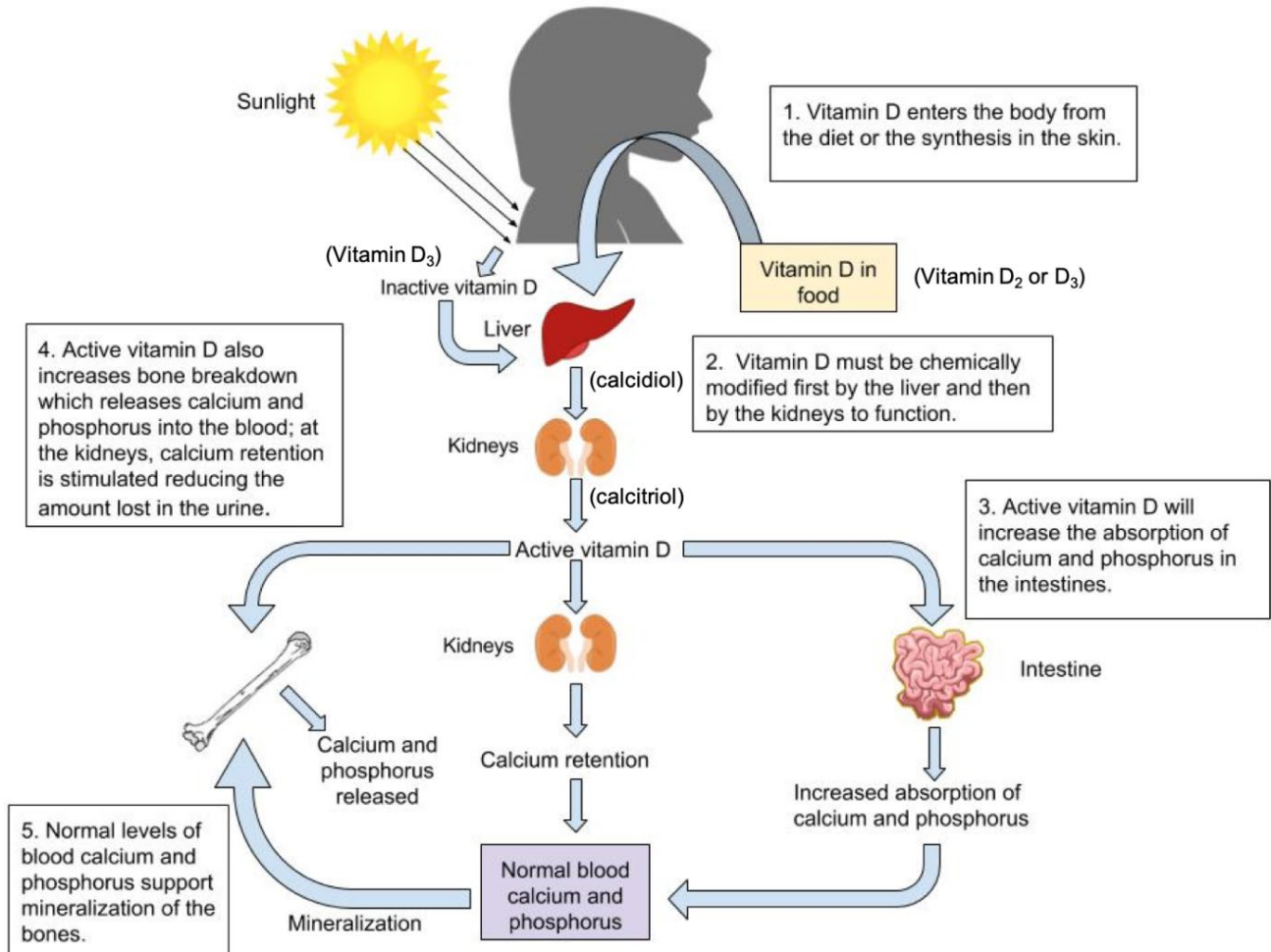
EXERCISE 5. Put the verbs in the correct form.

1. What time ... the participants ... at the conference last Tuesday? – They ... by eight o'clock in the morning. (arrive)
2. How many clients ... he ... by the end of the day? – He ... ten clients. (serve)
3. ... the performance ... by seven o'clock yesterday? – No, it (finish)
4. Unfortunately Louise ... (never to use) this computer program before.
5. Whom ... James ... (see) during his last visit to Paris? – He ... (meet) some of his friends and relatives.
6. What hotel ... you ... (choose) to stay at during your last trip? – I ... (stay) at the Central Hotel.
7. Robert ... (have) such an experience before.
8. ... William ... (be) to our Theme Park before this visit? – Yes, he
9. Which street ... his parents ... before they moved? – They ... in Baker Street. (live)
10. By what time ... your grandparents ... their work in the garden yesterday? – They ... their work by five o'clock. (finish)

EXERCISE 6. Discuss these questions with a partner.

1. What is the history of vitamins?
2. Who discovered the first vitamin?
3. What were vitamins originally called?
4. Who is the father of vitamins?
5. Why vitamins are important?
6. What are vitamins made of?
7. What is the king of vitamins?
8. What are 3 important reasons to take vitamins?
9. Which vitamin is more powerful?
10. Are vitamins really natural?

EXERCISE 7. Look at the picture. Describe the process of synthesizing vitamin D. Try to sequence your language and make your details easier to read by using language like: firstly, first of all, secondly, after that, from this, where, following that, subsequently, before that, in turn, then.



TOPIC 8

DO YOU KNOW THAT?

1. The word placebo, from the Latin for "I shall please," first turned up in medical texts in the 18th century.
2. Placebos are often called sugar pills, and indeed, they're sometimes tablets made of sugar or starch.
3. Scientists include placebo groups in clinical trials thanks to the work of anesthesiologist Henry K. Beecher, MD.
4. Studies show that placebo treatments are surprisingly effective for a variety of conditions, from Parkinson's disease to gastrointestinal problems.
5. 30 studies have shown that when people are given a placebo, but are told it's a pain killer, their bodies produce morphine-like compounds called opioids.

WHAT ELSE DO YOU KNOW ABOUT PLACEBO?

PLACEBO



A placebo is anything that seems to be a «real» medical treatment – but isn't. It could be a pill, a shot, or some other type of «fake» treatment. What all placebos have in common is that they do not contain an active substance meant to affect health.

Researchers use placebos during studies to help them understand what effect a new drug or some other treatment might have on a particular condition.

For instance, some people in a study might be given a new drug to lower cholesterol. Others would get a placebo. None of the people in the study will know if they got the real treatment or the placebo. Researchers then compare the effects of the drug and the placebo on the people in the study. That way, they can determine the effectiveness of the new drug and check for side effects.

Sometimes a person can have a response to a placebo. The response can be positive or negative. For instance, the person's symptoms may improve. Or the person may have what appears to be side effects from the treatment. These responses are known as the «placebo effect». There are some conditions in which a placebo can

produce results even when people know they are taking a placebo. Studies show that placebos can have an effect on conditions such as: Depression, Pain, Sleep disorders, Irritable bowel syndrome, Menopause. In one study involving asthma, people using a placebo inhaler did no better on breathing tests than sitting and doing nothing. But when researchers asked for people's perception of how they felt, the placebo inhaler was reported as being as effective as medicine in providing relief.



Research on the placebo effect has focused on the relationship of mind and body. One of the most common theories is that the placebo effect is due to a person's expectations. If a person expects a pill to do something, then it's possible that the body's own chemistry can cause effects similar to what a medication might have caused. For instance, in one study, people were given a placebo and told it was a stimulant. After taking the pill, their pulse rate sped up, their blood pressure increased, and their reaction speeds improved. When people were given the same pill and told it was to help them get to sleep, they experienced the opposite effects.

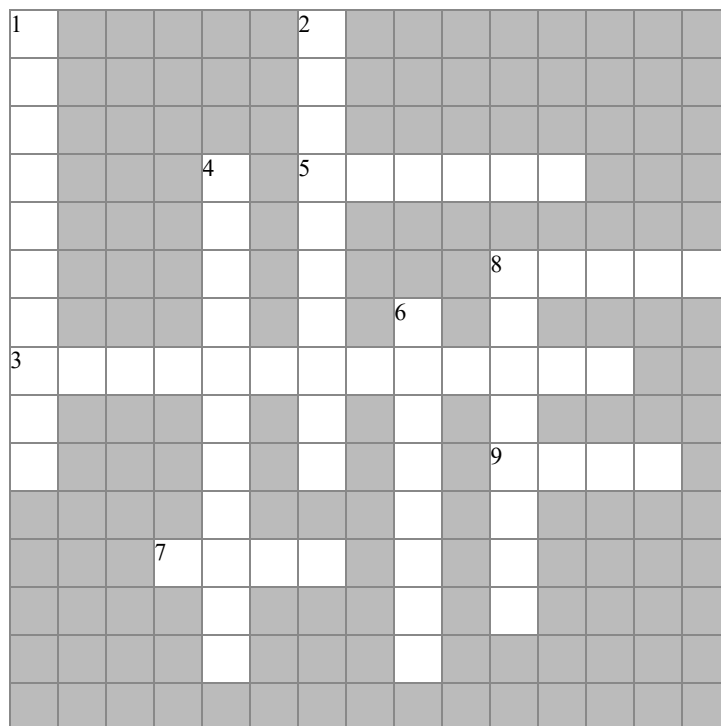
Experts also say that there is a relationship between how strongly a person expects to have results and whether or not results occur. The stronger the feeling, the more likely it is that a person will experience positive effects. There may be a profound effect due to the interaction between a patient and healthcare provider. The same appears to be true for negative effects. If people expect to have side effects such as headaches, nausea or drowsiness, there is a greater chance of those reactions happening. The fact that the placebo effect is tied to expectations doesn't make it imaginary or fake. Some studies show that there are actual physical changes that occur with the placebo effect. For instance, some studies have documented an increase in the body's production of endorphins, one of the body's natural pain relievers.

One problem with the placebo effect is that it can be difficult to distinguish from the actual effects of a real drug during a study. Finding ways to distinguish between the placebo effect and the effect of treatment may help improve the treatment and lower the cost of drug testing. And more study may also lead to ways to use the power of the placebo effect in treating disease.

EXERCISE 1. Read the words and translate them into your native language.

pill		stimulant	
shot		pulse	
effectiveness		pressure	
depression		provider	
asthma		headache	
relief		nausea	
expectation		drowsiness	

EXERCISE 2. Complete the crossword.



ACROSS:

- 3. The degree to which something is successful in producing a desired result; success.
- 5. A feeling of relaxation.
- 7. a small round mass of solid medicine
- 8. A rhythmical throbbing of the arteries, typically as felt in the wrists or neck.
- 9. An injection.

DOWN:

- 1. Sleepiness.
- 2. Feelings of severe despondency and dejection.
- 4. A strong belief that something will happen.
- 6. A continuous pain in the head.

8. Continuous physical force exerted on an object.

EXERCISE 3. Insert the verbs into the sentences: determine, contain, distinguish, compare, improve, check, lead, expect, show, focus, occur, experience.

1. All placebos do not ... an active substance meant to affect health.
2. Researchers ... the effects of the drug and the placebo on the people in the study.
3. That way, they can ... the effectiveness of the new drug and ... for side effects.
4. The person's symptoms may
5. Research on the placebo effect has ... on the relationship of mind and body.
6. A person ... a pill to do something.
7. The stronger the feeling, the more likely it is that a person will ... positive effects.
8. Some studies ... that there are actual physical changes that ... with the placebo effect.
9. One problem with the placebo effect is that it can be difficult to ... from the actual effects of a real drug during a study.
10. More study may also ... to ways to use the power of the placebo effect in treating disease.

EXERCISE 4. Read the sentences and tick which is (T) true or (F) false.

1. A placebo is a real medical treatment.
2. A placebo couldn't be a pill or a shot.
3. All placebos contain an active substance meant to affect health.
4. Researchers use placebos during studies to help them understand what effect a new drug might have on a particular condition.
5. A person can't have a response to a placebo.
6. There aren't conditions in which a placebo can produce results when people know they are taking a placebo.
7. The placebo effect is due to a person's expectations.
8. There may be a profound effect due to the interaction between a patient and healthcare provider.
9. If people expect to have side effects, there is a greater chance of those reactions happening.
10. There aren't actual physical changes that occur with the placebo effect.

EXERCISE 5. Write the sentences in reported speech.

1. He said: "I want a cup of coffee."
2. She said: "The city is very old."
3. He said: "My car has just broken."

4. They said: "We haven't seen our new neighbors yet."
5. He said: "I'll phone you."
6. She said: "I've just arrived."
7. They said: "We are going on holiday."
8. She said: "I can't do it"
9. He said: "I'll send you an e-mail."
10. She said: "I've got a lot of work to do."

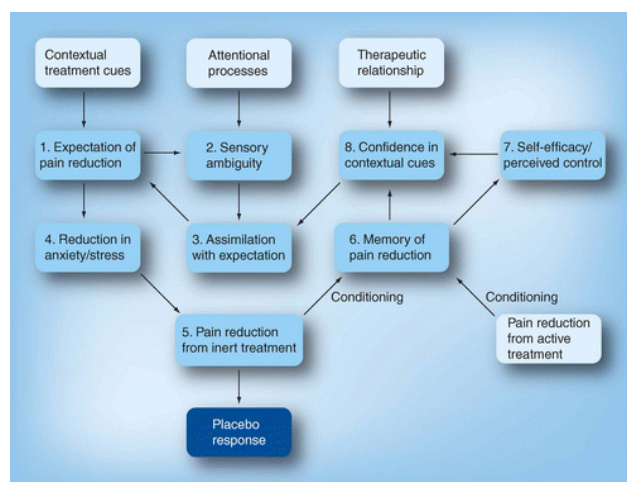
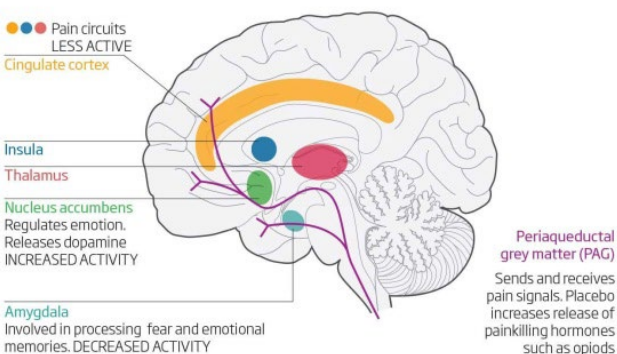
EXERCISE 6. Discuss these questions with a partner.

1. How does the placebo effect work?
2. How are placebos used?
3. What is an example of a placebo effect?
4. What is a placebo and why is it important?
5. Is caffeine a placebo effect?
6. Does placebo change behavior?
7. Is alcohol a placebo?
8. Is placebo effect moral?
9. Do doctors prescribe placebo?
10. Are placebo pills just sugar?

EXERCISE 7. Look at the picture. Describe the therapeutic process of the placebo. Try to sequence your language and make your details easier to read by using language like: firstly, first of all, secondly, after that, from this, where, following that, subsequently, before that, in turn, then.

Your brain on placebo

Brain imaging studies have revealed specific areas of the brain are involved in the placebo effect



ANSWERS TO CROSSWORD PUZZLES

HISTORY OF PHARMACY

- ACROSS:**
1. physician
 2. ailment
 3. ingredient
 6. salve
 7. prescription
 9. remedy
- DOWN:**
1. pharmacist
 4. drugstore
 5. maneuver
 8. drug

THE SANTA MARIA NOVELLA PHARMACY

- ACROSS:**
1. scent
 3. incense
 6. plague
 7. miasma
 11. monk
 12. jar
- DOWN::**
2. recipe
 4. corpse
 5. infirmary
 8. balm
 9. flame
 10. scales

HIPPOCRATES

- ACROSS:**
1. wrath
 3. injustice
 4. harm
 7. humor
 8. fluid
 10. cause
 12. phlegm
- DOWN:**
2. oath
 5. maturity
 6. deficiency
 9. bile
 11. quote

DISCOVERY OF PENICILLIN

- ACROSS:**
1. amputations
 3. demand
 4. supply
 6. culture
 8. pneumonia
- DOWN:**
2. deaths
 5. dawn
 7. patient
 9. mold
 10. research

ANAESTHESIA

ACROSS:	DOWN::
2. range	1. advance
5. chest	3. anaesthetist
7. introduction	4. airways
8. attempt	6. surgeon
11. abdomen	9. lump
	10. decade

ASEPTIC AND ANTISEPTIC

ACROSS:	DOWN:
3. maintenance	1. disinfectant
4. wound	2. microorganism
5. gloves	5. gown
6. germ	7. tool
8. midwife	9. equipment

VITAMINS

ACROSS:	DOWN:
1. metabolism	2. gut
4. bone	3. property
5. scurvy	6. husk
6. hypothesis	8. removal
7. discovery	9. rickets

PLACEBO

ACROSS:	DOWN:
3. effectiveness	1. drowsiness
5. relief	2. depression
7. pill	4. expectation
8. pulse	6. headache
9. shot	8. pressure

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Навчальне видання

Методичні вказівки
з англійської мови для студентів 1 курсу
спеціальності 226 «Фармація, промислова фармація»
English learner guide for 1st year students 226 «Pharmacy, industrial pharmacy»

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