

In this unit

- care homes
- the ageing brain
- Alzheimer's disease
- will
- describing the problems of the elderly
- aids used by the elderly

Reading

- 1 Write your name as fast as you can with your right hand, then do the same with your left hand. Was one easier? Does it look better? Discuss the reason why with a partner.
- 2 Read the article, and decide if these sentences are true (T) or false (F).
 - 1 You can learn to write with the wrong hand. _____
 - 2 Learning makes new nerve cells grow. _____
 - 3 As we get older, large numbers of brain cells die. _____
 - 4 If our brain is healthy, it continues to develop when we are old. _____
 - 5 Mental stimulation keeps your memory good. _____

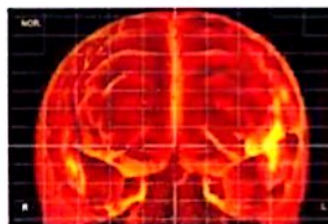
Old age and the brain

If you hold a pen in your 'wrong' hand, writing becomes uncomfortable and difficult. But keep doing it and you will get better at it – you learn. This is because connections between neurons in your brain get stronger, and your brain grows.

In our early years our brains grow very fast as we learn language, writing, numbers, music, and how to coordinate movement. By the time we are teenagers, each neuron in our brain has connected to tens of thousands of other neurons, and every time we have a new thought or memory, our brains make new connections. Just as muscles get stronger by using them, the brain develops when it is stimulated. Without stimulation, it gradually dies.

A healthy brain does not lose huge numbers of brain cells as it ages. It continues to rewire itself and grow new neurons. However, degenerative brain diseases are very common in old age, and so we associate ageing with diseases such as Alzheimer's disease.

Even though these diseases are very common in the elderly, it is a mistake to think that old age automatically equals mental decline. When elderly people who do not have Alzheimer's disease suffer age-related losses of memory and motor skills, it is often not because of ageing, but because of inactivity and lack of mental stimulation.



- 3 Find words in the text with these meanings.

- 1 to make things happen at the same time
c _____
- 2 to change the electrical connections
r _____
- 3 conditions that kill brain cells
d _____
- 4 loss of the ability to use your brain well
m _____ d _____
- 5 connected to getting old
a _____ r _____
- 6 the ability to control your body's movement
m _____ s _____

- 4 Try these brain exercises. Do you know any others?

- Name the colours of the following words as fast as you can. Don't read the words but say what colour they are.

BLUE BROWN PURPLE YELLOW
GREEN MULTICOLOURED ORANGE
RED BLACK PINK WHITE GREY

- Read a page of writing upside-down.



Reading: Old age and the Brain

If you hold a pen in your wrong hand, writing becomes uncomfortable and difficult. But keep doing it you will get better at it. You learn this is because connections between neurons and your brain gets stronger and your brain grows.

In our early years our brains grow very fast as we learn languages. Numbers, music and how to coordinate movements. By the time each neuron in our brains has connected to ten of thousands of other neurons, and every time we have a new thought or memory, our brains make new connections just as muscles get stronger by using them.

The Brains develops when it is stimulated, without stimulation it gradually dies.

A healthy brain does not lose huge numbers of brain cells as it ages. It continues to rewire itself and grow new neurons. However, degenerative brain diseases are very common in old age, and so we associate ageing with diseases such as Alzheimer's disease. Even though these disuses are very common in the elderly, it is a mistake to think that old age automatically equals mental decline. When elderly people who do not have Alzheimer's disease suffer age-related losses of memory and motor skills, it is often not because of ageing, but because of inactivity and lack of mental stimulation.

Read the article, and decide if these sentences are true (T) or false (F).

- 1 You can learn to write with the wrong hand. _ **T**
- 2 Learning makes new nerve cells grow. _ **F**
- 3 As we get older, large numbers of brain cells die. _ **F**
- 4 If our brain is healthy, it continues to develop when we are old _ **T**
- 5 Mental stimulation keeps your memory good. _ **T**

Exercise:

Find words in the text with these meanings.

- 1 To make things happen at the same time **coordinate**.
- 2 To change the electrical connections **rewire**.
- 3 Conditions that kill brain cells – **degenerative brain diseases**.
- 4 Loss of the ability to use your brain well **mental decline**.
- 5 connected to getting old **age-related**.
6. the ability to control your body's movement **motor skills**.

Alzheimer's disease

Exercise: Decide if each symptom is more connected with movement (M), thought (T), or behavior (B).

Alzheimer's disease damages the brain, destroying memory and reason. People with Alzheimer's disease suffer confusion and loss of cognitive function. They need more and more nursing care as they become progressively more helpless, and finally die. The illness has three stages:

early stage

1. forgetting recent conversations or events T
2. minor changes in abilities and behavior M/ B/ T
3. repetition T

middle stage

1. needing some help with ADLs M
2. wandering B
3. loss of interest in other people B/ T
4. unusual behavior B
5. shuffling gait M

later stage

1. needing constant help with ADLs M
2. forgetting names T
3. complete loss of memory T
4. inability to recognize people, objects or places T
5. getting easily upset or aggressive B
6. confusing night and day T
7. confinement to bed or a wheelchair M
8. difficulty in swallowing M
9. loss of speech T

Language Spot:

The main uses of will:

***We use will to talk about future facts.**

e.g. In twenty years 'time, there will be more old people and fewer young people.

***To make predictions and express hopes about the future We often use words such as**

I think... I hope..., and probably when we do this. See the following examples:

I don't think I'll play sport when I'm 80 I hope won't live in a care home. With family around, you'll probably have a long and healthy old age .

*** When we decide what to do, have, etc.**

Tea or coffee?

I'll have coffee, please.

*** To make offers, requests, and promises.**

I'll get you a drink.

Will you do me a favor ?

I won't be back late, so don't worry .

*** We can also use Shall I...? for offers, request, and promise.**

Shall I get you something to eat?

Exercise : Complete the sentences with the words below.

'll be able,

'll have,

'll probably,

'll sleep ,

Shall I,

Will open

1- The new hospital will open in 2010. (F)

2- I don't think you 'll sleep tonight if you have a nap now. (P)

3- Shall I, go out tonight? Er ... no, I think I'll stay at home. (D)

4- You 'll be able to go home a week after your operation. (F)

5- I 'll have chicken curry with rice, please. (D)

6- I'm working tonight, so I 'll probably be tired tomorrow.(P)

In this unit

- nutritional value of different foods
- vitamins and minerals
- diabetes
- giving advice
- body measurements and bmi
- eating disorders

Body bits

Nutrition



1 Work in pairs. Look at the pictures above. Talk about why our body needs the things shown. What does it contain? Which part of the body is it especially good for?

2 Complete the descriptions of vitamins, minerals, and oils with the words below, and match each one to a picture. Some words are used more than once.

teeth	organs	enzymes	nervous system
brain	eyes	skin	immune system
blood	muscles	bones	cardiovascular system
cells			

Vitamin C is needed to help the _____¹ repair itself when it is cut or damaged. It is found in fruit, especially citrus fruit like oranges and grapefruit.

The B-vitamins keep the _____² healthy and help reduce stress. They are found in foods like wholegrain bread and cereals.

Vitamin A keeps the _____³ healthy and is important for good vision. It is found in fatty foods like butter, cheese, whole milk, and yoghurt.

Vitamin D is needed for healthy bones and _____⁴ because it helps the body absorb calcium. Our body makes Vitamin D when our _____⁵ is exposed to sunlight.

Calcium is needed for children's _____⁶ and teeth to grow. It is found in foods like milk, cheese, and yoghurt.

Iron helps your _____⁷ carry oxygen. If you do not get enough iron, you will be pale and tired and you may get anaemia. Iron is found in red meats, especially liver.

Zinc makes your _____⁸ stronger so that you can fight colds and infections. It is found in shellfish, nuts, and seeds.

Omega-3 is an essential fatty acid which helps your _____⁹ function well. It is found in oily fish like mackerel, sardines, salmon, and tuna.

Protein builds up, maintains, and replaces the tissues in your body. Your _____¹⁰, your _____¹¹, and your immune system are made up mostly of protein.

Carbohydrates are sugars which are broken down by _____¹² then stored in the _____¹³ as a source of energy. Grain products such as rice, bread, and pasta are sources of carbohydrate.

Fats fuel the body and help absorb some vitamins. They are also the building blocks of hormones, and they insulate nervous system tissue in the body. Unsaturated fats, found in oils and nuts, for example, are believed to protect the _____¹⁴.

Project

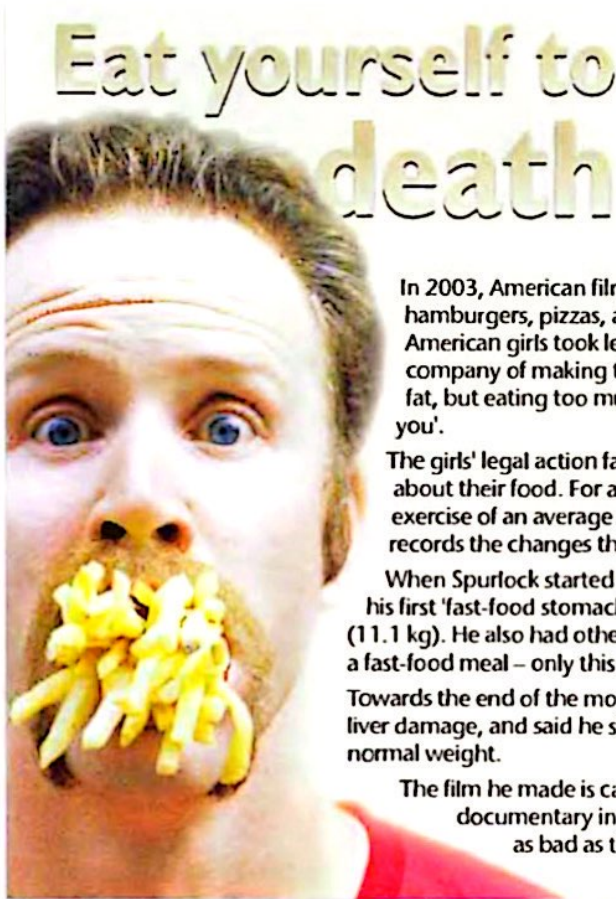
Research two of the following substances, and write about why our body needs them, and what they are found in. Try to use some of the language in *Body bits*.

- Vitamin E
- Vitamin K
- Potassium
- Selenium
- Folic acid

BMI (n) BMI means **Body Mass Index**. It is used to assess whether a person's weight is healthy or not. To calculate a patient's BMI you use the formula:

$$\frac{\text{weight in kilograms}}{\text{height in metres}^2}$$

- BMI of **18.5 to 24.9** is the right weight
- BMI of below **18.5** is underweight
- BMI of **25 to 29.9** is overweight
- BMI of over **30** is obese



3 Discuss these questions with a partner or in a group.

- Is obesity a choice or an illness?
- Do you think fast foods should be limited like cigarettes (for example health warnings, high price, special places for eating, etc.)?
- Should overweight people pay more for health care, plane tickets, etc.?

In 2003, American film maker Morgan Spurlock made a film about the effects of eating only hamburgers, pizzas, and fries for a month. The idea came to him when two overweight American girls took legal action against a famous fast-food company. The girls accused the company of making them fat. The company said that it was not the food that made them fat, but eating too much. The company also said their food was 'nutritious and good for you'.

The girls' legal action failed, but Morgan Spurlock decided to test what the company said about their food. For a month he ate only fast food, three times a day, and took the daily exercise of an average American. He filmed himself during this month and the film he made records the changes that happened to him.

When Spurlock started making the film, he was healthy and slim. On the second day, he had his first 'fast-food stomach ache', and vomited. Over the following thirty days, he gained 24.5 lb (11.1 kg). He also had other problems – depression, headaches, and lethargy. He had cravings for a fast-food meal – only this would relieve the symptoms. A doctor told Spurlock he was addicted. Towards the end of the month, doctors warned him that the food was causing life-threatening liver damage, and said he should stop. It took five months on a vegetarian diet to get back to a normal weight.

The film he made is called *Super size me*. It was nominated for an Academy Award for best documentary in 2005. The film's message was that the fast-food industry was probably as bad as the tobacco industry – it made a lot of money by encouraging illness.

Speaking

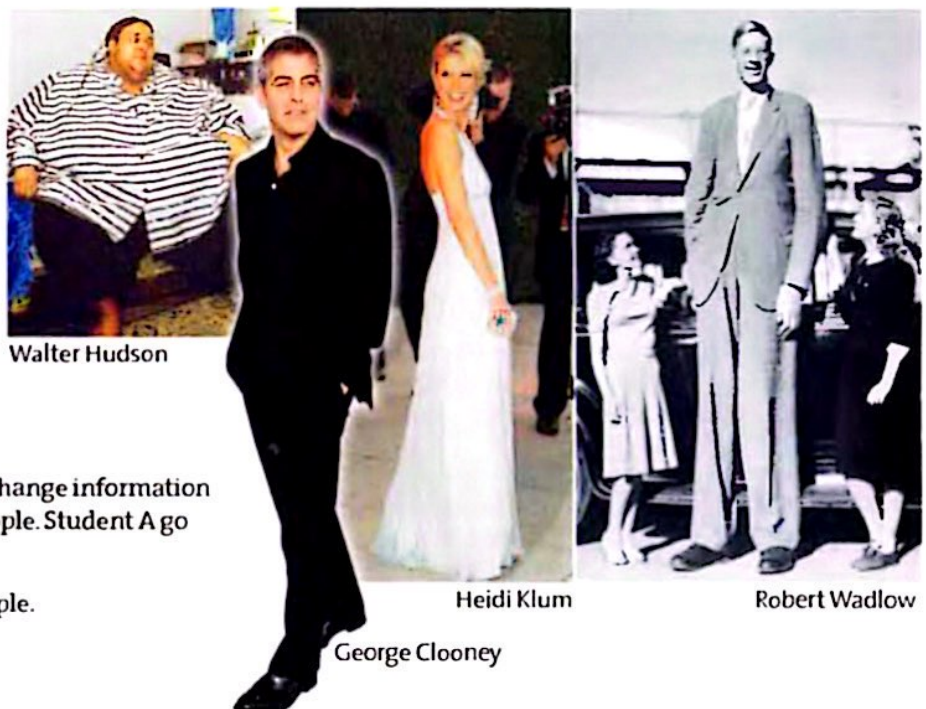
1 Work in pairs. Which of the people on the right do you think these statistics refer to?

- 1 1.80 m
- 2 95.7 kg
- 3 5'11"
- 4 211 lbs
- 5 $1.8 \times 1.8 = 3.24$
- 6 $95.7 \div 3.24 = 29.54$

2 How do you say them? Listen and check.

3 Work in pairs. You are going to exchange information about the other three pictured people. Student A go to p.110. Student B go to p.113.

4 Calculate the BMI of the three people.



Walter Hudson

Heidi Klum

Robert Wadlow

George Clooney

The idea of human beauty changes over time. At the beginning of the 20th century, **Lillian Russell**, a Hollywood star, weighed over **200 pounds** (91 kilos).



Obesity now contributes to the death of more than **360,000** Americans a year. The incidence of childhood obesity is now at epidemic levels.
Tom Harkin
American politician

• Language spot

should / shouldn't

• We use *should* / *shouldn't* to give advice and to say what would be correct.

You should give up smoking.

Your blood sugar shouldn't go over 240 mg/dl.

• *Should* is weaker than *must*.

I should stop eating sweets – but I'm not going to!

• Here are some other ways of giving advice.

It would be a good idea to lose some weight.

I'd see a nutritionist, if I were you.

» Go to Grammar reference p.120

Complete these sentences using *should* or *shouldn't* + verb.

- 1 You should drink lots of water before you run a marathon.
- 2 I'm getting fat. I _____ more exercise.
- 3 You _____ breakfast – it wakes up the body and provides fuel for the day.
- 4 People with high blood pressure _____ too much salt on their food.
- 5 You _____ plenty of vitamin C in your diet.
- 6 People with diabetes _____ large meals.
- 7 A person with an eating disorder _____ help from a psychologist.
- 8 Children _____ too many sweets.

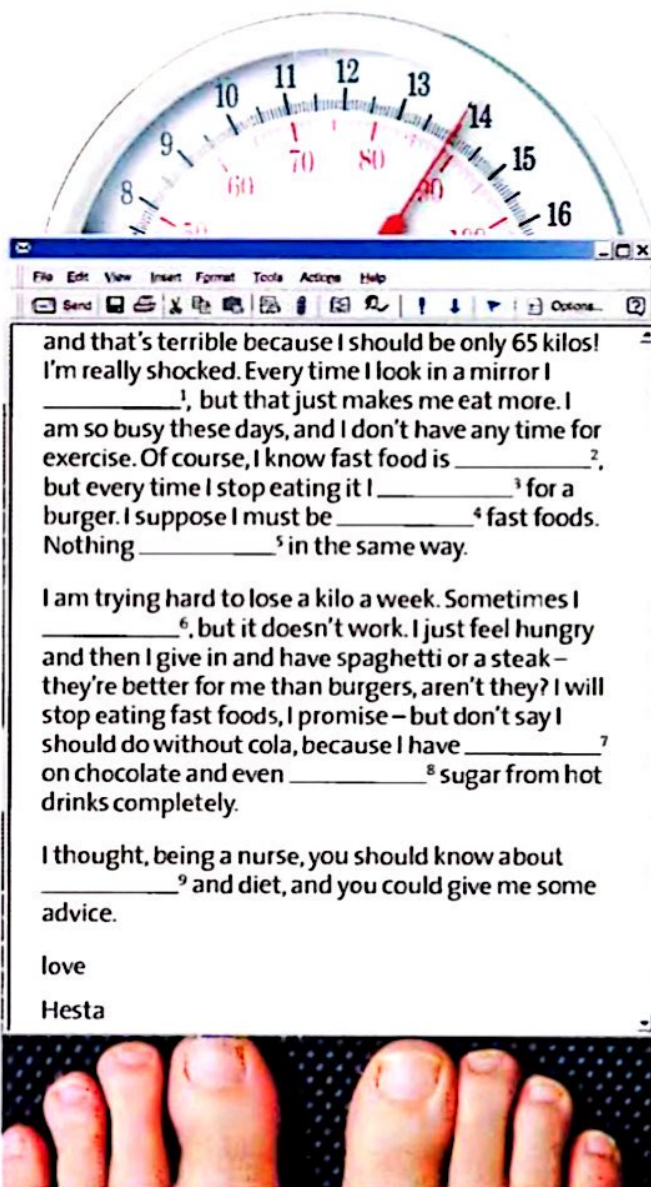
Writing

Advice to a friend via email

- 1 A close friend has written you an email asking for advice. She is worried about her eating habits. Complete the email with the words below.

addicted to
bad for you
cut down
cut out
skip meals

feel depressed
fills my stomach
get cravings
losing weight



- 2 Discuss with a partner what advice to give Hesta to help her lose weight successfully and in a healthy way. Think about these topics.

- exercise
- how much weight to lose
- how quickly to lose weight
- what to eat
- what not to eat
- when to eat
- what to drink
- other good habits

- 3 Write an email replying to Hesta.

9 Blood

Scrub up

- There are four main blood groups: A, B, AB, and O. Each type can be followed by + or -. Do you know your blood group?
- Not all blood types can be mixed together. Read the information below, and work with a partner to solve the puzzle.



Who's who? Can you work out the names of the women in the picture?

Maddy's blood can't be given to the other women.
 Holly could receive blood from Katie and Alex.
 Only Katie could donate blood to Freya.
 Four of the women could give blood to Maddy.
 Alex can't be given blood by any of the others.

A- = _____ A+ = _____ O+ = _____
 AB+ = _____ AB- = _____

This chart shows which blood types can mix.

	DONOR							
	A-	A+	B-	B+	AB-	AB+	O-	O+
A-	✓							
A+	✓	✓						
B-			✓					
B+			✓	✓				
AB-	✓				✓			
AB+	✓	✓			✓	✓		
O-					✓	✓	✓	
O+							✓	✓

Vocabulary

Testing blood

Complete the text using the words below. Use your dictionary to help you.

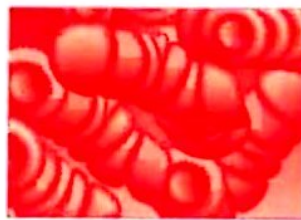
slide drop microscope syringe
 vein test tube pipette

Use a _____¹ to take some blood from a
 _____² in the patient's arm. Put the blood into a
 _____³. Then, use a _____⁴ to put a
 _____⁵ of the blood onto a _____⁶.
 Examine it under a _____⁷. What do you see?

Listening 1

Blood types

- Listen to some student nurses learning about how different blood types mix together. Which two blood types are mixed together in each picture?



a = type _____ + type _____ b = type _____ + type _____

- Which blood type is most useful for emergencies?

3 Finish these sentences with true information, then discuss them with a partner.

- 1 When I get home tonight, I'll ...
- 2 If the weather's good at the weekend, ...
- 3 I'll be very happy if ...
- 4 I'll be very disappointed if ...

Body bits

The heart

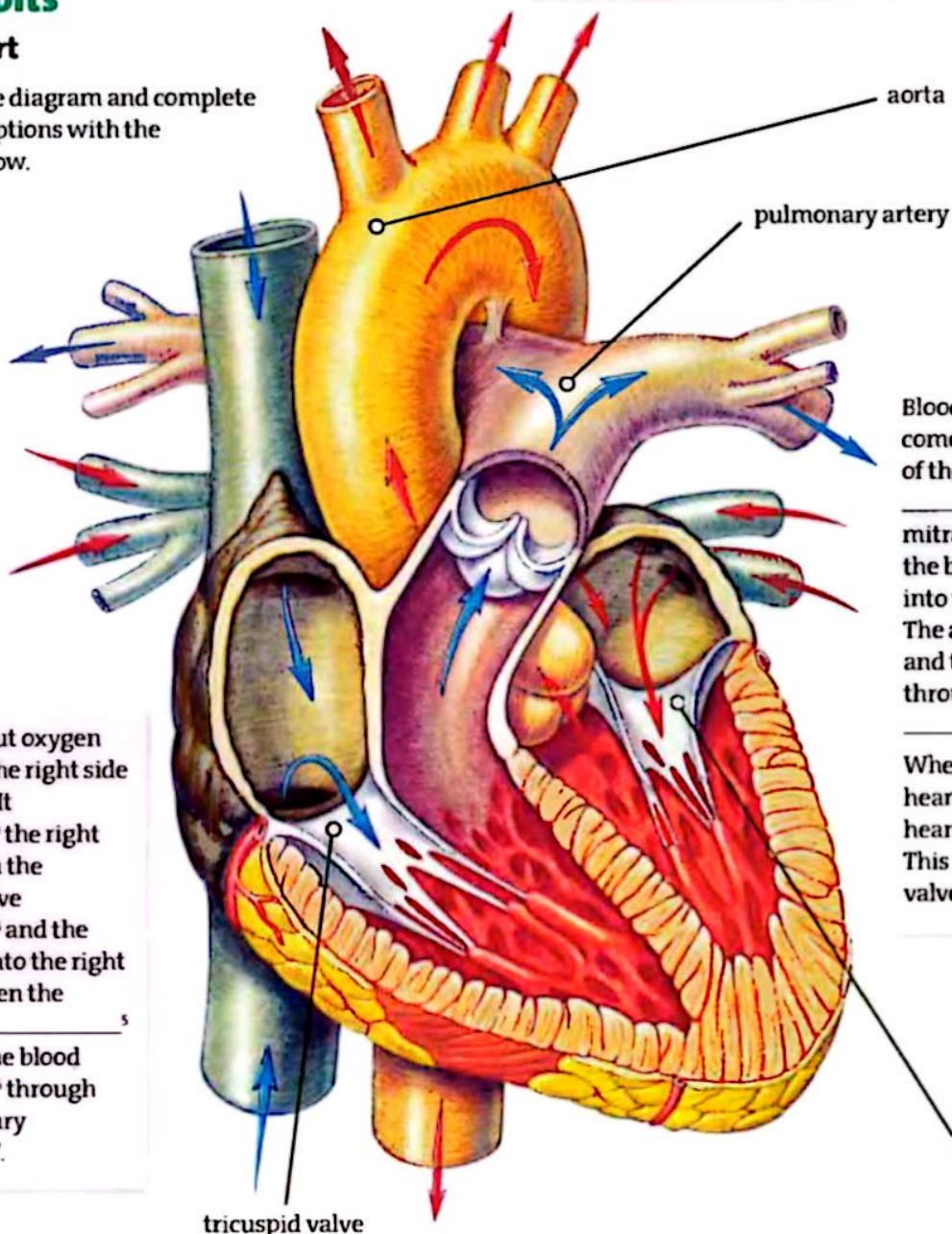
Look at the diagram and complete the descriptions with the words below.

pump
leaves
valve
enters
artery
flows
atrium
fills
aorta
opens
closing
beat

Blood without oxygen comes into the right side of the heart. It _____³ the right atrium. Then the tricuspid valve _____⁴ and the blood goes into the right ventricle. Then the pulmonary _____⁵ opens and the blood _____⁶ through the pulmonary _____⁷.

The heart is a muscle as big as your fist in the centre of your chest. It is an efficient _____¹ that can get blood to the furthest cell in your body within sixty seconds.

On its circular journey around the body, blood _____² the heart twice. Once with oxygen and once without oxygen.



Blood carrying oxygen comes into the left side of the heart. The left _____⁸ fills, the mitral valve opens and the blood _____⁹ into the left ventricle. The aortic valve opens and the blood leaves through the _____¹⁰.

When you listen to a heart _____¹¹ you hear 'lub dub, lub dub'. This is the sound of the valves _____¹².

Solve this crime

Date: 1235

Place: China

A man is murdered in a village



The investigator knows the murderer used a sickle. But he can't find the murder weapon because all the sickles in the village are clean. He lays them all out in the sun and watches. Soon he knows which sickle was used in the murder. How?

Reading

- 1 Do you know of any murders where blood analysis has helped the police to catch the killer? Tell the class.
- 2 Read the article, and decide if these sentences are true (T) or false (F).
 - 1 Blood from a cut artery drips out. _____
 - 2 Blood pattern analysis looks at the shape of drops of blood. _____
 - 3 Luminol tells you the blood type. _____
 - 4 Male blood is different from female blood. _____
 - 5 Graham Backhouse's neighbour shot himself. _____

3 Find words in the text with these meanings.

- 1 (used about a thick liquid) to move slowly o _____
- 2 a knife, gun, or other thing used to hurt people w _____
- 3 saliva, semen, and other liquids in the body b _____
- 4 people who the police believe committed a crime s _____
- 5 hurt by a weapon w _____
- 6 responsible for a crime g _____

BLOOD PATTERN ANALYSIS

Even a tiny drop of blood at the scene of a violent crime can give important information to the police. Blood is there either because it has dripped out of a small wound, sprayed out from an artery, oozed out through a large wound, or flown off a weapon. Using blood pattern analysis, police can learn a lot about what happened from the shape of the blood drops.

Sometimes a murderer cleans the crime scene very carefully, and if detectives cannot see any blood they spray a chemical called Luminol across the scene. This makes it possible to see the blood in the dark. Luminol can show up very small drops of blood.

From blood at the scene of a crime, police can learn about the person the blood came from. They can tell the person's blood type and, because male and female blood cells are different, they can also work out if the blood comes from a man or woman. Also, 80% of us are 'secretors', which means our blood type is contained in other bodily fluids. This can also help identify suspects.

In 1984 a man, Graham Backhouse, was found injured near his home with deep cuts across his face and chest. A neighbour lay dead nearby. Backhouse said the neighbour attacked him, and so he shot the neighbour to defend himself. But the shape of the blood drops showed that Backhouse was standing still when he was wounded, and there was also no blood from Backhouse on his gun or near the victim. Police were sure Backhouse shot his victim and then wounded himself. He was found guilty of murder.

**Project**

Research one of these topics, and present what you find out to other students.

- forensic analysis of hair, DNA, and fingerprints
- a crime that was solved using forensic analysis

10 Death and dying

Scrub up

Work in pairs. Discuss the questions.

- Which is more common in your culture, burial or cremation?
- What is a typical funeral like?



Vocabulary

Talking about dying

1 Match these words with a definition.

- | | |
|----------------|---|
| 1 terminal | a (of an accident or illness) that causes death |
| 2 fatal | b to become more and more weak or ill |
| 3 go downhill | c an examination of a body to find out how the person died |
| 4 coma | d the use of machines to keep a person alive |
| 5 life-support | e (of an illness) that cannot be cured, and causes death |
| 6 pass away | f a room in a hospital where dead bodies are taken and stored |
| 7 mortuary | g an unconscious state that a person cannot wake from |
| 8 post-mortem | h a polite word meaning 'to die' |

2 Complete these sentences using the words in 1.

- 1 This boy has serious head injuries. He has been in a _____ for a week.
- 2 The patient stopped breathing, and is now on a _____ machine.
- 3 We need a porter to take the body to the _____.
- 4 I'm afraid your father _____ in his sleep last night.
- 5 There was a _____ accident outside the hospital – both drivers were killed.
- 6 The _____ showed that the old lady died of a stroke.
- 7 After a bad fall, Mr Deans _____ very fast and died the following week.
- 8 This gentleman has _____ cancer. With treatment, he may live another year.

3 Choose one of the words. Tell a true story which includes it.

hospice (n) a hospital for people who are dying



Reading

1 Read the article about a children's hospice, and match each of these headings to a paragraph.

- 1 Saying goodbye _____
- 2 Using the senses _____
- 3 A home from home _____
- 4 Personal care _____
- 5 Helping the family _____

2 Read the article again and answer the questions.

- 1 Do children have to stay at the hospice all the time?
- 2 How does the hospice help the children's families?
- 3 How many children does each carer look after?
- 4 What can children do in the multi-sensory room?
- 5 How is music used at the hospice?
- 6 How are the special quiet rooms used?

The Hope Children's Hospice

A The Hope Children's Hospice provides free specialist care for children with life-limiting conditions who are not expected to live into adulthood. It cares for up to eight terminally-ill children at one time, and aims to care for them in the same way their families would care for them at home. When families prefer to do the caring themselves, a hospice carer will go to their home and help them.

B Life-limiting conditions present many long-term medical and emotional problems – not only for the child, but for parents and siblings too. So the hospice offers respite care – short stays for the child alone or for the whole family together. At these times, parents hand over responsibilities to the staff and have a 'holiday'. Short stays give terminally-ill children an opportunity to meet others with similar conditions.

C Each child at the hospice has their own carer and their own care plan. A normal day might start with a jacuzzi bath followed by a massage from a complementary therapist. Some children go to school, while others play with hospice play specialists.



D The hospice has a multi-sensory room. This is a special room which stimulates the children's senses with lights, music, touch, and smell. It has touch-screen computers, video games, paddling pools, and space for wheelchair dancing. Children have music therapy and can record their own music, not only as a way to express their feelings, but to leave something for their family and friends to listen to in the years to come.

E The hospice has a number of quiet rooms where we care for children during and after death. These are places where families and friends can say goodbye. Our support does not end with death. We help not just grieving parents, but also siblings who are experiencing bereavement. We give everyone opportunities to discuss their fears about death and dying.



Patient care

Breaking bad news

1 Medical staff sometimes need to give sad news, for example that an illness is terminal, or that a relative has died. Here are some tips for breaking bad news. Discuss the reasons for each one with your partner.

- allow a lot of time
- find a private place
- express sympathy
- use simple and honest language

2 Add three more tips.

● Language spot

Expressing possibility

• When you are not sure about something, you can use the modal verbs *may*, *might*, or *could*. The verbs all have a similar meaning.

They're going to try a new drug. It might work and it might not.

He's been diagnosed with cancer. He may have only weeks to live.

Mrs Carr has developed a rash. She could be allergic to Penicillin.

• You can use these verbs to talk about possible future plans or schedules.

I'm tired, so I might not go out tonight.

I may be working nights next Friday – I'll have to check.

• Here are some other ways to express possibility.

He says his ear hurts. Perhaps he has an infection.

Mrs Ferreira is talking to herself. Maybe she's having hallucinations.

It's possible that the growth is cancerous, so we'll need to do tests.

» Go to **Grammar reference** p.120

1 Complete these sentences using an item from the top group, and a verb from the bottom group.

may	might	could
maybe	perhaps	It's possible that

left 's has gone be go have to

- 1 I can't find my phone. I _____
buy another one.
- 2 I _____ a little late for my shift –
my bus isn't here yet.
- 3 I _____ to the cinema tonight – I
haven't decided yet.
- 4 Marie isn't here? _____ she _____ ill
today.
- 5 The bed's empty. _____ Mrs Lewis
_____ home.
- 6 You've lost your notebook? _____ you
_____ it at reception.

2 Work with a partner. Discuss what these symptoms could indicate in a patient.

a fever	diarrhoea
a rash	sleeplessness
stomach ache	crying (in a baby)
extreme tiredness	painful fingers

EXAMPLE

A *A fever might indicate an infection.*

B *Or it could be flu.*

A *Or maybe the person has ...*

3 Spend five minutes thinking about your plans for your free time in the next week. Note down your definite schedule, your possible schedule, and things you haven't decided yet.

EXAMPLES

I'm working tomorrow night.

I could be meeting my friend on Sunday morning – I'll check my diary.

I might go shopping, or I may stay in and study.

4 Work in pairs. Talk about your plans and schedule.

Speaking

1 When a patient dies in hospital, a nurse will prepare the body if relatives want to see it. Discuss with a partner what you need to do to the body. Think about the following.

- | | |
|-----------|-------------------------------|
| • eyes | • position |
| • mouth | • jewellery |
| • hair | • lines (IV, catheters, etc.) |
| • washing | • the room |



2 Student A go to p.78. Student B go to p.113.

11 Hygiene

Scrub up

Test your knowledge of hygiene by doing this quiz.



- 1 What is MRSA?
a a virus
b a bacterium
c an antibiotic
- 2 How do you catch MRSA?
a by eating from dirty plates
b from poor hospital hygiene
c by drinking bad water
- 3 Which of these things has nothing to do with bacteria?
a wine making
b yoghurt
c the common cold
d bad smells
- 4 In an operating theatre, which of these things breaks hygiene rules?
a wearing your mask over your nose
b wearing your hair loose
c wearing make-up
- 5 Which of these things is most important in stopping the spread of MRSA?
a hospital staff should wash their hands between patients
b cleaners should disinfect door handles
c visitors should wear masks
- 6 Where do staphylococcus bacteria live?
a in noses
b in soil
c in toilets
- 7 When Florence Nightingale, founder of modern nursing, worked in a hospital during the Crimean war (1854-1856), the death rate dropped from 60% to 2.2%. Why?
a She made nurses wash their hands
b She gave her patients fruit and vegetables to eat
c The ventilation was improved
- 8 How long should you wash your hands in hot water to be sure they are clean?
a fifteen seconds
b half a minute
c one minute



Vocabulary

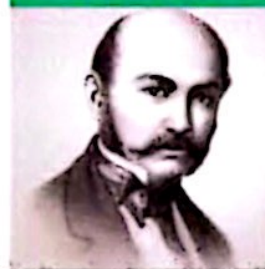
Hygiene equipment

- 1 Match each of these items of hygiene equipment to a picture.

- bin _____ clinical waste disposal bag _____
 bucket _____ detergent _____
 cloth _____ disposable gloves _____
 mop _____ paper towels _____
 sink _____ soap dispenser _____



A survey was done in 2004 to find **the cleanest country in the world**. Can you guess which country it was?



Hungarian **Ignaz Semmelweis** (1818-65), **the father of hand hygiene**, died from an infection that spread from a small cut on his finger.

● Language spot

Talking about obligation

- 1 Match these examples with the rules.
- Sorry, I have to go. I'm on duty in ten minutes.*
 - You mustn't forget to put gloves on.*
 - We need to clean the floors more often.*
 - You don't have to wash Mrs Shah's face. She can do it herself.*
 - Two beds need changing.*
 - All visitors must wash their hands.*

must

- We use **must** in rules, and to say when things are necessary.

1 _____

We must follow procedures more carefully.

NOTE: It can sound very strong to say *You must ...*

have to

- We use **have to** to talk about things that other people oblige us to do.

2 _____

mustn't

- We use **mustn't** to say it is necessary that you do NOT do something.

3 _____

don't have to

- We use **don't have to** to say something is not necessary.

4 _____

NOTE: Use **must + verb NOT must to + verb**

need to

- We use **need to** to say it is necessary to do something

5 _____

need + ing

- We use **need + ing** to say what jobs it is necessary to do

6 _____

» Go to **Grammar reference** p.121

- 2 Complete the sentences with **need to**, **must**, **need(s)**, **don't have to**, **mustn't**, **has to**. Use the verbs below.

use cutting cut order
complete mop change emptying

- You'll **need to mop** the floor – there's been a spillage.
- You _____ gloves after contact with each patient.
- The bins _____ – they're all full.
- You _____ Mr Mills's nails – I've just done them.
- You _____ your mobile phone inside the building.
- The Ward Sister _____ a hygiene report every month.
- My hair _____ – I can't keep it all under my hat.
- I _____ some more paper towels – they've nearly all gone.

Speaking

Student A, working in pairs with another Student A, go to p.110. Student B, working in pairs with another Student B, go to p.114.

Writing

Notice

Work in pairs. Following the hygiene inspection, the Ward Sister has asked you to make a notice reminding nurses about good hygiene practice. Write a list of rules and instructions for the nurses.

HYGIENE REMINDER!

- 1 You must report all spillages immediately.
- 2 All visitors should ...

12 Mental health nursing

Scrub up

- 1 Which of these people do you think may have a mental illness? Discuss each one with your partner.

- 2 With your partner, try to explain what 'mentally ill' means. Finish this sentence in your own words.

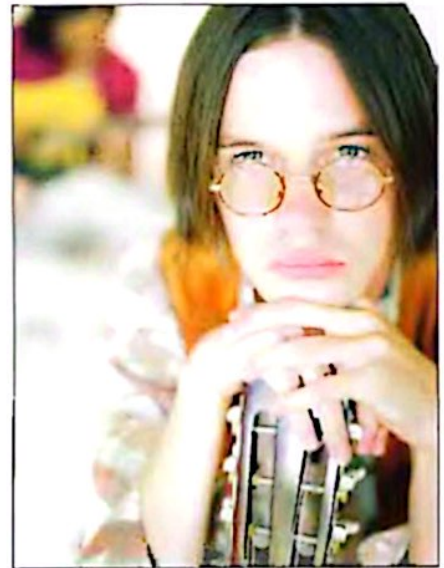
A person is mentally ill if he / she ...



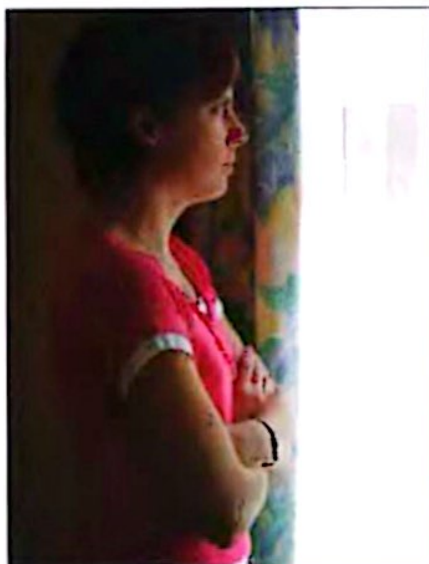
Stephen Gough has walked naked across Britain. 'Nakedness is natural,' he says every time he is arrested.



By the time Salma Perrin goes to bed, she will have washed her hands over a hundred times. She says, 'I know they're clean, but I can't stop myself.'



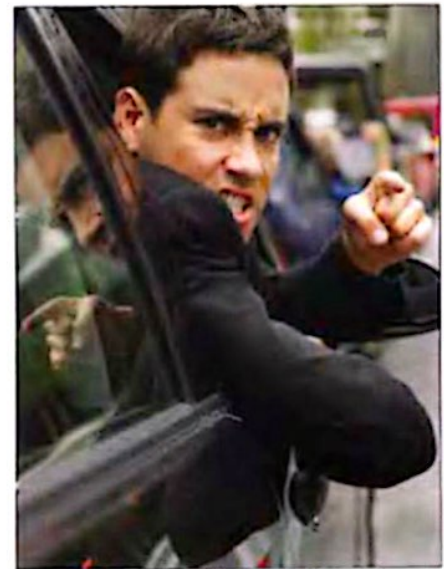
David Leary is seventeen. He sleeps all day, and at night he sits in his room playing his guitar. He says, 'Life sucks!'



Barbara Scott believes she is in danger, and never leaves her house. She talks to the people on the television and says, 'They're my real friends.'



Andy Park has celebrated Christmas every day for the last twelve years. He lives alone and says, 'Every day I give presents to myself.'



Every time Diego Ferri gets into a car, he becomes a monster. 'Other drivers are mad,' he says.

13 Monitoring the patient

Scrub up

1 Look at the pictures below. Describe what the nurse is doing in each one.

2 Work with a partner. Match each reading 1–4 with a vital sign a–d.

- | | |
|-----------|-----------------------|
| 1 120 bpm | a temperature ____ |
| 2 38.5°C | b blood pressure ____ |
| 3 150/90 | c heart rate ____ |
| 4 18 bpm | d respiration ____ |

3 Listen and check.

4 Can you answer these questions?

- What two things does bpm mean?
- What do 150 and 90 refer to?
- Are these readings normal? What is the normal range for each?

5 Take your partner's pulse. What should their maximum heart rate be when they exercise?



Pronunciation

Taking readings

1 Which words or expressions from *Scrub up* do these phonetics represent?

- | | |
|----------------------|-------|
| 1 /'hɑ:t reɪt/ | _____ |
| 2 /'temprətʃə/ | _____ |
| 3 /pʌls/ | _____ |
| 4 /re'spɪrətri reɪt/ | _____ |
| 5 /'blʌd ,preʃə/ | _____ |
| 6 /,vaɪtl 'saɪn/ | _____ |

2 Listen and check.

Patient care

Taking vital signs

1 Put these words in order to make sentences in your notebook. Which vital sign is the nurse taking in each case?

- tongue pop your under just this.
- roll your can up you sleeve?
- cold a feel bit your may on chest this.
- and out in just normally breathe.
- relax me for your arm.
- shirt you undo please your , me for could?

2 Listen and check.

14 Medication

Scrub up

1 Work in pairs. Match these pictures with the medical problems.

- 1 an infection
- 2 a cut
- 3 an insect bite
- 4 constipation
- 5 obesity
- 6 vitamin deficiency
- 7 an infectious disease
- 8 an allergy



2 Tell your partner about a time when you had one of these conditions. What treatment did you have? Did it work?

Vocabulary

Types and forms of medication

1 Complete each sentence with a type of medicine.

- | | |
|----------------------|-------------------|
| A painkiller | An antihistamine |
| A sedative | A stimulant |
| An anti-inflammatory | An antidepressant |
| An inoculation | A laxative |
| An antibiotic | A supplement |

- 1 _____ kills bacteria and other germs.
- 2 _____ protects you against infectious diseases.
- 3 _____ relieves pain.
- 4 _____ reduces swelling.

- 5 _____ encourages bowel movements.
- 6 _____ provides a substance that the body lacks.
- 7 _____ treats allergies.
- 8 _____ increases activity in the body.
- 9 _____ reduces feelings of extreme sadness.
- 10 _____ makes you relaxed and sleepy.

2 Work in pairs. Look at the list of words in 1. Circle the syllable that you think is stressed in each word.

EXAMPLE

painkiller

3 Listen and check.

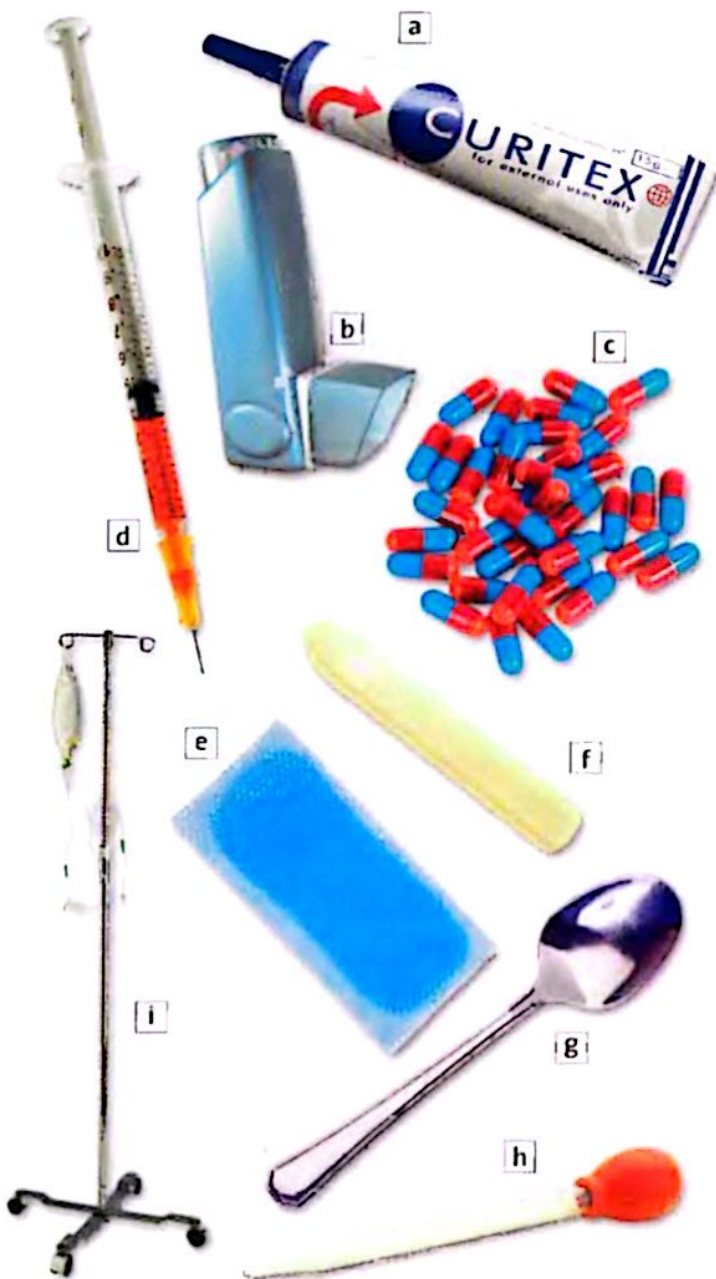
4 Discuss with a partner which type of medicine you could use to treat the people in *Scrub up*.

In this unit

- types of medication
- methods of giving medication
- understanding instructions for giving medication
- *be going to* v Present Continuous for future
- writing up an experiment

5 Match the pictures with these names.

- | | | | |
|------------|-------|------------------|-------|
| 1 syringe | _____ | 6 suppository | _____ |
| 2 inhaler | _____ | 7 adhesive patch | _____ |
| 3 ointment | _____ | 8 tablespoon | _____ |
| 4 capsules | _____ | 9 dropper | _____ |
| 5 IV drip | _____ | | |

**Listening****Patient medication**

- 1 Listen to the nurse give information about patients' medication. Match each patient with the problem they have and with a medication type.

patient	problem	medication
Mr Gupta	allergy	antibiotic
Mr Gill	constipation	painkiller
Mr Sawyer	skin infection	laxative
Mr Thomas	respiratory tract infection	antibiotic
Mr Cheong	abdominal pain	antihistamine

- 2 Listen again and write down the dosage for each patient.

- Mr Gupta _____ mg of Morphine every _____ hours
- Mr Gill a _____ mg infusion of Clindamycin over a _____ hour period
- Mr Sawyer one _____ mg tablespoon of Metamucil, _____ times a day
- Mr Thomas _____ mg of Cephalexin every _____ hours
- Mr Cheong an injection of _____ mg of Dimotane every _____ hours

15 Alternative treatments

Scrub up

1 Work in pairs. Discuss the questions.

- What treatment is being performed in each picture?
- What do you know about it?
- Have you tried it? / Would you try it?



Vocabulary

Types of therapy

1 Complete the descriptions with the words below, and match each description to a therapy.

energy herbs channels pressure points
stimulate heal therapist functioning

- a traditional Chinese medicine
- b acupuncture
- c music therapy
- d cupping
- e reflexology
- f faith healing
- g reiki
- h hydrotherapy

- Putting heated cups on the skin to suck bad _____ from the body d
- The use of hot and cold water and underwater exercise to _____ the immune system _____

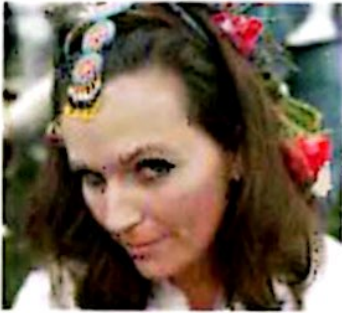
- Massaging hands and feet to unblock energy _____
- Inserting needles into _____ on the body to control the energy called *qi* (/tʃi:/) _____
- Using sound to help patients control pain and improve physical and mental _____
- Using prayer to ask a god or spirit to _____ the patient _____
- Using Chinese knowledge of _____ to balance *yin* and *yang* _____
- Laying of the _____'s hands on the patient to bring energy into the body _____

2 Discuss these questions with your partner.

- What alternative therapies do you believe in?
- Which are you most sceptical about?

Listening

Qigong



- 1 Listen to this radio programme about an alternative treatment called *qigong* (/tʃiː'ɡʊŋ/), and decide if these statements are true (T) or false (F).

- 1 Qi causes illness. _____
- 2 Qi is a treatment. _____
- 3 A 'holistic' treatment deals with the patient's mind, not the body. _____
- 4 Qigong corrects the body's energy balance. _____
- 5 External qigong healers pass their hands over the patient's body. _____
- 6 Professor Silver is sceptical about qigong. _____
- 7 Professor Silver believes in the placebo effect. _____
- 8 Professor Silver thinks that belief is the most important part of treatment. _____

- 2 What is your opinion of qigong healing? Put an x somewhere on this line to show your opinion.

x _____ x
I strongly believe in it I am extremely sceptical about it

Language spot

Giving reasons

We can give reasons for things in a number of ways.

• for + noun

People take herbal medicines for good health.

I see a reflexologist for my back pain.

• for + -ing

Birds use these plants for building nests.

• to + infinitive

Chimpanzees eat these leaves to treat stomach aches.

I visited a healer to get relief from the pain.

• ...so that ...

Elephants eat leaves so that their labour will be easier.

• ...because ...

Animals put ants on their skin because they produce formic acid.

• ...so ...

The juice is antiseptic, so bears put it on their wounds.

• That's why ...

I use only herbal medicines – that's why I am so healthy.

» Go to Grammar reference p.124

- 1 Match the beginnings and the endings of the sentences.

- | | |
|--------------------------------|---|
| 1 Homeopathy works on animals, | a that's why I feel so good now. |
| 2 Acupuncture unblocks qi | b for swellings. |
| 3 We need a lot of information | c so it cannot be a placebo. |
| 4 They use massage | d to make a diagnosis. |
| 5 Use an ice pack | e for relaxing the body and mind. |
| 6 I gave up smoking – | f because your yin and yang are not balanced. |
| 7 You are ill | g so that it can flow around the body. |

- 2 Complete the sentences using *for*, *to*, *so that*, *because*, *so*, and *That's why*.

- 1 I have music therapy _____ improve my memory.
- 2 My mother doesn't believe in modern medicine, _____ she will not see a GP.
- 3 Lie in the water _____ you get the full benefit of the treatment.
- 4 Garlic has antibacterial properties. _____ it's good for the immune system.
- 5 I take vitamin C every day _____ it stops you getting colds.
- 6 People use this herb _____ burns.
- 7 She believes in homeopathy _____ healing and relaxation.

- 3 Do you use supplements, therapy, etc. to help you stay healthy? Tell your partner what you use, and why.

In this unit

- describing alternative treatments
- natural medicines
- Qigong
- giving reasons
- healers
- arguing for and against something

Reading

1 Discuss these questions in pairs.

- Do you know any examples of animals using natural medicines to keep themselves healthy?
- What medicinal plants or other natural medicines do you know?

2 Guess which natural medicine (1–5) animals use to treat which condition (a–f). Then read the article and find out if you guessed correctly.

- | | |
|-------------------|--------------------|
| 1 aromatic plants | a labour |
| 2 clay | b skin conditions |
| 3 grass | c stomach problems |
| 4 leaves | d wounds |
| 5 roots | e tiredness |
| | f worms |

3 Work with a partner. Try to remember the verbs used in the article. Then read the article again to check.

- 1 Grass m_____ cats sick and d_____ their stomach of worms.
- 2 Chimpanzees eat certain leaves to c_____ stomach aches and r_____ tiredness.
- 3 Bears ch_____ Ligusticum roots and a_____ the juice to wounds.
- 4 Elephants eat certain leaves before they g_____ b_____ to h_____ them with labour.
- 5 Many animals eat clay to b_____ d_____ poisons in their stomach.



A lot of knowledge which we call 'alternative medicine' has come from watching animals, because not every pharmacist is a human being – animals treat themselves with medicines too. You may have seen a dog or a cat eat grass, for example. They do this because it makes them sick, and clears their stomachs of worms.

In Tanzania, leaves from a tree which local WaTongwe people call 'the bitter leaf tree', are eaten by chimpanzees. Both the WaTongwe and the chimpanzees know that the leaves can cure stomach aches and relieve tiredness.

Bears know about the medicinal properties of the root of a plant called Ligusticum. They chew its root, and apply the juice to wounds as an antiseptic. Ligusticum is used by Navajo Indians too. A folk story says they were told about the plant by bears.

When African elephants are going to give birth, they will walk many kilometres to eat the leaves from a certain tree that will help labour. The leaves are used by Kenyan women for the same thing.

Clay is eaten by many animals, from cows to rhinoceroses, because it breaks down poisons in the stomach. It is also the main ingredient of kaolin, which is used in treatments for stomach illnesses in humans.

When some birds build their nests, they choose aromatic plants that will keep their babies healthy. The plants chosen by the birds are also used by herbalists for skin problems such as ulcers, sores, and eczema.

Because bacteria are becoming resistant to antibiotics, it is becoming more and more important to find alternatives, and zoopharmacognosy – a word from Greek meaning 'animals' knowledge of medicine', – may give us important new information about very old ways of dealing with illness.