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COURSE DETAILS

COURSE OBJECTIVES:

- Following and taking part in a discussion / meeting between professionals.
- Reading, understanding, writing and responding to articles from scientific journals / specialist press
- Making a PowerPoint presentation in front of an audience and handling questions related to it.
- Giving medical advice to patients in English.
- Discussing innovations in the medical field.

LESSON SCHEDULE:

- → Your English classes (1.5 hours) will take place every week on Thursday mornings from 8:30 to 10:00, from 10:05 to 11:35, and from 11:40 to 13:10 depending on your group. Please note that your time slots will be modified in the second semester.
- Classes are held in the Eiffel building (Centrale Supélec), at the Language Center (3rd and 4th floors of the building).

PRESENCE IN CLASS:

- ♣ Any absence must be justified by a medical certificate or a screenshot of train or bus schedule changes / cancellations with the hour and date clearly seen in the picture (maximum 72 hours following the absence), and sent to the administration and to your teacher. Prescriptions, doctor appointments and doctolib screenshots are not accepted as valid justifications
- → A catch-up session will be provided ONLY for justified absences in a test in the following class or in an "English for You" class. Otherwise, please note that the grade for a missed test is automatically a ZERO.

MATERIALS TO BRING INTO CLASS:

- **★** The 3rd year brochure: IT IS IMPERATIVE THAT YOU BRING A PAPER OR DIGITAL VERSION of your brochure to each class. (It could be printed from E-Campus or purchased from the Corpo.)
- ♣ You will regularly watch video reports on themes related to health, treatments, and medical research in class. Therefore, it is highly recommended to come to classes with HEADPHONES AND A COMPUTER (OR TABLET).

ECAMPUS

It is the educational platform where you will find documents related to your English classes and where you will receive messages and documents from teachers in charge of your group, as well as general announcements of exam organization. Consequently, you must activate your user account (https://adonis.u-psud.fr/activation/) to have access to e-campus.

ENGLISH 4 YOU CLASSES

- Will take place on Mondays during lunchtime, from 12:30 PM to 1:30 PM, in the BPC building.
- They are accessible to all students without prior registration.

♣ Their main aim is to help students improve their English, prepare for their TOEIC tests, check their work, receive feedback from an English teacher and catch up on tests (only in case of duly justified absences).

EVALUATIONS:

- **Continuous assessment of written and oral work** will be carried out all throughout the year **(60%)**. This grade will stay with you even if you have to sit for the second session, but will only count for 25%.
- A final exam in English (40%).
- If you miss more than 1 class without justification, the administration may decide that you are not allowed to sit in for the 1st session of exams.
- **★ The second session:** 25% Continuous assessment 25 % written exam (50% oral comprehension + 10% written comprehension + 40% written expression) + 50% Oral expression

Continuous assessment:

- Vocabulary tests on paper every 2 lessons: translation plus word in context exercises.
- **A video test:** questions + an opinion piece.
- ➡ Written expression: write an essay for a medical magazine about a topic seen in class. (Use linking words, a phrasal verb, an idiomatic expression...etc.) Length, name of magazine, formal expression and the target audience will be given to you by your teacher.
- 2 Oral presentations during the year:
- > Presentations will be conducted by groups of three students.
- Each group will present weekly with the exception of Weeks 1 and 2 whereas week 4 will feature two presentations.
- > All presentations must be supported by visual aids.
- Each student is allotted *three minutes* to present.
- > To engage your audience, employ a compelling introduction and effective impact techniques.

 Additionally, make effective use of eye contact and body language, as well as voice modulation and intonation.

First semester: Presentation about Research and the pharmaceutical industry on one of the following topics:

Here are your topics, choose one:

Treatment by immunotherapy:

Mechanisms of action, types of immunotherapies, clinical applications, efficacy and outcomes, side effects and management (compare to current therapies), personalized treatments, current research and innovations, future hopes and applications, ethical and economic considerations, patient experience, regulatory and approval processes ...etc.

Vaccines against cancer:

Basic concept of cancer vaccines, difference between preventive and therapeutic cancer vaccines, overview of how it works, available cancer vaccines, mechanism of action, developing effective cancer

vaccines, clinical trials, challenges and limitations, patient experience, what the future holds, public awareness, integration with and comparison to other cancer therapies...etc.

Al and healthcare:

Diagnostics and imaging, predictive analytics, personalized medicine, drug discovery and development, enhancing clinical decision making, virtual health assistance and remote patient monitoring, ethics and bias... etc.

Gene therapy:

Scientific and technological advances, clinical applications, challenges and limitations, ethical and social considerations, the cost and the economic impact, patient experience and outcomes, future directions and hopes, regulations and policies surrounding gene therapy.

Antimicrobial resistance:

Public health impact, healthcare burden, its causes, its mechanisms, its consequences, how to limit it, research and development around AMR, education and public awareness, economic and social impacts...etc.

Biosimilars:

What are biosimilars? Why biosimilars? Safety and efficacy, interchangeability, economic impact, patient access and awareness, pharmacovigilance, quality control, ethical considerations, scientific and technological advancements, global market dynamics.

Second Semester: Choose a drug in one of the drug families to present:

for example: allergenics, analgesics, antibiotics, anticholinergics, anticoagulants, antidepressants, antidiabetics, antihistamines, antipsychotics or others.

Give instructions about its use, dosage, side effects and eventual adverse events, appropriate warnings and
precautions, its administration routes, why it is used (What ailments or diseases is it used to treat?),
alternate treatments in case of stock rupture, its active ingredient (s) and their purpose, its inactive
ingredients (if any) and their purpose, its mechanism of action. Etc

End of year exam:

Case studies directly linked to the 14 topics seen in class throughout the year:

You will have 15 minutes to prepare and 5 minutes to present your response, including sufficient justifications and explanations. Your teacher will ask you questions at the end. Please note that the 5 minutes allocated will include both your presentation and the question-answer session. You are expected to be entirely familiar with all class topics and utilize the vocabulary and language points discussed.

IN THE PHARMACY

1. Patient Pharmacist Dialogues

You will listen to 3 patient-pharmacist dialogues:

Before listening:

In pairs discuss your pharmacy internships using the following questions:

- What was a typical day like? What were your main responsibilities?
- How were relations with your work colleagues, your boss and patients?
- In what way was this internship beneficial to you professionally?
- Can you share any memorable experiences which you had while working in the pharmacy?
- What were the most common pathologies that patients came with?
- Can you think of an interesting experience that you had in the pharmacy with a certain patient?

In threes, listen to the 3 dialogues on ecampus (1 each), debrief each other and then complete the grid on page 7.

First listening- Answer the questions and debrief your group:

- What have you understood in general?
- What is the main theme of the dialogue?
- What complaint does the patient have? How does the pharmacist react?
- What do you think of how the pharmacist handles the situation each time?

Second listening: Listen- find information-fill the grid on the following page.

Third listening (if needed): Verify your answers

After listening:

In 2s roleplay:

Either act out one of the situations in the audio, or make up your own pharmacist / patient dialogue. (You can use your internship for inspiration.) One of you will be a pharmacist, the other a patient. Inverse roles.

Language point: Giving advice in English:

Brainstorming: How did the pharmacists give advice to the patients in the listening exercises? What language structure did they use?

Let us look at some of the dialogue extracts:

Dialogue extract 1:

- > I recommend you and the rest of your family use Nix too.
- > I suggest you make an appointment with a podiatrist, a foot doctor, or call your primary care doctor.
- I would recommend Benadryl tablets and hydrocortisone cream. (Would is to be more polite / tentative)
- > I also recommend a medicated anti-lice treatment. (continued on page 9)

Pharmacist / Patient Dialogues

Treatment (+ recommendations, side effects, etc.)	
Diagnosis	
Symptoms	
Context	
Patient (age, date of birth, etc.)	
	Context Symptoms Diagnosis

English for Pharmacy Writing and Oral Communication, Miriam Diaz-Gilbert

Language point: Giving advice in English (continued from page 7)

1. Make a suggestion using recommend or suggest:

You can use the words 'suggest' or 'recommend' as in the examples above.

Suggest/recommend + you + infinitive or suggest/recommend + a noun.

You can also use 'suggest' or 'recommend'+ verbing.

I recommend seeing a doctor before taking this medicine

I suggest using these tablets for 5 days.

Dialogue extract 2:

OK. Don't put Betadine on your toe.... Follow the directions on the bottle.

First, wash her hair with shampoo, rinse it, and towel dry. Then rub the Nix cream into her hair After that, use the louse comb to remove the lice.

2. Use the imperative and use sequencing:

Although imperative verbs are used to issue commands, they have other functions:

Giving instructions: Take these tablets for 5 days.

Giving advice: Eat food rich in fibres.

Warning someone: Don't skip your medications

Affirmative imperative sentence: Take up a physical activity **Negative imperative sentence**: Don't put Betadine on your toe.

Sequencing:

First, firstly, first of all...
Second, secondly,
Third, thirdly

Then, after that, afterwards, subsequently, finally, lastly.

Other ways of giving advice:

3. Using a modal verb

For giving advice, we usually use 'should' or 'could' or 'had ('d) better'.

(We can use 'must' and 'have to' for stronger obligation):

You could start with the cream.

You shouldn't exceed the recommended dosage

You'd better consult with your doctor first.

You must have a prescription for this medicine.

4. Make it into a question

Using a question makes the person we are advising consider the advice we are giving them.

Why don't you take lozenges for your sore throat?

How about using the blue inhaler for your asthma? / How about you use the blue inhaler? What about re-explaining your symptoms to your doctor? / What about your symptoms?

NOTE: With the question 'Why don't you...?' we use an infinitive without 'to'.

'How about...? & What about' + verbing / + you + infinitive / a noun

5. Put yourself in the person's position

Sometimes it's useful to imagine yourself being in that person's position. This is a good way to explain your advice.

If I were you, I would see my doctor first.

If I were you, I would have an x-ray.

If + subject + past simple >> subject + would + infinitive

Written exercise:

1.	If I were you, (take up) a new physical activity. This should help regulate your
	cholesterol.
2.	see a cardiologist? I highly recommend that in your case.
3.	How about (change) your diet? Additionally, you make
	some changes to your sedentary lifestyle.
4.	You (adhere / strict) to your medicine schedule (not
	skip) a scheduled pill or you risk developing antimicrobial resistance.
5	(respect) the prescribed dosage. Otherwise, the consequences can be quite serious

Oral practice:

- In this role-play, one person will be a patient with heart disease, hypertension, and / or high cholesterol, seeking advice from a pharmacist about their condition and over-the-counter herbal supplements. The pharmacist will offer guidance and advice. These phrases can help you: lifestyle changes, moderate / intense exercise, regular physical activity, a low-cholesterol diet, weight management, salty and fatty foods and angina symptoms. The roles will then be reversed to gain both perspectives. Use language points and vocabulary seen in class.
- Bring a box of drugs to the next class, or find a picture of the drug on internet. Explain how to use it to a patient (speed dating style). Use language and syntax seen in class

Vocabulary: Quizlet list 1

2. Medicine warnings and precautions

Revision:

- 1. Quizlet 1.
- 2. Using your boxes of medicine or a picture of a drug box online, role-play a patient pharmacist dialogue then switch roles. Use the vocabulary and grammar seen in class last week.

Warmer discussion:

In pairs discuss the following:

- What are the principal responsibilities of pharmacists when dispensing medications to patients in a pharmacy?
- Can you give at least one example of a medication that requires explicit warnings or specific instructions?
- How can you ensure that patients fully understand and adhere to the warnings and instructions associated with their prescribed medications?
- Can you think of things that pharmacists can do to enhance better communication with patients in regards to warnings and instructions of medications?

Videos: (watching and discussions)

- In groups of threes, you will watch three videos (one video per student), take notes, answer questions and debrief your group partners. Following each debriefing, each student will pose the discussion questions to their group and so on.
- Look out for any phrasal verbs that you may hear while watching and take note of them. (A phrasal verb is an idiomatic phrase consisting of a verb + an adverb, or a verb + a preposition or a combination of both.)

Student 1:

Watch video entitled "Taking medicines as we get older": https://www.youtube.com/watch?v=NagT5IAYWrw

Watch, take notes and answer the questions.

Answer the questions:

- What is the main aim of this video?
- What particular medicines is the medical advisor talking about? What is it used to treat?
- What can be its side effects?

Now using your notes and answers to the questions, make a summary of the video to share with your group. Subsequently, discuss the following with your group:

- Do you know of other medications that may have similar side effects? Discuss together
- Why is the video mostly addressing older patients? What do you think of this method as a way of raising awareness? How efficient is it? Can you think of other ways?

Student 2:

Watch video entitled "Tips for Managing Your Medication: https://www.youtube.com/watch?v=VI-Tb7rJQvQ

Watch, take notes and answer the questions.

Answer the questions:

What is the percentage of Americans who do not adhere to their prescribed medications? Why do many Americans not take their medicine as directed?

What tips does the pharmacist offer to solve this problem?

Now using your notes and answers to the questions, make a summary of the video to share with your group. Subsequently, discuss the following with your group:

Can you think of other tips that can help patients take their medications as prescribed?

Student 3:

Watch video entitled "Antidepressants and Understanding Black Box Warnings" * https://www.youtube.com/watch?v=14HsaL7vHvA

* **A "black box warning"** is added to the labelling of drugs by the Food and Drug Administration (FDA) in the USA when very serious adverse reactions or special problems occur during the clinical trials.

Watch, take notes and answer the questions.

Answer the questions:

- What is the medication mentioned in the video called and what is it used for?
- Why does it have a black box warning?

 What were the consequences of this black box warning 	•	What were t	the consec	quences of	this black	box warning?
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• Consequently, what does the doctor do when she prescribes these medicines?

Now using your notes and answers to the questions, make a summary of the video to share with your group. Subsequently, discuss the following with your group:

• What medications are mostly used for treating depression in adolescents and children in France? What could be its / their serious side effects, if any? How would you inform the patient concerned of those side effects? What recommendations would you give while dispensing this medicine?

Activities:

- Do exercise on page 15 in pairs (the pictograms)
- In pairs, role-play the following scenarios (Switch roles between patient and pharmacist)

Scenario 1: Over-the-Counter Recommendation

Patient: You have a cold and are looking for an over-the-counter medication to help with your symptoms. (You are also taking other prescription medications for diabetes and high blood pressure.)

Pharmacist: Ask the appropriate questions. Recommend an appropriate over-the-counter medication, considering the patient's existing prescriptions. Educate the patient on proper usage and dosing. Give the appropriate warnings and precautions.

Scenario 2: An anti-depressant:

Patient: You are a parent and you have been prescribed a selective serotonin reuptake inhibitor (SSRI) to treat your teen's depression. You are quite worried about the side effects and the black box warnings.

Pharmacist: Explain the side effects in more detail and go into the downsides of not adhering to the medication.

Language Point: Phrasal verbs:

Have you heard any phrasal verbs in the videos which you just watched? Can you remember any of them?

What is a phrasal verb?

It is an <u>idiomatic</u> phrase consisting of a verb and another element: either an adverb, or a preposition or a combination of both.

Using them will help you sound natural, relaxed, friendly and more authentic.

The best way to learn phrasal verbs is to see them in context. Try to notice phrasal verbs when you're reading, listening to a song, watching a video or talking to someone. This will help you understand the meaning, get a feel of how to use them and remember them better.

Here are some phrasal verbs that we saw in the videos:

To weigh up.

Choose the correct meaning:

It's important to weigh up the risks and benefits of any medication.

- It is important to assess the risks and benefits of any medication.
- It is important to *decrease* the risks and benefits of any medication.
- It is important to check the dose of the medicine.

To put something down to

Choose the correct answer:

You haven't been able to sleep very well lately. Well, you can *put that down to* getting older. But could there be other reasons?

- Well, you can put things on the floor easily because you're getting older.
- Well, you can attribute that to getting older.
- Well, you can tolerate that because you're getting older.

To look out for:

Choose the correct answer:

These are side effects that you should **look out for**. They aren't very common but they could eventually happen.

- These are side effects which you should *treat*.
- These are side effects that you should try to notice.
- These are side effects which you which should talk about.

To figure out:

Choose the correct answer:

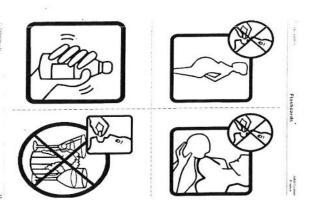
Your doctor can work with you to help *figure out* what the best course of action is.

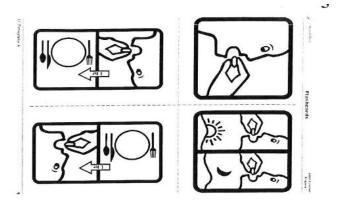
- Your doctor can work with you to help *plan* what the best course of action is.
- Your doctor can work with you to help draw what the best course of action is.
- Your doctor can work with you to help you understand what the best course of action is.

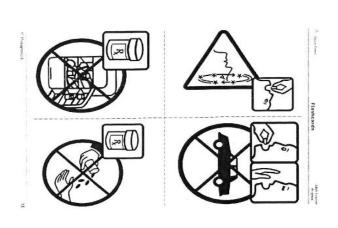
In pairs, can you try making sentences using these phrasal verbs?

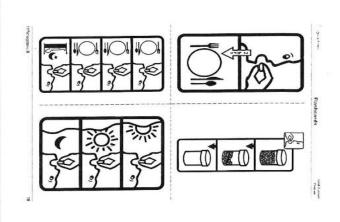
Vocabulary: Quizlet 2.

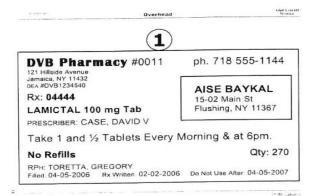
Pictograms

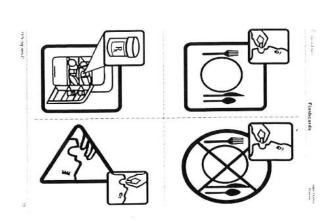












An extra read:

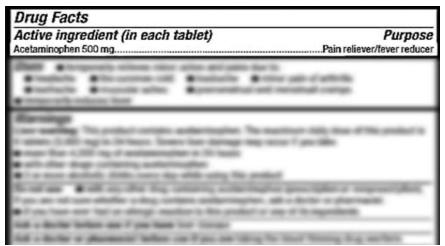
How to Read Medicine Labels

Medically Reviewed by Poonam Sachdev, MD on August 28, 2023, Edited from www.webmd.com

Drug Facts You Should Know

There's a lot of important information that comes with the medicine you buy at a pharmacy. The Drug Facts panel on an over-the-counter med lets you know how to take it, what's in it, and how it might make you feel. But the way that info is written can make it tricky to understand. Here's how to make sense of drug labels so you can avoid common, possibly dangerous mistakes.

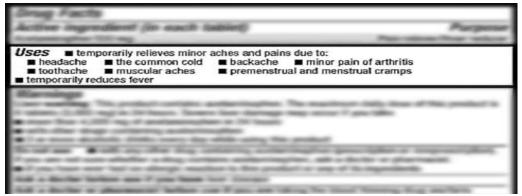
Active Ingredient and Purpose



Find this info at the top of the label on over-the-counter meds. It's the ingredient in the medicine that treats a symptom, along with the type of medication it is, like "antihistamine" or "pain reliever." It also tells you how much of the drug is in each dose. Check this to make sure you don't take other drugs with the same ingredient and to understand what the product will do for.

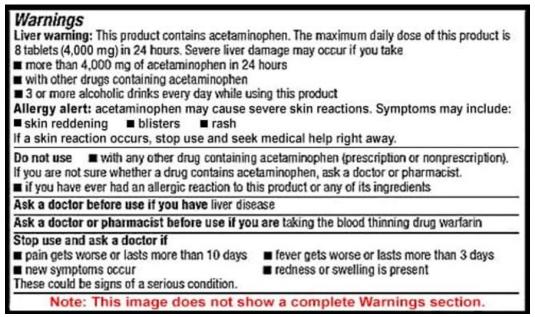
Uses

This section gives you a snapshot of the symptoms or diseases that the drug can treat. For example, a pain-reliever label might say it eases toothaches, headaches, joint pain, and menstrual cramps. Always check this part when you buy a new medication to make sure it will do what you need it to do.



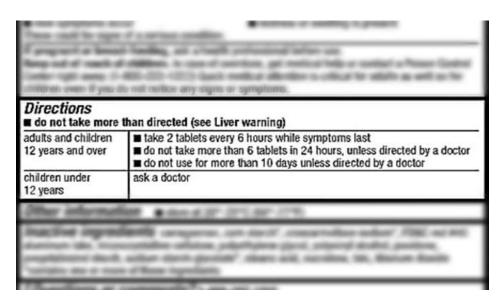
Warnings

This is one of the most important parts of the drug label, and it's usually the largest. It gives you safety details about the medicine. You'll find four things here: who shouldn't take the drug, when you should stop using it, when to call your doctor, and side effects which you might have. It can help you check if it's not safe to take with some health conditions or other medications.



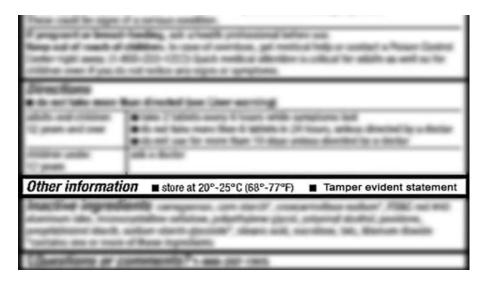
Directions

Check this part carefully. It tells you how much of the drug to take and how often to take it, called the dosage. For example, it may say to take two tablets every 4 to 6 hours. Never take more than the label says without talking to your doctor. The directions are grouped by age, so you know how much you or your child can use. You'll also get details about the maximum amount you should take in 1 day.



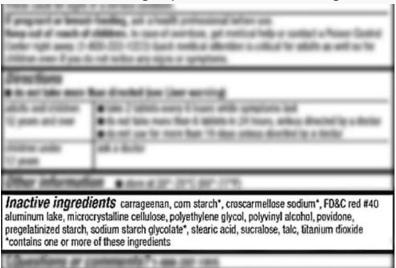
Other Information

This part of the label will tell you the right temperature range for storing the product. It also reminds you to make sure the package's safety seal hasn't been broken before you use it, which could be a sign of tampering.

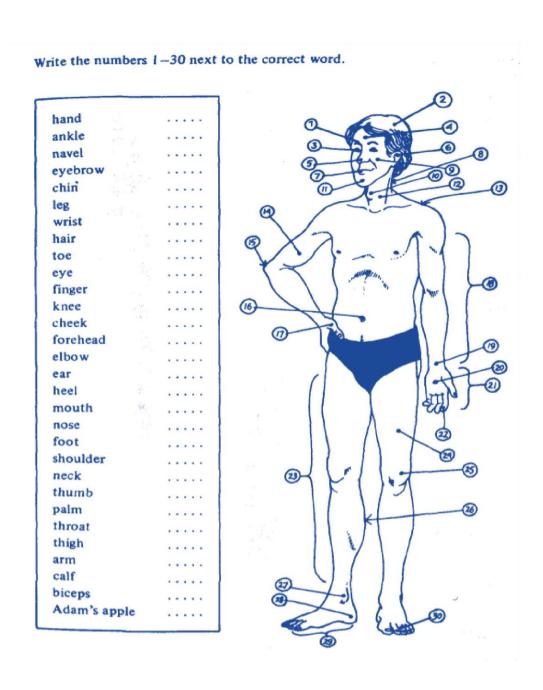


Inactive Ingredients

These are the ingredients in a drug that don't directly treat your symptoms. They might be preservatives, dyes, or flavourings. Always check this section if you or your child has food or dye allergies. Keep in mind that different brands of the same kind of drug may have different inactive ingredients.

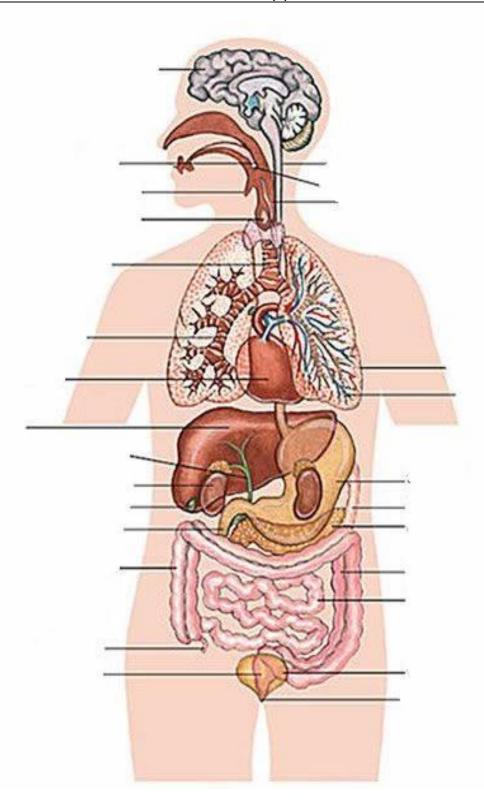


3. Body parts, symptoms and diagnosis



Complete the document below with the appropriate terms from this list:

appendix – bile duct – bladder – brain – bronchial tube – capillaries – gallbladder – gullet/oesophagus – heart – kidney – larynx – liver – large intestine – lung – pancreas – pharynx – rectum – small intestine – stomach – tonsils – windpipe/trachea



<u>Discuss</u>: Should pharmacists be able to diagnose some diseases? Why? Should they be able to prescribe some medications? What can be the pros and cons of that? What are some of the problems facing the national health system in France? What can be some solutions to these problems?

Groups: ABCDEFGH, read the following article

Launch of NHS (National Health Service) Pharmacy First Advanced Service,

published on January 25th, 2024 edited from https://www.england.nhs.uk/long-read/launch-of-nhs-pharmacy-first-advanced-service/

The new NHS Pharmacy First advanced service will launch on Wednesday 31 January 2024, as announced in November 2023. The new Pharmacy First Service will enable community pharmacists to complete episodes of care for patients without the need for the patient to visit their general practitioner. This, alongside expansions to the pharmacy blood pressure checking and contraception services, will save up to 10 million general practice team appointments a year and help patients access quicker and more convenient care, including the supply of appropriate medicines for seven conditions:

Clinical pathway	Age range
Acute Otitis Media*	1 to 17 years
Impetigo	1 year and over
Infected insect bites	1 year and over
Shingles	18 years and over
Sinusitis	12 years and over
Sore throat	5 years and over
Uncomplicated urinary tract infections	Women 16-64 years

The <u>clinical pathways</u> were carefully developed with input from a group of multi professional experts, including practicing clinicians, antimicrobial resistance specialists, and representatives from national organizations. The pathways include self-care and safety-netting advice, and, when appropriate, pharmacists can supply a restricted set of prescription only medicines via patient group directions and/or over-the-counter medicines via <u>clinical protocol</u>. Patients will access the new clinical pathway element by walking into the pharmacy directly or where appropriate, by contacting them by video consultation. In addition, patients will access the service via referrals.

Information for general practice

To streamline and improve workflow, we have redesigned the way that pharmacy consultation outcomes can be captured in the patient record. This will roll out throughout February 2024 and will mean that practice staff can review consultation information and add the data to the patient record with one click of a button.

Appendix 1: NHS Pharmacy First Service – frequently asked questions

Consultations

What happens during a consultation?

In a confidential consultation, the pharmacist will ask the patient questions about their health. This may include their previous medical history, any allergies, any medicines they are taking and the symptoms they are currently experiencing. The pharmacist may ask the patient for consent to check any patient record they can access. For some conditions, the pharmacist may request to perform an examination, such as using an otoscope to examine the ear of patients presenting with acute otitis media symptoms. The pharmacist will be able to recommend the best course of action on an individual patient basis. A contemporaneous clinical consultation record will be made during the consultation and shared with GPs to add to the record.

Will diagnostic tests be used as part of the Pharmacy First Service?

No, pharmacists will not use diagnostic tests such as urine dipsticks or sore throat swabs as part of the service, as there is not enough evidence to support their use. For the urinary tract infection pathway, the national guidance from UK

Health Security Agency currently does not recommend a dipstick test if the patient has two or three key urinary symptoms and no other excluding causes or warning signs.	
In pairs, answer the following questions:	
1. Why was the pharmacy first advanced service put in place?	
2. What does it consist of?	
3. How can GPs (general practitioner doctors) and pharmacists collaborate in the healthcare offered t their patients?	to
4. What do you think of this service? What can be its advantages and/or disadvantages?	

Groups IJKLMNOP, read the following article

Department of Health and Social Care Media Centre. Pharmacy First: what you need to know

edited from https://healthmedia.blog.gov.uk/2024/02/01/pharmacy-first-what-you-need-to-know/ Posted by: <u>DHSC Media Team</u> on: 1 February 2024 - Categories: Pharmacy

Patients can now get treatment for seven common conditions directly from their local pharmacy, without the need for a GP appointment or prescription.

The Pharmacy First scheme was launched by the government and NHS England on 31 January 2024 to give patients quick and accessible care and ease pressure on GP (General Practitioners) services.

But what does it cover and who will benefit? Here's everything you need to know.

What is Pharmacy First?

Pharmacy First will enable community pharmacists to supply prescription-only medicines, including antibiotics and antivirals where clinically appropriate, to treat seven common health conditions without the need to visit a GP. What are the seven common conditions?

- Sinusitis
- Sore throat
- Earache
- Infected insect bite
- Impetigo (a bacterial skin infection)
- Shingles
- Uncomplicated urinary tract infections in women.

What will happen when I arrive at the pharmacy?

The pharmacist will be able to speak to you privately in a separate consultation room. They may perform an examination or ask to access your medical records. The pharmacist will be able to recommend the best course of action on an individual patient basis, including by issuing prescriptions for antibiotics or antivirals where necessary.

How will this reduce NHS waiting times?

By reducing the number of patients with common conditions, needing blood pressure checks or oral contraception visiting a GP, Pharmacy First aims to free up 10 million GP appointments a year by next winter for more complex diagnosis. This will give GPs time and space to see patients with more complex conditions.

Four in five people in England can reach a community pharmacy within a 20-minute walk and there are twice as many pharmacies in the most deprived communities, making access to care quicker and more convenient.

Will Pharmacy First have an impact on anti-microbial resistance?

Anti-microbial resistance occurs when the body's microbes no longer respond to medicines due to over-usage, making infections harder to treat.

This scheme is not expected to result in larger volumes of antibiotics being prescribed, and patients will still undergo a consultation with a pharmacist before any medicine is dispensed.

Medicine supply must be clinically appropriate and only after a shared discussion between the patient and pharmacist on the risks and benefits of taking the medicine, and of any alternative self-care options.

In pairs, answer the following questions:

Why was the pharmacy first advanced service put in place?
 What does it consist of?
 What are pharmacists expected to do in this service?
 What do you think of this service? What can be its advantages and disadvantages?

Activities for all groups:

Activity1: Group discussions:

After reading the article, discuss the following in groups of threes:

- What do you think of this service? What are its benefits? What can be its challenges?
- Are you for or against including mental health issues in the list of treatable diseases by pharmacists? Why?
- Would including tele pharmacy or video pharmacy be a good idea? Why?
- Should chronic disease management be included in this program? Why?
- If you were a decision-maker, what would you do to expand access to healthcare in remote or underserved areas in the UK?

Here are some phrases to help you in your discussions:

Expressing pros and cons

- There are two sides to this question.
- On the one hand..., on the other hand...
- An argument for/ in favour of/ against ... is / would be
- While admitting that...one should not forget that...
- Some people think that..., others say that... I tend to believe that
- I wonder if you realize that...
- The reason for this is (that is)...

Activity 2:

There are mainly three verbs used to express symptoms: to feel, to be and to have.

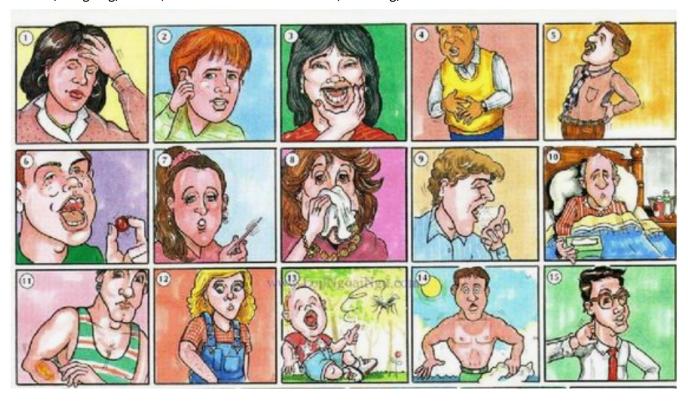
To feel and to be are used to talk about sensations and short-term conditions.

To have is used to talk about short- or long-term manifestations and conditions, that are mostly local.

Translate the following symptoms:

French	English
	I'm sneezing a lot / I sneeze a lot.
J'ai le nez bouché.	
J'ai mal aux oreilles.	
	I have a toothache.
	I have a bad cough.
J'ai des douleurs à la poitrine.	
J'ai des vertiges / je me sens étourdi.e	
	I have a rash.
J'ai mal au dos.	
J'ai tellement mal au ventre que j'ai vomi.	

Using the following phrases, describe what you think has happened / is happening to the following patients in the pictures below: Feverish; a headache; an insect bite; bed-ridden; a sunburn; food poisoning; an earache; a rash; a backache; coughing; a burn; a stomach-ache: a sore neck; sneezing; feverish:



Activity 3: Role-Play:

In pairs: one of you is suffering from one of the 7 conditions mentioned in the article. Go to your local pharmacist. Describe your symptoms. Your pharmacist must diagnose your ailment, and give you the appropriate help, advice and medication. You may be referred to a GP depending on your condition. Inverse roles with a different health condition. Don't forget to research the symptoms of the condition you chose. Don't tell your partner what it is.

4 Medical Gaslighting

Warmer discussion:

Discuss these questions in pairs:

- How do doctors and medical professionals reach a diagnosis?
- Have you heard stories of misdiagnosis, wrong diagnosis or missed diagnosis? Tell your partner about them. In your opinion, why were those patients misdiagnosed? Why does wrong diagnosis occur sometimes?
- Have you heard of the term gaslighting before? What do you think it means?

Groups: ABCDEFGH, read the following article and watch the video that follows:

"Now little lady, I think you'll find it's all in your mind."

Medical gaslighting: when conditions turn out not to be 'all in the mind'

Published on 18th September 2023 by Caitlin Gainty, senior lecturer in the History of Science, Technology and Medicine, King's College London (edited version)

Gaslight, a psychological thriller starring Ingrid Bergman, was a box-office hit when it was released in 1944. Set in 1880s London, the story plays out in the upper-middle-class gas-lit home of Gregory and Paula Anton. Gregory is intent on making Paula think she is going insane so that he can have her committed to a mental institution and claim her inheritance. He attempts to convince her that the gas lighting in their house, which the audience can see is flickering, is not really flickering. What her senses tell her is a lie – a sign of her steady descent into madness.

Today, the term "gaslighting" is widely used to describe psychological manipulation, where a person is made to doubt their perception of reality. Politicians are accused of it, as are celebrities. The term has also been used in discussions about health. Medical gaslighting refers to cases in which a healthcare practitioner imposes a pattern of questions, testing or diagnosis that runs counter or tangential to the history or symptoms the patient is describing or experiencing. There is usually a clear power imbalance at play. More often than not, gaslit patients are women, or people belonging to minority groups.

It is a painful reminder that medicine does not occupy a rarefied space apart from society and history. One of the best-known examples relates to heart disease, where a woman's symptoms are twice as likely as a man's to be simply written off as mental illness. This missed diagnosis is often explained by the fact that women's heart attack symptoms are "strange and unpredictable" (compared with a man's "normal" symptoms). However, that excuse doesn't hold water – there is a large overlap in heart attack symptoms between the sexes.

Elsewhere, social media and news reports are full of egregious examples of women being medically gaslit. There are those whose cancer reached an advanced stage before they could get a doctor to take them seriously. And those whose lives were imperilled by a doctor who dismissed their pain as anxiety, as postpartum depression, as not nearly as bad as they think it is. Examples of medical gaslighting also accrue around chronic but poorly understood diseases.

Algorithmically out of whack

While Gregory's attempts to gaslight his wife were malicious and intentional, medical gaslighting quite often overlaps with a more basic problem in medicine: misdiagnosis. In many cases, misdiagnosis occurs not because an individual doctor is being malicious or even intentionally – though perhaps unconsciously –

prejudiced, but because the symptoms they observe in the patient before them are "algorithmically" out of whack with the standard set of symptoms and characteristics they have been taught to look for and associate with different diseases.

Since these algorithms were explicitly built around young white men, it makes sense that the vast majority of those who have experienced medical gaslighting or misdiagnosis hail from beyond this extremely narrow band of the population. Until a much greater part of society is included in that statistical reckoning, we can expect medical gaslighting to remain a part of our medical experiences.

In pairs, answer the following questions:

1.	What is implied by the term "medical gaslighting"? Which medical conditions are primarily affected,
	and which category of patients is most impacted?

2.	What is th	ie probl	em with	medical	algoritl	hms for	diagnosis?	' What	does t	hat ir	nply	/?
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3.	According to the author, what is the solution to the problem of medical gaslighting? Can you think of
	other solutions?

4. Look at these expressions in the article and decide what they mean:

	, , , , , , , , , , , , , , , , , , ,
To Gaslight	You are imagining all this.
All in your head	Seem to be true or reasonable
Hold water	Make someone believe that what they are experiencing isn't true.
<u>Misdiagnosis</u>	Unable to stand up to examination / full of inconsistencies
Out of whack	Incorrect diagnosis

Watch the video "How to recognize medical gaslighting" https://www.youtube.com/watch?v=hXr8flkXWLs (until mn. 3.07), then answer the questions in pairs:

1. What is the MeToo of healthcare and why has it been called that?

2.	Before receiving the correct diagnosis, what diagnosis was Maria Garcia given?
3.	What were her symptoms?
4.	What does she put her misdiagnosis down to? How did that impact her?
5.	According to the video, what are the causes of medical gaslighting? Which diseases are the most affected?
6.	What is being done to confront this form of missed diagnosis? What advice is given in to patients who feel they are being gaslighted? What else should be done?

Groups IJKLMNOP, read the following article and watch the video that follows:

How to Spot Medical Gaslighting and What to Do About It By Cynthia Vinney, PhD Updated on May 18, 2023 (an extract)

Medical gaslighting describes a behaviour in which a physician or other medical professional dismisses or downplays a patient's physical symptoms or attributes them to something else, such as a psychological condition. Medical gaslighting is especially likely to happen to women and people of colour.

Who Is Most at Risk of Experiencing Medical Gaslighting?

Women and people of colour are especially likely to experience medical gaslighting. Research on various medical conditions has repeatedly shown that women's and people of colour's symptoms are less likely to be taken seriously than those of white men.

Women Are More Likely to Have Their Symptoms Attributed to a Mental Health Condition

For example, one study found that when men and women have the same symptoms of coronary heart disease, doctors were significantly less certain of a diagnosis in women patients, and women were twice as likely as men to have their symptoms attributed to a mental health condition. Similarly, other research demonstrated that women with heart disease were treated less aggressively and weren't as well represented in clinical trials. Additionally, women receive Cancer diagnoses later than men.

Moreover, an investigation at an emergency department found that women with abdominal pain were less likely than men with the same issue to receive pain medication, and even when they did receive pain medication, they waited longer to get it.

Furthermore, an analysis of emergency department records from several U.S. states demonstrated that Black and Latino people were more likely to have their stroke symptoms misdiagnosed.

Why Does Medical Gaslighting happen?

Medical gaslighting may not always be conscious. In fact, if healthcare providers treat women or people of colour differently, it may be due to implicit instead of explicit bias. Part of this may be a result of systemic issues. For example, research has shown that the United States National Institutes of Health have generally overfunded research on diseases that primarily impact men and underfunded research about diseases that primarily impact women. As a result, medical professionals aren't as knowledgeable about women's health issues, needs, and treatment. Studies have also demonstrated that discrimination is still prevalent in medicine, with one study finding that Black patients were two and half times more likely than White patients to be described negatively at least once in their medical records.

The Medical System Needs Reform

However, one doctor notes that the whole American medical system is to blame rather than the doctors themselves. The system is rife with problems, such as allowing doctors minimal time with each patient leading to a reliance on biases that may not be applicable to a specific patient, inadequate training in mental health, and physical and mental exhaustion leading to burnout.

At the same time, medical professionals should be required to learn about implicit biases and how to avoid applying them to their patients. Unfortunately, these changes won't happen overnight. Therefore, given the power doctors often exercise over their patients, it's important for patients, especially women and people of colour, to be aware of how their medical symptoms may be overlooked or ignored and to be supported in speaking up and advocating for their medical care and treatment.

In pairs, answer the following questions:

1. What is medical gaslighting? Who is more likely to experience medical gaslighting? (use your own words and not the words of the text)

- 2. Mention one or two examples of a condition that is most likely to be medically gaslit by doctors.
- 3. What does the writer attribute medical gaslighting to?
- 4. What solutions to this problem are suggested in the article? To what extent do you agree with these propositions?
- 5. Look at these expressions in the article and decide what they mean:

To Gaslight	To make something seem less important than it is
To downplay	To have much knowledge about something
To be knowledgeable	Make someone believe that what they are experiencing isn't true.
Misdiagnosis	A prejudice for or against something or someone.
A Bias	Incorrect diagnosis

Watch the video "Medical gaslighting affects women more than men; here's what it is and how to push back" https://www.youtube.com/watch?v=qXhmf5QEB-w (until Mn 2.18), then answer the questions in pairs:

- What condition was Elizabeth Moore suffering from? How prevalent is this condition among women, and how easy is it to be doagnosed?
- What were her symptoms? How long did she have to wait before receiving the correct diagnosis?

According to the video, which group of people is mostly affected by medical gaslighting?
 What advice is given in the video to confront this problem? What is your input on that?

- **Activities for all groups:**
 - 1. Activity: You are working in a university hospital. You will have a meeting in groups of threes about the following issues and will discuss them. Choose your roles (a hospital pharmacist, a doctor consultant, hospital psychologist, or other).
 - How can we confront medical gaslighting? What should be done to face this problem?
 - The impact of medical gaslighting on the patient-doctor trust relations and how to address that.
 - How medical training can better address medical gaslighting.
 - 2. Patient and Healthcare Provider: In groups of 3s, role-play scenarios where one student plays a patient expressing their symptoms and concerns, while another plays a healthcare provider who dismisses their concerns and gaslights them. Another healthcare provider (an intern attending the consultation to learn) will provide a more supportive role (How will he/she do that?).

Language Point: The Passive

When do we use the passive?

- When we prefer not to mention who or what does the action (for example, it's not known, it's obvious, we don't want to say it or it's of secondary importance)
- So that we can **start** a sentence with **the most important or most logical information**
- In more formal or scientific writing.

How do we make the passive?

We make the passive using the verb to be + past participle. We start the sentence with the object.

Health carers	are	accused of medical gaslighting.
\	\	V
Object	+ be +	past participle

- It is not always necessary to add who or what did the action. If you add that, use by X. (it remains of secondary importance)
- Only the form of be changes to make the tense. The past participle stays the same.

Here are some examples of the passive.

Tense	Example	Structure
Past simple	I was told again and again that it was all in my head.	Was / were + past participle
Modal Verbs	Everything <i>could be attributed</i> to either me being dramatic, exaggerating or being fat.	Modal verb + be + past participle

• In pairs, can you find examples of the passive in the articles which you read?

Do the following exercise: Change the verb to the active or passive form:

- 1. Most of the data that we use today in medicine (base on) on research on men, male animals or male cells.
- 2. Most of those who (experience) gaslighting in the past years are women or people belonging to minority groups.
- 3. Solid changes (must / do) to medical training as a way of facing medical gaslighting.
- 4. Can you imagine? Her symptoms(misdiagnosed) almost 20 times before getting the correct diagnosis. They showed her story yesterday on BBC.
- 5. Your symptoms (dismiss/ probably) as minor for such a long time because autoimmune diseases can be quite challenging to diagnose.
- 6. Why are women twice as likely? (diagnose) with mental illness as men?
- 7. I (tell) again and again that my symptoms were all in my head.

- 9. This cause (must / advocated for) by policymakers if we want to see change any time soon.
- 10. Apparently, this medicine (take) on an empty stomach, which is why you are suffering from such bad stomach pain.

Activity 3: Depending on the outcome of the meetings that you had earlier, write an email to the hospital administration to inform them of the decisions taken or issues discussed so far. Don't forget to use the passive and the vocabulary seen in class. You should try to use phrases from page 24 to express two different views. Start your email with: 'Dear Mr Wallach," and end it with 'Best regards (cordialement)'

Vocabulary: Quizlet 4.

5. Administration routes

Warmer: Say words or phrases that come to mind when you hear the phrase 'Drug administration routes'

Article: Drug routes of administration and their uses

Edited from https://www.medicalnewstoday.com/articles/routes-of-administration, medically reviewed by Alyssa Peckham, PharmD, BCPP — Written by Lewis Forsey on November 2, 2023

A route of administration is a way that a drug can enter the body. There are many drug routes of administration, each suited to different situations. Each route has its benefits and potential risks. The most common route is through the mouth. Drugs can also enter the body through the skin, gums, veins, nose, and many more.

Keep reading to learn about the different routes of drug administration and their advantages and disadvantages.

What are the drug routes of administration?

There are many different drug routes of administration. Some are commonly used, while others are rare. Drug administration routes can be:

- oral, which is when a person swallows a drug
- intraocular, or into the eye
- nasal, or through the nose
- sublingual, or under the tongue
- buccal, between the gums and the mouth cheek
- inhaled through the <u>respiratory system</u>
- enteral, which is when a person receives the drug directly into their digestive tract
- rectal, or through the <u>rectum</u>
- vaginal, or through the vagina
- transdermal, or through the skin
- subcutaneous, or under the skin
- intramuscular, or via an injection into a muscle
- intravenous, or into a vein
- intra-arterial, or into an artery

• intraosseous, or into the bone marrow

(This is not a comprehensive list.)

Oral drug administration

It is one of the most common routes of drug administration, and it is convenient for many as it does not require special equipment. People can use oral administration for a range of medication types, such as pills, capsules, and liquids. However, one of the downsides of oral administration is that it can be inefficient. The digestive system and liver start to break down drugs via this route before they reach the bloodstream, meaning the concentration is significantly reduced. This is known as the "first pass effect." Additionally, some oral drugs can have adverse effects on the digestive system, and some people have difficulty swallowing pills.

Intravenous and intramuscular administration

The intravenous (IV) administration route involves using a needle to inject a drug directly into a vein. The intramuscular route is similar but involves an injection into a muscle instead.

IV administration is suitable for many drugs, particularly in situations where a person needs an urgent, high, or consistent dose, such as during a severe infection. This is because IV drugs bypass the digestive system and take effect quickly. Intramuscular administration also bypasses the digestive system, allowing the body to get a more potent dose of a drug.

The downside of these methods is that they can cause pain, swelling, or irritation around the injection site. For people with needle phobias, they can be distressing. There is also a risk of complications, such as infection, nerve injury, hematoma, and accidental puncturing of a blood vessel.

Nasal drug administration

The nasal administration route involves spraying or sniffing a drug through the nose, where it quickly absorbs into the bloodstream. This is a route of administration for drugs that work directly on nasal and sinus conditions, such as decongestant sprays. However, doctors can also prescribe it for other types of medical treatment. For example, some vaccines come in nasal forms.

The benefits of administering medications via the nose are that it is painless, delivers a high concentration of the drug, and allows drugs to take effect quickly.

However, only certain drugs work via nasal administration. Additionally, the dose and effect may have limitations depending on the size and features of a person's nasal cavity and how they administer it. People may also make more mistakes with dosing nasal administration, affecting the dose they receive. Another concern is keeping the tip of the applicator clean. If a person does not, they could get recurring infections.

Sublingual and buccal administration	Su	blir	ngual	and	buccal	adn	nini	istrati	01
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Enteral and rectal drug administration

Summary

There are many routes of drug administration, each with unique benefits and drawbacks that make them suitable for different situations. Doctors will weigh up the best options to prescribe depending on a person's unique circumstances and tolerance. Where one route is not available, it may be possible to prescribe another route of administration instead.

Exercise:

Complete the other administration routes in groups of threes. Write about the advantages, disadvantages and mechanism of action of every administration route. Use linking words to link the different parts.

Activity: Speed-dating presentations in groups:

In groups of three, choose a drug for an administration route to talk about. You need to research the following:

- What pathologies is this drug used to treat? Why is it present in this form?
- (= advantages/disadvantages).
- Warnings & precautions.

You need to present your research to another group (every student in the group should be able to present a part). Ask your listeners if they have any questions.

Administration Route + Drug Form	Student 1	Student 2	Student 3
1			
2			
3			
4			
5			
6			

Language point - Link words

Warmer: Can you find some link words in the article? What linking words have you used when writing the missing information? Can you brainstorm synonyms for: and / but / for example / indeed?

Linking words:

Addition	Giving Examples	Reference
indeed, furthermore, moreover, additionally, and, also, both <i>x</i> and <i>y</i> , not only <i>x</i> but also <i>y</i> , <u>besides</u> <i>x</i> , in fact	such as, like, particularly, including, as an illustration, for example, for instance, in particular, especially, notably	considering x, regarding x, in regards to x, as for x, concerning x, the fact that x, on the subject of x
Similarity	Contrast	Clarification
in the same way, by the same token, in like manner, equally, likewise	but, however, although, though, by way of contrast, while, on the other hand, (and) yet, whereas, in contrast, (when) in fact, conversely, whereas even so, nonetheless, nevertheless, even though, on the other hand, admittedly, despite x, notwithstanding x, (and) still, although, in spite of x, regardless (of x), (and) yet, though, granted x	that is (to say), namely, specifically, more precisely, in other words
Dismissal	Emphasis	Replacement
regardless, either way, whatever the case, in any/either event, in any/either case, at any rate, all the same	above all, indeed, more/most importantly, as a matter of fact, in fact	(or) at least, (or) rather, instead, or (perhaps) even, if not
Consequence	Purpose	Condition
therefore, because (of x), as a result (of x), for this reason, in view of x, as, owing to x, due to (the fact that), since, consequently, in consequence, as a consequence, hence, thus, so (that), accordingly, so much (so) that, under the/such circumstances, if so	to, in order to/that, for the purpose of, in the hope that, so that, to the end that, lest, with this in mind, so as to, so that, to ensure (that)	even/only) if/when, on (the) condition that, in the case that, granted (that), provided/providing that, in case, in the event that, as/so long as, unless, given that, being that, inasmuch/insofar as, in that case, in (all) other cases, if so/not, otherwise

- Second
- Third
- Finally
- Next
- Meanwhile
- After
- Before
- Later
- Subsequently
- Then
- First of all
- By the timeEventually
- At last At the end
- Furthermore Further
- Moreover Another
- In addition Also
- In conclusion
- To summariseAfterwards
- Firstly
- Secondly
- Thirdly
- And In the end
- Soon



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Please note the following

! Don't start a sentence with **also**. If you want to start a sentence with a phrase that means also, you can use **in addition**, or **in addition to this, additionally, moreover, futhermore...etc.!**

! With "although, even though, despite and in spite of", you must have two halves of a sentence!

- "Although it was cold, she went out in shorts."
- "In spite of the cold, she went out in shorts."

! "Despite, in spite of, due to and owing" to are followed by a noun (or a verbing). If you want to follow them with a noun and a verb, you must use "the fact that"!

- Despite the competition, Novo Nordisk is still the market leader in producing insulin drugs.
 - "Despite the fact that the company was doing badly, they took on extra employees."

! "While, whereas and unlike" are used to show how two things are different from each other!

- "While my sister has blue eyes, mine are brown."
- "Unlike the UK, India has more raw material factories for medicines."

! "Due to" and "owing to" must be followed by a noun! If you want to follow these words with a clause (a subject, verb and object), you must follow the words with the fact that!

- "Due to the rise in oil prices, the inflation rate rose by 1.25%."
- "Owing to the serious adverse events, our clinical trials were discontinued."
- "Due to the fact that oil prices have risen, the inflation rate has gone up by 1%25."
- "Owing to the fact that the adverse events were very serious, we had to discontinue our clinical trials."

Linking words Activity:

In groups of 3s, you will discuss one or two topics. A student will say a sentence about the topic. Then, the other 2 students will add a sentence each using a linking word, and so on until you end talking about the topic.

Example:

Student 1: I heard that Logan really hated his pharmacy internship last year.

Student 2: Besides (that), he had horrible summer holidays.

Student 3: Conversely, I truly benefited from my internship.

Choose one of these phrases to start your 'linking words activity':

- During my pharmacy internship.......
- She has needle phobia
- We shouldn't test drugs on animals
- He used to smoke
- She never sticks to her medicine routine
- I believe the best administration route is the oral route.

Dosage forms exercise

Dosage or dose: The amount of medicine, drug, vitamin that should be taken at one time or regularly during a period of time.

Match the dosage forms in the box with the definitions below and name the possible administration routes: syrup – eye drops – lozenges – inhaler – capsule – elixir – emulsion – pill/tablet – cream – patch – liniment – pessary – lotion – nasal drops/spray – injection/shot/jab – ointment

Dosage	Definition	Route(s)
form		
	a – A drug compressed into a solid form, often round in shape.	
	b – A non-greasy preparation used to apply drugs on the area of the body, or to cool	
	and moisten the skin.	
	c – The act of putting a liquid, especially a drug, into a person's body using a needle	
	and a syringe.	
	d – A solid medicine which melts slowly in the vagina.	
	e – A solution of a drug, usually in water, for introduction in the nose.	
	f – A concentrated, thick solution of sugar and flavouring containing the active drug.	
	g — A greasy preparation used to apply drugs to an area of the body, acts as a	
	protective or lubricant layer.	
	h – A sterile drug solution or suspension dropped on the eye's surface.	
	I – A medication on material or cloth placed on the skin.	
	j – An oily liquid to rub on aching or sore body parts to reduce pain.	
	k – A device used for inhaling medicinal aerosols, often used for respiratory	
	conditions.	
	I – A cylindrical-shaped gelatine shell containing the drug, which breaks open after	
	swallowing.	
	m – A drug dispersed in oil and water	
	n – A drug solution in a sweetened mixture of alcohol and water	
	o – A solution or suspension applied to unbroken skin to cool and dry the affected	
	area.	
	p – A small, medicated candy intended to be dissolved slowly in the mouth to	
	lubricate and soothe irritated tissues of the throat.	

6. Nicotine Replacement Therapies

Discuss in pairs:

- Do you know someone who was smoking and stopped? How did they stop?
- What are some different forms of nicotine replacement therapies on the market?
- What are some of the most common nicotine withdrawal symptoms?
- Which Nicotine replacement therapies are the most popular among people who want to quit smoking?
 Why?
- In your opinion, which one is the most efficient? Why?

Videos:

- In groups of 3s, you will watch videos about nicotine addiction and Nicotine Replacement Therapies.
- Each student in the group will watch a video, answer the questions related to it and make a summary of it to the other students.

Student 1:

function?

"What is Nicotine addiction and how can Nicotine Replacement Therapy help?":

https://www.youtube.com/watch?v=g3Ar4v5K880

• How does Nicotine change your brain?

What do NRTs (Nicotine replacement therapies) do to help stop nicotine addiction? How do they

• According to the video, what is recommended to quit smoking?

Student 2:

"How to use the Nicotine patch": https://www.youtube.com/watch?v=9RBzaLQIf-s

- What precautions does the doctor give about using a Nicotine patch?
- What can be the drawback of using this NRT (nicotine replacement therapy)? How can a patient deal with that?
- What false rumour about nicotine patches does the customer mention? How does the doctor correct this concept?

Student 3:

"Australia to ban recreational vaping": https://www.youtube.com/watch?v=RkHjdvcwH8o

•	What does the new ban in Australia on vaping mean? Who will have access to e-cigarettes and who
	will not?

• What fears arise due to this new legislation?

• What advantage of e-cigarettes is mentioned in the video and for whom is it addressed?

Activities:

1. NRT speed-dating activity

In groups of threes: prepare short presentations (You can use one or two slides to back up your presentations if you wish to) on 1 of 6 NRT (Nicotine Replacement Therapy) forms of products sold in pharmacies for smoking cessation (except for e-cigarettes which aren't sold in pharmacies). You need to tackle the following:

- -What exactly is the product? (form/dosage/price)
- How does it work? (Explain to patient)
- How is it used? (don't forget warnings, precautions and instructions)
- Pros & Cons.

NRT	3 students/ 1 NRT
nicotine gums	
Inhaler	
Patch	
nasal spray	
Lozenges	
E-cigarettes / vaping (not sold in pharmacies but used as NRT)	

Class vote: what is the best option for smoking cessation in your opinion?

Group written exercise: In groups of threes, write an advertisement about an NRT to hang in your pharmacy. Briefly mention how it works and explain its efficacy. Give some warnings and instructions without forgetting its pros and cons.

7 The Gut Microbiome

Warmer discussions in pairs:

- Have you heard about the "gut microbiome"? What does it mean? What are its implications?
- How could we improve the gut health? What would be the results?
- What kind of advancements in science and medicine could allow us to better understand the gut microbiome?

Written and oral comprehension:

Read the following article

Nutritional psychiatry: Your brain on food

September 18, 2022, by Eva Selhub MD, Contributing Editor adapted from https://www.health.harvard.edu/blog/nutritional-psychiatry-your-brain-on-food-201511168626

Think about it. Your brain is always "on." It takes care of your thoughts and movements, your breathing and heartbeat, your senses — it works hard 24/7, even while you're asleep. This means your brain requires a constant supply of fuel. That "fuel" comes from the foods you eat — and what's in that fuel makes all the difference. Put simply, what you eat directly affects the structure and function of your brain and, ultimately, your mood.

Like an expensive car, your brain functions best when it gets only premium fuel. Eating high-quality foods that contain lots of vitamins, minerals, and antioxidants nourishes the brain and protects it from oxidative stress — the "waste" (free radicals) produced when the body uses oxygen, which can damage cells.

Unfortunately, just like an expensive car, your brain can be damaged if you ingest anything other than premium fuel. If substances from "low-premium" fuel (such as what you get from processed or refined foods) get to the brain, it has little ability to get rid of them. Diets high in refined sugars, for example, are harmful to the brain. In addition to worsening your body's regulation of insulin, they also promote inflammation and oxidative stress. Multiple studies have found a correlation between a diet high in refined sugars and impaired brain function — and even a worsening of symptoms of mood disorders, such as depression.

It makes sense. If your brain is deprived of good-quality nutrition, or if free radicals or damaging inflammatory cells are circulating within the brain's enclosed space, further contributing to brain tissue injury, consequences are to be expected. What's interesting is that for many years, the medical field did not fully acknowledge the connection between mood and food.

How the foods you eat affect your mental health

<u>Serotonin</u> is a neurotransmitter that helps regulate sleep and appetite, mediate moods, and inhibit pain. Since about 95% of your serotonin is produced in your gastrointestinal tract, and your gastrointestinal tract is lined with a hundred million nerve cells, or neurons, it makes sense that the inner workings of your digestive system don't just help you digest food, but also guide your emotions. What's more, the function of these

neurons — and the production of neurotransmitters like serotonin — is highly influenced by the billions of "good" bacteria that make up your intestinal microbiome. These bacteria play an essential role in your health. They protect the lining of your intestines and ensure they provide a strong barrier against toxins and "bad" bacteria; they limit inflammation; they improve how well you absorb nutrients from your food; and they activate neural pathways that travel directly between the gut and the brain.

Studies have compared "traditional" diets, like the Mediterranean diet and the traditional Japanese diet, to a typical "Western" diet and have shown that the risk of depression is 25% to 35% lower in those who eat a mediterranean or traditional diet. Scientists account for this difference because these traditional diets tend to be high in vegetables, fruits, unprocessed grains, and fish and seafood, and to contain only modest amounts of lean meats and dairy. They are also void of processed and refined foods and sugars, which are staples of the "Western" dietary pattern. In addition, many of these unprocessed foods are fermented, and therefore act as natural probiotics.

This may sound implausible to you, but the notion that good bacteria not only influence what your gut digests and absorbs, but that they also affect the degree of inflammation throughout your body, as well as your mood and energy level, is gaining traction among researchers.

Adapted from a Harvard Health Blog post by Eva Selhub, MD

In pairs, each student will watch a video, understand it then summarize it to the other student. Start by sharing video 1 first. Try to use linking words in your summary.

Student 1: Video 1:

What is the gut microbiome?

Student 2: Video 2:

Testing your gut microbiome: Is it worth it?

Activities:

In pairs, role-play the following scenarios:

- One of you will assume the role of a pharmacist working in a pharmacy in the USA. A patient arrives, seeking to purchase a "gut microbiome test kit." The patient will have numerous questions. Provide them with appropriate advice and information regarding their gut microbiome.
- You are working in a pharmacy. A patient who regularly buys food supplements will come again to buy their monthly supply. Provide them with appropriate advice and don't forget to give them some information regarding their gut microbiome.

In groups of threes, have a discussion about the following issues:

- The impact of antibiotics on gut health
- The efficacy or inefficacy of probiotics.
- How further research on gut microbiome can impact the pharmaceutical domain

An email / a short newsletter:

• You belong to a 'Student Wellness Association". Write an email / short newsletter to raise awareness among students about one of the topics that you have just discussed. Try to grab your readers attention by a catchy introduction. Don't forget to use linking words, phrasal verbs, idiomatic expressions and at least one passive. Get your teacher's and peers' feedback on the email.

8 Weight loss drugs

Discuss the following questions in pairs:

- What are the effects of obesity and weight related issues?
- What is the impact of social media on body weight trends?
- What do you think of food supplements, diet pills and weight loss drugs?
- Can you mention some weight-loss drugs? Which ones are the most popular? Why?
- Do you know of any long-term health concerns associated with weight-loss drugs? Have you heard of other benefits related to them that haven't yet been totally exploited?
- What do you know of their side effects?

Written and Oral Comprehension:

- A. Before reading the article, can you guess the meanings of the following expressions:
- To fly off the shelf: to have super powers to sell very quickly to find in a library
- Surging earnings: a boost in profits to win the lottery to increase taxes.
- To catch off guard: to be caught by the police to happen by surprise a term used in soccer.
- Runaway sales: bad sales sales that are taken by someone else very successful sales.
- B. In pairs, each student will read a part of the article and will debrief their partner about it.

Wegovy, the 'Viagra' of weight-loss drugs flying off the shelves

12 February 2024, By Adrienne Murray, Business reporter, Copenhagen edited from https://www.bbc.com/news/business-68226369 (edited)

Casper Nielsen says he has shed 60kg (nine stone) in weight in two years. At his home in Denmark Casper Nielsen retrieves a package from the fridge and prepares to inject his next dose. "So, this is Wegovy, you take it four times a month," says the 45-year-old. "Before, I thought, 'maybe I'm not getting to be 60, maybe I'm not seeing my grandkids. But now I'm looking at the future way brighter. [Two years ago] I started on 159kg [25 stone] ... Right now, I'm weighing 93.5kg, so I'm in a really good place."

Fuelled by a social media buzz and celebrity users including Elon Musk, Wegovy is a weight-loss drug that has been flying off pharmacy shelves. Such has been the rise in its global sales that its manufacturer, Danish drug-maker Novo Nordisk, last year became Europe's most valuable listed company.

Wegovy's manufacturer, Novo Nordisk, cannot make the drug fast enough. Aimed at people who are severely overweight, Wegovy's active ingredient is called semaglutide, which helps control blood sugar, lowers appetite, and makes patients feel fuller. It is also the active ingredient in sister drug Ozempic, which is also used to treat type 2 diabetes.

Research suggests that Wegovy patients can lose more than 10% of their body weight. However, there can be side effects for some users, such as nausea and vomiting, and research shows that patients often put weight back on after stopping treatment. Nonetheless, these issues have not slowed sales of Wegovy, which increased five-fold in 2023. It is currently available in eight countries - Denmark, Germany, Iceland, Norway, Switzerland, the UAE, the US and the UK - with Japan due to follow at the end of February.

Profit Margins:

The runaway sales of both drugs (Wegovy and Ozempic) has led to surging earnings at Novo Nordisk. At the end of January, it announced that its annual net profit had jumped by 51% to 83bn Danish kroner (\$12bn; £9.6bn).

For almost a century, Novo Nordisk had focused on producing insulin. However, the company has been transformed by its discovery of semaglutide in 2004. Several years later the medicine was developed as a treatment for diabetes, and the weight loss effect came as a surprise.

Dr Maria Kruger, a GP and spokesperson for the Danish Society for General Medicine, says that the number of patients now asking for Wegovy has astonished doctors, and she thinks that stronger guidance is needed for who should get it. "Social media is really affecting people," she adds.

Conversely, she says that some people in Denmark who might benefit from taking Wegovy find it too expensive, as users in the country have to pay the full-market price for the drug. The patients who are really struggling with weight and maybe cannot work, and have physical disabilities, many of them cannot afford this drug," says Dr Kruger.

Yet with worldwide obesity levels having almost tripled over the past 50 years, and tipped to hit one billion people by 2030, the success of Wegovy has set off a weight-loss drugs arms race. Back in November, American pharmaceutical firm Eli Lilly was given clearance in the US to sell its rival Zepbound. Its sister drug aimed at treating diabetes, Mounjaro, was already on the market. Novo Nordisk's Mr Knudsen shrugged off the increased competition: "The market potential is so big that there's more than enough space for two or even more competitors."

- C. After reading the article, discuss the following questions in pairs:
- 1. What has led to the current Wegovy mania?
- 2. How was its slimming effect discovered?
- 3. What is its principle active ingredient? What are its side effects?
- 4. In your opinion, are weight-loss injections the answer to obesity? Why? Why not?

D. Watch the video: Powerful weight loss drugs could soon come as pills:

Answer the questions in pairs:

- What are the main ideas of the video?
- How did these drugs become quite popular?
- What are the downsides of these drugs according to the video?
- How do these medicines work in the body?
- What does the doctor recommend?

Activity 1:

Debate: Host a debate on the topic "Are weight-loss drugs a necessary tool in combating obesity?" Instructions:

- Participants will be divided into groups of 4: two students will prepare arguments supporting the use of weight-loss drugs and the other 2 students opposing it.
- o Each group prepares arguments, citing scientific research, case studies, and real-life examples...etc

- Each side has to present their case and rebut the other side's arguments alternating between strong and diplomatic disagreement.
- Go to page 70 to help you prepare your debate.

Vocabulary: Quizlet 8

Language point: Emphasizing Important Information:

Extract from the video dialogue:

"What we have seen, is that people did lose dramatic amounts of weight when taking it for diabetes."
Why did the doctor particularly use this language structure?

Some ways of emphasizing important information:

Using "what" in the beginning of the sentence:

- What is really important is enlarging the scope of those clinical trials.
- What we noticed was the notable effect of the microbiome on the brain.
- What we must do is approach these issues without any biased thoughts.

Using 'verb to do':

- People did lose dramatic amounts of weight when taking this drug for diabetes.
- I do believe that the long-term side effects are still unknown.
- People do need to get vaccinated in order to create herd immunity.

Using certain verbs (stress, emphasize, focus on, highlight ...etc)

- I'd like to focus on the following point.
- I must draw your attention to the exorbitant price of drugs in the USA.
- We need to *emphasize* the ethical issues linked to the accessibility of this medicine.

Using adverb + adjective construction:

- It would be *completely wrong* to give this drug to someone who doesn't need it.
- The impact of this medicine was absolutely surprising.
- We compared the two offers and found the second one to be *totally unacceptable*.

Using can't + enough:

- I can't say it enough, but what you eat affects every organ of your body.
- I can't repeat it enough, but mental health first aid is not a mere commodity.

Using your voice to stress the important information.

Can you think of other ways that are used to emphasize important information?

Activity 2:

Write a short text about weight-loss drugs. Choose the important information that you'd like to highlight and use one of the above techniques. Exchange your text with your partner and have their feedback.

9 The future pharmacy

Warmer discussion:

- Have you ever wondered what medication will look like in the future? Tell your partner.
- What advancements, do you think, will be made in the formulation and development of medicine?
- How might the role of pharmacists change in the future?

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In pairs, each student will watch one of the videos and debrief the other student.

Video 1:

The pharmacy of the future?

Take notes for your summary or answer the following questions for more help:

- What is the presenter trying to promote?
- What are the advantages of the polypill according to the presenter? Do you agree with the speaker? Why?
- How is he planning to put the polypill concept into place? What is Daniel Kraft's vision of the future pharmacy?

Video 2:

Customising 3D printed pills as a treatment for patients

Take notes for your summary or answer the following questions for more help:

- What is a polypill according to this video?
- Why is it that only 10% of people get healed from a headache pain after taking a paracetamol according to the video?
- What are the advantages of polypills?

- What difficulties is Chris Roberts facing in following his medication? What could be the solution to his problems?
- How are polypills going to be produced? In what way can this help poor countries?

Activities:

Discuss the following:

- What are the eventual pros and cons of polypills?
- What do you think of this concept?
- Can you think of any ultimate challenges that can be associated with polypills?
- Do you believe that this should be our future pharmacy? Do you agree that this concept can help poor countries as per video 2? Why or why not?

Written expression:

Following your discussion, write an essay about polypills for a medical magazine. Mention their pros and eventual cons: Start with an introductory paragraph. Then write the other paragraphs: one idea per paragraph.

Don't forget to link the different parts of your essay together by using linking words.

Emphasize some of the most important information in your essay using methods seen in class 8.

Or

The ministry of health in France is considering the concept of polypills. On behalf of the French pharmacist federation, write an email to the minister of health arguing for their benefits and / or risks. Link your ideas and emphasize the most important points

Vocabulary: Quizlet 9

Language point: the comparatives and superlatives:

We use comparatives to compare two people or things. We form it by adding -er to the short adjectives and putting more/less before the long ones.

Examples:

- A polypill would be so much easier to manage.
- The question is: would it be more expensive to produce, though?

We can also indicate equality, with the use of as...as:

• This new treatment is **as** expensive **as** the previous one.

To compare **more than 2 things, we use the Superlative form**: **the + -Est is** for short adjectives, and the + most/least for long ones.

- This is the **shortest** clinical scientific research I have ever read.
- This is the most underfunded research I have ever seen.

So-called double comparatives are structures that employ two parallel clauses to express cause and effect. The more / less + (noun / noun phrase) subject + verb x2

For example:

- The less you eat, the leaner you get.
- The more you exercise, the fewer health worries you have.
- The weaker the bones, the easier they break.

Double comparatives can also be simplified as follows:

- The sooner, the better
- The more, the merrier!
- The better your gut microbiome, the stronger your health.

Exercise 1: Comparatives and Superlatives of Adjectives

Fill in the blanks with the correct form of the adjectives provided.

1.	Antibiotics are (strong)	than antivirals for bacterial infections.
2.	This medication is (effective)	_ in treating hypertension than the previous one.
3.	Among all the painkillers, this one is the (strong)	
4.	This drug is (expensive)	than the generic version.
5.	Aspirin is (cheap) than some other of	over-the-counter painkillers.
6.	The side effects of this medicine are (severe)	than those of the alternative.
7.	The new treatment is (promising)	we've seen so far.
8.	This brand of supplements is the (popular)	in our pharmacy. Generic drugs are
	usually(affor	dable) than brand-name drugs.
9. The (common) side effect of this medication is drowsine		on) side effect of this medication is drowsiness.
10.	This vaccine is	(effective) against the flu than last year's.
11.	Out of all the medications available, this one has	the (low) risk of side effects.
12.	Pharmacists find that educating patients is	(important) than just dispensing
	medication.	
13.	This antibiotic is (potent) than the one we used previously.
14.	Of all the vitamins, vitamin C is the	(beneficial) for immune health.
15. The new treatment plan is		(complex) than the standard protocol.

Oral Practice: In pairs, compare the following:

- o Paracetemol vs Aspirin vs Ibuprofen
- o The flu vs Covid-19
- o Vitamin supplements vs Mineral supplements vs Probiotics
- o Generic drugs vs Branded drugs

FIRST AID

10 Physical First aid

Warmer discussion:

- 1. Discuss the following: Have you had a first aid training? Have you been in a situation that needed first aid? Were you the giver or the receiver of first aid in the situation or were you just a witness? How did that go? Tell your partner
- 2. Now, match the words in the box to their definitions.

FIRST AID, DRESSING, BLISTER, CHOKING, SWELLING, ITCHING, CPR

-	L.	The immediate medical assistance given to a person who has been injured or suddenly taken ill:
		2. A small bubble on the skin filled with fluid caused by friction or burning:
		3. A sterile covering placed over a wound to protect it from infection and promote healing:
		4. A sensation on the skin that causes a desire to scratch due to irritation or inflammation:
		5. An abnormal enlargement of a body part caused by accumulation of fluid or inflammation:
		6. A condition where the airway is blocked, preventing breathing, usually caused by food:
		7. An emergency lifesaving procedure performed when the heart stops beating

In pairs, you will watch the following videos, take notes and debrief your partner about it.

Student 1:

CPR in Action | A 3D look inside the body

Student 2:

Jack's Story - First Aid in Schools - St John Ambulance

Vocabulary list: Quizlet 10: https://quizlet.com/fr/923220285/quizlet-10-physical-first-aid-flash-cards/

Activity 1 – speed dating presentations:

You have been invited to Jack's school to give a first aid training course. In pairs, you will research and prepare a first aid training for a condition: Someone is not breathing, someone is unconscious, someone got burnt, someone is unconscious and not breathing, someone is choking, someone is bleeding, someone goes into shock, someone has an asthma attack, someone has a seizure or any other emergency. Use the Web to help you with your exercise.

Briefly describe the condition, then relate the first aid needed to be given to the victim. Give precise and clear instructions. Use emphatic techniques when needed.

Language point: Past Modal Verbs

Jack's teacher said in the video: "He must have been listening extra hard that day."

Why did she use this form? When do we use this form in English?

Modal verbs: deductions about the past

Modal Verb + have + past participle

Look at these examples to see how *must*, *might*, *may*, *could*, *can't* and *couldn't* are used in the past to make deductions.

- Jack must have been listening extra hard that day at school to the first aid training course.
- We don't know for sure that Alex broke the coffee table. It **might have been** the dog.
- How did she fail that exam? She can't have studied very much.

Explanation

We can use modal verbs for making deductions about the past – guessing if something is true using the available information. The modal verb we choose shows how certain we are about the possibility.

must have

We use must have + past participle when we **feel sure** about what happened.

- Who told the newspapers about the prime minister's plans? It must have been someone close to him.
- The thief must have had a key. The door was locked and nothing was broken.

might have / may have

We use might have or may have + past participle when we think it's possible that something happened.

- I think you might have broken your arm. Better have an x-ray to be sure.
- Police think the suspect may have left the country using a fake passport, but they aren't sure.

"May have" is more formal than might have. Could have is also possible in this context but less common

can't have / couldn't have

We use can't have and couldn't have + past participle when we think it's not possible that something happened.

- She can't have gone home. I have just seen her.
- I thought I saw Adnan this morning but it couldn't have been him he's in Greece this week.

Exercise: Use either "must have, may have, might have, could have, can't have or couldn't have" in the following sentences:

- 3. I kept waiting for my bus for almost 30ms but it never came. Maybe it was the snow or the RATP(go) on strike again.
- 4. Surely, you (see) him. He was standing right next to you.

6. The teacher explained the lesson, but she ended up getting all of the exercise wrong. She	5.	He(travel) abroad. He doesn't have a passport.
7. Oh, no! My phone isn't in my bag. I		The teacher explained the lesson, but she ended up getting all of the exercise wrong. She
 "Mr Johnson was found unconscious on the floor" "Jane has Lyme disease" "Tom's forehead is badly swollen" Make deductions about these situations using the past modal verbs. Use as many sentences as you can for each. Vocabulary: Quizlet 10 An Extra Watch: Video comprehension: Emergency case at UCLA The patient: Jay YIM His occupation:	7.	·
"Jane has Lyme disease" "Tom's forehead is badly swollen" Make deductions about these situations using the past modal verbs. Use as many sentences as you can for each. Vocabulary: Quizlet 10 An Extra Watch: Video comprehension: Emergency case at UCLA 1- The patient: Jay YIM a) His occupation:	Ac t	ivity (In pairs):
An Extra Watch: Video comprehension: Emergency case at UCLA 1- The patient: Jay YIIM a) His occupation:		"Jane has Lyme disease"
An Extra Watch: Video comprehension: Emergency case at UCLA 1- The patient: Jay YIM a) His occupation:		
1- The patient: Jay YIM a) His occupation:	V O	cabulary: Quizlet 10
a) His occupation:	Δn	Extra Watch: Video comprehension: Emergency case at UCLA
b) His professional project:		1- The patient: Jay YIM
c) What happened to him?		a) His occupation:
d) Give the 3 symptoms he presented: e) What was he doing at the time?		b) His professional project:
e) What was he doing at the time?		c) What happened to him?
f) LAPD officer Joshua Sewell simply imagined Jay Yim		d) Give the 3 symptoms he presented:
the sentence, using a <u>passive form</u> to express the 2 hypotheses) 2- <u>Therapeutic hypothermia:</u> a) Why was Jay Yim especially lucky to be rushed to UCLA Ronald Reagan medical centre? b) Use the following vocabulary to describe the procedure:		e) What was he doing at the time?
a) Why was Jay Yim especially lucky to be rushed to UCLA Ronald Reagan medical centre? b) Use the following vocabulary to describe the procedure:		
b) Use the following vocabulary to describe the procedure:		2- Therapeutic hypothermia:
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11 Mental Health First Aid

Warmer discussion - Discuss in pairs:

- What are some signs that someone might be struggling with mental health issues?
- How would you respond if someone confided in you that they are experiencing mental health problems?
- What resources or strategies do you think are most effective for maintaining good mental health?
- How can communities come together to support mental health on a large scale?
- How can we reduce the stigma around mental health in the society?

In groups of threes, each student will watch a video, take notes or answer the questions then debrief their partners:

Before watching, can you match the following English terms with their translations in French?

A training course	Avoir un objectif
A support network	Competences vitales
Vital skills	Une formation
Have a purpose	Reseau de soutien

Tim's story about Mental Health First Aid: https://www.youtube.com/watch?v=iGk1rnGY-eU

- What did Tim confront during his first year of university? What did that lead him to?
- What is the new initiative that Tim helped establish? How is this new initiative useful?
- What are the skills that someone could learn from this training?

Attending Mental Health First Aid Youth Course: https://www.youtube.com/watch?v=RxBpxHcWK-Q

• In what way is mental first aid youth course similar to a first aid course?

 What is a participant in the mental health first aid you training course expected to learn?
What will the course not teach you?
 What is an important key if you want to successfully provide adequate mental health first aid?
what is all important key if you want to successfully provide adequate mental health hist aid:
Nurse Shares 5 Steps from the Mental Health First Aid Kit: https://www.youtube.com/watch?v=ds8GYO5Gdg4
Why does Holly Miles have a great passion for mental health?
 What is the main aim of the five-step action plan developed by the international mental health first aid program?
Briefly describe the 5 steps, giving an overview of each step.
57

How does Ms. Miles end her video?

Activities:

Oral activity: In groups of 3s, you are going to make a news report / or an interview to encourage people to take up mental health first aid training courses: Explain why this course is important, talk about the content of the course, its main aims and some practical steps needed to be done in order to join this course. Present your news report or interview to the class. Be as convincing as possible. Use emphatic techniques, linking words, and comparatives or superlatives when and if necessary. Use background music or other prompts if you'd like to.

Written activity: You have watched a video promoting mental health first aid training courses. As a member of the student pastoral care team, send an email to all students encouraging them to attend this course. Be as convincing as possible. Use emphatic techniques and linking words, comparatives or superlatives when and if necessary. Start your email with 'Dear Students," and end it with "Best regards, your name" (Cordialement, X)

Vocabulary: Quizlet 11

Language Point: Compound words:

These words are formed by COMBINING TWO OR MORE EXISTING WORDS, creating a NEW WORD WITH A DISTINCT MEANING. Using these words makes your expression sound more formal and more professional.

Can you think of words like that? (Think in pairs)

Examples from the mental first aid videos:

Health problems: Problems related to health

Life threatening emergencies: Emergencies that are threatening to life.

Support Network: A network of people that give you support.

Student pastoral care team: A team that offers pastoral care to students

A two-month internship: An internship that took two months.

! Notice how we remove the 's' from the word two months when in a compound word!

Use of plurals in compound word structures: Only the last word can carry the plural, as the preceding words count as adjectives, which are always invariable in English.

Notice the efficiency and concision of → Pain management clinics

Compared to → Clinics whose role is to cope with the management of pain

Exercises

Form the relevant compounds using these descriptions:

A period of tests which lasts 2 years

A budget for research of which the total cost is 2 million dollars

A trend which is nationwide

A course which lasts for 4 years

Instruments whose precision is high

A therapy consisting of radiation at low doses

RESEARCH AND INNOVATION

12 The placebo effect

Warmer discussion:

- What are clinical trials? What do you know about them?
- What is a placebo effect? What are its pros and / or cons?
- Are you for or against using placebos in clinical trials? Why?
- Can the pharmaceutical industry benefit from the placebo effect? How?

In pairs, you will watch the following videos:

Student 1:

Helping You Understand the Placebo Effect:

Using your notes and key vocabulary, compose a concise written summary of the video's content, ensuring that all essential information is included. Read your summary aloud to your partner, incorporating appropriate linking words to enhance coherence and flow.

Student 2:

The Neuroscience behind the placebo effect: https://www.youtube.com/watch?v=REaiu-7wRvs

Using your notes and key vocabulary, compose a concise written summary of the video's content, ensuring that all essential information is included. Read your summary aloud to your partner, incorporating appropriate linking words to enhance coherence and flow.

Afterwards, discuss the following in pairs:

- How would you address the issue of placebo effect in a clinical trial?
- Can you think of ways in which healthcare could try to benefit from the placebo effect?

Choose one of the following issues to write about: Write your argument to be published in a medical magazine that is targeting a non-scientific audience. (At least 120 words) Don't forget to use linking words.

What do you think of the following statements? Do you agree? Do you have counter arguments? Use linking words, emphatic and debating techniques. Exchange your written production and get the feedback of your partner and / or teacher.

- 1. Using a placebo can mean withholding effective treatment from participants in clinical trials, which can result in harm or worsening of their condition. Additionally, in conditions where effective treatments already exist, using a placebo might mean denying participants the best-known treatment.
- 2. Using a placebo is the best way to determine the efficacy and safety of a new treatment.
- 3. By utilizing the placebo effect in conjunction with lower doses of active medications, healthcare providers can achieve therapeutic effects while minimizing side effects and dependency risks.
- 4. Creating a positive therapeutic environment and using supportive communication can activate the placebo effect, promoting healing and recovery in patients even in the absence of active pharmacological agents.

Language point: Intonation:

USING YOUR VOICE EFFECTIVELY

How you say something is often just as important as what you say. You can use your voice and the way you stress words or make pauses in sentences to make your presentation more interesting and easier for the audience to follow.

Stressing words

By emphasizing particular words or parts of words you create certain effects. Notice how you can change the meaning of a sentence by putting the stress on a different word.

We all know that this is an extremely difficult market. (it's more than just difficult)

We all know that this is an extremely difficult market. (you and I agree on this)

We all know that this is an extremely difficult market. (but they don't)

Making pauses

You can use pauses to slow your pace down and make your sentences easier to understand. Group words into phrases according to their meaning and make pauses between the phrases.

In my opinion we should go into other markets.

In my opinion // we should go // into other markets.

On the other hand, the figures prove that we are on the right track.

On the other hand, // the figures prove // that we are on the right track.

10 Look at the clues in brackets and underline the word which should be stressed in each sentence.

- 1 Clearly, we need to look at this again. (it's obvious!)
- 2 Clearly, we need to look at this again. (twice wasn't enough)
- 3 We will never get such a perfect opportunity again. (this is our only chance)
- 4 We will never get such a perfect opportunity again. (but perhaps the competition will)
- 5 I'd like us to work out a strategy. (and nobody else)
- 6 I'd like us to work out a strategy. (a plan is important)
- 7 There hasn't been a dramatic increase in production costs. (but there has been an increase)
- 8 There hasn't been a dramatic increase in production costs. (the increase was in personnel costs)
- 9 I think we've made a good start. (but you might not agree)
- 10 I think we've made a good start. (but there is still a lot to do)
- 11 This is not the only option. (There might be others)
- 12 This is not the only option. (I have a better one)
- 13 Sales this month have been quite good. (But not brilliant)
- 14 Sales this month have been quite good. (We are pleased)
- 15 Where do we go from here? (I have absolutely no idea)
- 16 Where do we go from here? (Normal question)

Now work with a partner and practise reading out the sentence pairs with the correct stress. Can she or he hear the difference in meaning?

Here is the transcript of the first video. Use your voice effectively. First choose the most important information that you will stress with your voice, then read the text in pairs – Afterwards, you can mute the video and dub it using your voices:

Ever hurt yourself as a child and had someone kiss it better. Did it work? If so, you experienced the placebo effect. The kiss didn't actually do anything but because you believed it did, it made you feel better. While this might be great for moms and dads, it's not so great for doctors because when we're trying to test a potential new drug in the clinical study, the placebo effect can cloud our result. It happens like this to study the effects of the investigational drug.

We may give one group of people the investigational drug and another a placebo. They won't know which. Both look the same and are taken in the same way, but the placebo contains no active drug, so in theory not any difference is seen between the two groups. It should happen as a direct result of taking the investigational drug but it doesn't quite work that way because people want to get better so badly, they can actually fool themselves into thinking they are taking the investigational drug and that it definitely works. This can result in people feeling better despite being in the placebo group. They can also amplify any effects seen in the investigational drug group. That is, their high expectations of the investigational drug can make it seem like the investigational drug is working better than it actually is. This sounds great but the problem is that these results are false. They give study doctors the wrong idea and this could lead to people being given treatments that don't work in the way we expect.

We can do our bit to minimize the risk of the placebo effect but we rely on you doing your bit too. For example, it can be tempting to tell other study participants about how you are feeling but it's really important not to do this because it could change the outcome of the study. Why? Well because telling someone that you feel better could influence how you feel and if you are talking to another study participant, it could influence how they feel – even if they're taking a placebo.

Clinical studies are at the heart of all medical advances and so it's very important we get them right. New treatments under study may be better than standard treatments or they may be worse and so even if you're taking the investigational drug, there's no guarantee you'll get better. That's why we have clinical studies, after all, to find out.

13 AI (Artificial Intelligence) and the pharmaceutical industry

Warmer discussion:

- How has AI started to impact healthcare?
- What are some examples of AI applications in healthcare that you know of?
- What do you think are the potential benefits and risks of using AI for diagnosing diseases?
- How can we ensure patient data privacy and security in Al-driven healthcare systems?
- How might advancements in AI influence the development of new medical treatments
- How can AI be used to predict and manage public health crises, such as pandemics?
- How should medical education evolve to prepare future healthcare professionals for the integration of
- How can we balance the need for technological proficiency with the importance of human empathy in healthcare?

Watch this video and answer the questions: How AI is accelerating drug discovery - Nature's Building Blocks |
BBC Story Works

• What does Insilco Medicine specialize in?

• What makes the pharmaceutical industry quite risky?

• How can AI help younger countries in drug discovery?

• What does the CEO forecast for the future?

• Can you think of any downsides of the use of AI in the health industry? Share with your partner.

Blood test using AI could help predict Parkinson's disease early

By Euro news Published on 19/06/2024

A new simple blood test could predict Parkinson's disease before symptoms appear.

A new blood test using artificial intelligence (AI) may be able to predict Parkinson's disease seven years before symptoms appear in patients.

Parkinson's disease is a neurodegenerative condition impacting around 10 million people globally, especially older individuals. It can cause symptoms such as shaking, slow movement, and muscle stiffness in addition to other physical and mental problems, and is rising in prevalence.

Researchers used machine learning to identify eight blood-based biomarkers. Their test provided a diagnosis with 100 per cent accuracy, researchers said. "By determining eight proteins in the blood, we can identify potential Parkinson's patients several years in advance," said Michael Bartl, co-first-author of the study from University Medical Centre Göttingen.

"This means that drug therapies could potentially be given at an earlier stage, which could possibly slow down disease progression or even prevent it from occurring".

They also analysed blood from 72 patients with Rapid Eye Movement Behaviour Disorder (IRBD), which is associated with neurodegenerative disorders. The researchers followed up over ten years to see if the blood test could predict whether these

patients would develop Parkinson's. The test classified 79 per cent of patients as having the same profile as someone with Parkinson's disease. The earliest correct identification of a patient that would go on to develop the disease occurred 7.3 years before symptom onset, according to the study.

"We set out to use state-of-the-art technology to find new and better biomarkers for Parkinson's disease and develop them into a test that we can translate into any large NHS laboratory," said Kevin Mills, senior author from University College London. "With sufficient funding, we hope that this may be possible within two years".

The study was published in the journal Nature Communications.

The research "represents a major step forward in the search for a definitive and patient-friendly diagnostic test for Parkinson's," said David Dexter, director of research at Parkinson's UK, a charity which co-funded the study.

"Finding biological markers that can be identified and measured in the blood is much less invasive than a lumbar puncture, which is being used more and more in clinical research," he added.

Ray Chaudhuri, professor of movement disorders and neurology at King's College London, said that blood tests remain an "unmet need" for Parkinson's disease. "If replicated in larger studies", they could be invaluable in supporting Parkinson's diagnoses, he said

"Questions however remain about the ethics of predictive diagnosis in relation to proper counselling as well as absence currently, of any disease-modifying treatment".

• In pairs, as pharma students, comment on the last sentence of the article: "Questions however remain about the ethics of predictive diagnosis in relation to proper counselling as well as absence currently, of any disease-modifying treatment".

Is predictive diagnosis unethical in the absence of any disease-modifying treatment? Why? Why not?

Activity

A debate on the topic "AI in healthcare: Opportunities vs. Challenges."

Instructions: The classroom will be divided in 4 groups: two supporting the benefits of AI in healthcare and the other 2 focusing on the challenges and risks. Go to page 70 to help you with your debate.

- Each team prepares arguments and counterarguments, citing examples and research. Then two opposing teams will face each other in a debate.
- Here are some questions to help the teams preparing the argument for 'the challenges and risks': Who
 would be held responsible for AI medical mistakes? While AI systems can be highly accurate, are they
 infallible? How will AI generated errors be detected? With AI, patient data privacy and security can
 become a paramount concern. The automation of administrative tasks can lead to job loss.
- Both teams can go to page 70 for help.

14 Challenges in the pharmaceutical industry - The AMR

Warmer:

- 1. Discuss these questions in pairs:
- What are the some of the biggest challenges facing modern medicine in the world today?
- Have you heard of antimicrobial resistance? What is the difference between it and antibiotic resistance? What does it imply now and what can be its long-term consequences?
- Have you heard about superbugs? What are they?
- What measures should be taken to face AMR (antimicrobial resistance), in your opinion?
 - 2. Look at this figure below and discuss it in pairs. What can you say about it?

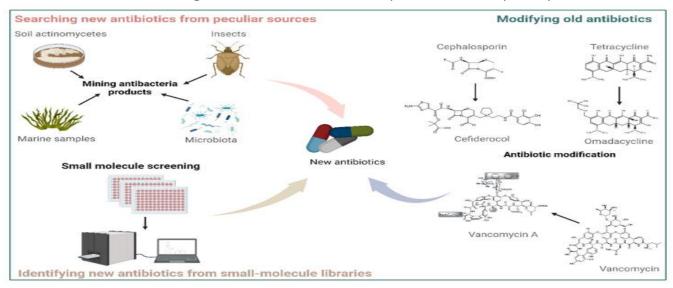


Figure 2: National library of medicine: an official site of the USA government

In pairs, you will read two articles. Each one of you will make a summary of their article to their partner. Take notes while reading to help you in your summary.

Student 1 - Article 1

'The silent pandemic': What is the EU doing to fight Antimicrobial Resistance?

In partnership with The European Commission, by Euronews, published on 02/11/2023 -

https://www.euronews.com/health/2023/11/02/the-silent-pandemic-what-is-the-eu-doing-to-fight-antimicrobial-resistance

In this episode of Smart Health, we hear from a sufferer of Antimicrobial Resistance, the deadly disease which has researchers and authorities scrambling for solutions. Back in 2013, Iñaki Morán spent 20 consecutive days in bed. His body had been ambushed by bacteria resistant to medicines. It was to be the first in a long list of similar attacks.

"I was regularly admitted to hospital. I was admitted in 2016, in 2017 and in 2018. For different bacteria, different germs," he told **Smart Health**. 63-year-old Iñaki suffers from Chronic Obstructive Pulmonary Disease (COPD). He's also been treated for colon and lung cancers. Bacteria resistant to treatments caused further havoc in a body already at the edge.

"My quality of life was greatly reduced. A planned pulmonary transplant was jeopardised. If the lungs are persistently infected, as was the case with me, then the transplant can simply be called off. In the end, I was lucky; I had a double-lung transplant. The worst was avoided," Iñaki revealed.

Antimicrobial Resistance – or AMR - is mainly driven by overuse and misuse of antibiotics, antiseptics and antifungals. It affects humans, animals, plants and the environment.

AMR causes some **35,000 deaths every year** in the European Union, with annual healthcare costs and productivity losses estimated at €1.5 billion.

Regular seminars help EU patients, physicians, pharmaceutical representatives, researchers and policymakers discuss prevention and control measures of what they call "a silent pandemic".

Experts agree Antimicrobial Resistance is among the top three health threats currently faced by the European Union.

Dr María Cruz Soriano Cuesta is the Head of the Internal Medicine Unit in a large public hospital in Madrid.

"There are extensive epidemiological studies involving more than 1,000 Intensive Care Units showing that on a given day, more than 50 per cent of the patients admitted have an active infection," she explained. "Half of those cases are hospital-acquired infections. This is a very serious issue. And unfortunately, at the ICU, the infections are often from multidrug-resistant bacteria."

How is the EU proposing to tackle the problem of AMR?

A lethal, complex and urgent situation that the European Commission has proposed to address by reducing the consumption of antimicrobials by 20 %. The **European Commission** wants to also encourage the development of new antibiotics, for instance by giving developers an extra year of regulatory data protection.

"Since the 1980s, we have not had any novel antimicrobials developed. So, we needed to provide strong incentives for new, for novel antimicrobials to be developed," said Stella Kyriakides, European Commissioner for Health and Food Safety. "We need to also work on advocating on the prudent use of antimicrobials and on addressing the abuse of antimicrobials. But at the same time, we need to support the European pharmaceutical industry, so that they innovate, so that we have new products on the market."

The European Federation of Pharmaceutical Industries and Associations says they are also ready to play their role.

"In 2020, we proposed a fund of 1 billion US dollars until 2030 with the objective of finding two to four new antibiotics," said Nathalie Moll, Director General of the European Federation of Pharmaceutical Industries and Associations. "This was a sort of a bridging fund to help small biotechs that so far had been failing to be able to produce antibiotics. "

"I think that if all patients know about their diseases, in this case Antimicrobial Resistance, if they know what the symptoms are, what the treatment is, if they are prepared, then they are going to be active patients," Iñaki Morán told Smart Health.

"They are really going to put up barriers against all this. And that's what we patients are trying to spread: our knowledge based on experience."

Student 2 - Article 2:

Current Promising Strategies against Antibiotic-Resistant Bacterial Infections
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9854991/ Published online 2022 Dec, written by Jinzhou Ye and Xinhai Chen (an extract)

Abstract

Infections caused by antibiotic-resistant bacteria (ARB) are one of the major global health challenges of our time. In addition to developing new antibiotics to combat ARB, sensitizing ARB, or pursuing alternatives to existing antibiotics

are promising options to counter antibiotic resistance. This review compiles the most promising anti-ARB strategies currently under development. These strategies include the following: (i) discovery of novel antibiotics by modification of existing antibiotics, screening of small-molecule libraries, or exploration of peculiar places; (ii) improvement in the efficacy of existing antibiotics through metabolic stimulation or by loading novel, more efficient delivery systems; (iii) development of alternatives to conventional antibiotics such as bacteriophages and their encoded endolysins, antibiofilm drugs, probiotics, nanomaterials, vaccines, and antibody therapies. Clinical or preclinical studies show that these treatments possess great potential against ARB. Some anti-ARB products are expected to become commercially available in the near future.

Introduction

Since the discovery of penicillin, the first antibiotic, by Alexander Fleming in 1928, bacterial infectious diseases have ceased to be the leading cause of death worldwide, and the average human life expectancy has almost doubled [1]. However, antibiotic resistance has quickly emerged in numerous clinical bacteria, compromising the initially overwhelming effectiveness of antibiotics. Furthermore, the overuse and misuse of antibiotics have exacerbated this problem of resistance. In 2017, the World Health Organization published a list of twelve bacteria that were of concern as they were all resistant to a notable number of currently marketed antibiotics [2].

Antibiotic and antimicrobial stewardship* is indispensable for combating antibiotic resistance. Netherlands and Sweden, where antibiotic stewardship has been applied in the outpatient setting, are the countries that have the lowest rates of antibiotic resistance in Europe [4]. In England, the reduction in antibiotic prescriptions has greatly attenuated an already increasing incidence of antimicrobial resistance in the subsequently identified *E. coli* bloodstream infections [5]. A systematic review reported that ASPs (antibiotic stewardship programs) could reduce the use of antibiotics, antibiotic costs, treatment duration, and local antibiotic resistance rate without adversely affecting the mortality of patients who require ICU [6].

However, certain limitations still exist that hinder the accurate implementation of antibiotic stewardship. In fear of inadequate coverage of the causative pathogen, physicians empirically prescribe broad-spectrum antibiotics to their patients. As a result, this treatment usually lasts too long or is too broad [7]. Moreover, the high management cost and the patient's unwillingness to pay hospitalization expenses limit the applicability of antibiotic stewardship in low- and middle-income countries [4].

Many scientists worldwide are now focusing on the development of solutions to combat antibiotic-resistant bacteria (ARB) as a means to prevent the situation of effective antibiotics from becoming clinically unavailable in the future.

*Antibiotic **stewardship** is the effort to measure and improve how antibiotics are prescribed and used.

If you'd like to read the rest of the article, go to https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6928725/

Now tackle these questions in pairs:

- What factors are contributing to the rise of antimicrobial resistance, and why is it regarded as a significant health threat?
- According to the articles, what measures are currently being implemented to address this threat?
- What additional efforts are being undertaken that were not mentioned in the articles?
- In your opinion, what further actions could be taken? Brainstorm potential solutions to this problem.

Activities:

You will work in groups of three, taking on the role of employers at the World Health Organization (WHO). Your mission is to design an awareness campaign addressing the critical issue of antimicrobial resistance and its global urgency. Together, you will write a compelling speech for a TED Talk. Use information from the provided articles and vocabulary list to support your ideas. Additionally, you may research one of the following topics to enhance your presentation. As you deliver your speech, be sure to use clear, engaging intonation.

- 1. The history of antibiotics and the emergence of antibiotic and antimicrobial resistance.
- 2. The role of agriculture, nutrition, water in antibiotic resistance.
- 3. New technologies and treatments being developed to combat resistant bacteria.
- 4. Global efforts and policies to fight antimicrobial resistance.

Debate Language & Techniques

Round One

- 1. Team One Presentation of "Pro/positive" or "Arguments for"
- 2. Team Two Presentation of "Con/negative" or "Arguments against"

Round Two

- 1. Team One 5 Minutes Response or rebuttal of "Pro/positive" or "Arguments for"
- 2. Team Two 5 Minutes Response or rebuttal of "Con/negative" or "Arguments against"

This can go on for many rounds. Make sure your arguments are backed with evidence and are not just emotional outbursts.

Expressions for Debate and Group Discussion

Main arguments

- I support/oppose the notion that... for the following reason: Firstly, ...
- The key issue here is...
- The real question/dilemma is... (question form)
- The critical/crucial factor here is...
- It's vital to remember that...
- By far and away the most important point is...

Adding points

- What's more,
- On top of that,
- Besides that,
- Apart from that,
- Another thing to consider is...
- We shouldn't forget that...
- It's also worth bearing in mind that...

Rebutting/Cross-Examining

- So, what you're saying is...
- So let me get this straight...
- You're not seriously suggesting that..., are you?
- You can't possibly be saying that...
- I feel I must disagree with you about...
- That's all very interesting, but the problem is that...
- Now let me respond to it.
- Sorry for interrupting, but I must respond to that.
- I'd like to take issue with what you just said.
- I want to call your attention to an important point that our opponents have not addressed.
- Our position is ...
- I'd like to deal with two points here. The first is...
- Our opponents have still not addressed the question we raised a moment ago...
- The other side has failed to answer our point about...
- Our opponents have claimed that..., but / however

Conceding/Partially Agreeing

- I admit that your point about... may be true, however,
- I take/see your point about...
- Let's say I (partially) agree with the idea of...
- I hear what you're saying about...
- It's true that

EXTRA WORK

Using the examples on the preceding pages as your guide, translate the following warnings into English:		
1. Respecter les doses prescrites		
2. Ne pas laisser à la portée des enfants.		
3. Bien refermer le flacon après utilisation.		
4. Eviter tout contact avec les yeux.		
5. Ne pas exposer cet équipement à la pluie, ni à une humidité excessive.		
6. Usage externe uniquement.		
7. A conserver à l'abri de l'humidité.		
8. Lire attentivement la notice avant utilisation.		
9. Si les symptômes persistent, consultez votre médecin.		
10. S'abstenir de prendre des boissons alcoolisées pendant ce traitement.		
 Doit être utilisé en respectant les conseils du médecin / se conformer à l'ordonnance du médecin. 		
12. En cas d'asthme, [] consultez un médecin avant utilisation.		
13. L'attention est appelée, notamment chez les conducteurs de véhicules et les utilisateurs de machines, sur les risques de somnolence liés à la prise de ce médicament.		
14. Prendre 2 comprimés toutes les 4 heures.		
15. A utiliser dans les trois mois après ouverture.		
16. Respecter la durée du traitement indiquée, sauf en cas d'avis contraire.		
17. Ne pas appliquer près des yeux, ni sur une peau lésée.		

Quizlet lists:

1. Quizlet 1: Patient Pharmacist Dialogue Vocabulary:

https://quizlet.com/fr/898711685/quizlet-1-patient-pharmacist-dialogue-vocabulary-flash-cards/

2. Quizlet 2: Medicine Warnings and Precautions:

 $\frac{https://quizlet.com/fr/915649288/quizlet-2-medicine-warnings-and-precautions-flash-cards/?funnelUUID=198f94f0-d219-4dc1-9400-579e5f0000d9$

3. Quizlet 3: Body parts, symptoms and diagnosis:

https://quizlet.com/fr/920759472/quizlet-3-body-parts-symptoms-and-diagnosis-flash-cards/?funnelUUID=88caf9a6-8888-4929-b04f-062518d9edb1

4. Quizlet 4: Medical Gaslighting:

 $\frac{https://quizlet.com/fr/926127886/quizlet-4-medical-gaslighting-flash-cards/?funnelUUID=f073a62a-849c-490d-9a10-99acc1f462f7$

5. Quizlet 5: Administration Routes:

https://quizlet.com/fr/923229042/quizlet-5-administration-routes-flash-cards/

6. Quizlet 6: NRT (Nicotine Replacement Therapies)

https://quizlet.com/fr/916026145/quizlet-6-nrt-nicotine-replacement-therapies-flash-cards/Quizlet 6:

7. Quizlet 7: The Gut Microbiome:

https://quizlet.com/fr/928153454/quizlet-7-the-gut-microbiome-flash-cards/

- 8. Quizlet 8: Weight-loss drugs:
- 5. https://quizlet.com/fr/925425390/quizlet-8-weight-loss-drugs-flash-cards/
- 9. Quizlet 9: The Future pharmacy:

https://quizlet.com/fr/925464821/quizlet-9-the-pharmacy-of-the-future-flash-cards/

10. Quizlet 10: Physical First Aid:

https://quizlet.com/fr/923220285/quizlet-10-physical-first-aid-flash-cards/

11. Mental First Aid:

https://quizlet.com/fr/922562517/quizlet-11-mental-first-aid-flash-cards/

12. The Placebo Effect:

https://quizlet.com/fr/924277868/quizlet-12-the-placebo-effect-flash-cards/

13. Al and the pharmaceutical industry:

https://quizlet.com/fr/928296386/quizlet-13-ai-and-the-pharmaceutical-industry-flash-cards/?new

14. Antimicrobial Resistance (AMR)

https://quizlet.com/fr/927993800/quizlet-14-amr-antimicrobial-resistance-flash-cards/?funnelUUID=2867bc15-ad0b-4b18-ad1a-59f314e520e8