

شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية



حل مراجعة امتحانية وفق الهيكل الوزاري

[موقع المناهج](#) ⇨ [المناهج الإماراتية](#) ⇨ [الصف الحادي عشر](#) ⇨ [علوم صحية](#) ⇨ [الفصل الأول](#) ⇨ [الملف](#)

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التواصل الاجتماعي بحسب الصف الحادي عشر



روابط مواد الصف الحادي عشر على تلغرام

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المزيد من الملفات بحسب الصف الحادي عشر والمادة علوم صحية في الفصل الأول

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UNITED ARAB EMIRATES
MINISTRY OF EDUCATION



الإمارات العربية المتحدة
وزارة التربية والتعليم

Grade 11 –ADV EXAM REVISION GUIDE

Academic Year 2022/2023 – Term 1

T.KAWTHAR HENDAWI

Khalifa feels happy most of the time and has high self-esteem. If he feels upset or nervous about something, he does some meditation as he knows this will improve his mood. Khalifa appears to have good _____ health.

- a. physical
- b. emotional
- c. social
- d. mental

Good communication and having positive relationships with others are an aspect of which dimension of health?

- a. Mental
- b. Physical
- c. Social
- d. Emotional

What is emotional health?

- a. How well the brain functions
- b. How people feel about themselves
- c. How well people get along with others
- d. How well the body works

What are the dimensions of health?

The dimensions of health show the different areas that make up overall health. Each dimension can affect the others.

The dimensions of health include the following:

- ⊙ **Physical health** – refers to any physical aspect of health. Physical ill-health can include diseases such as diabetes, heart disease and cancer. It can also include fractures or other physical injuries to the body.
- ⊙ **Social health** – refers to the ability to build and keep relationships. In order to do this, a person must have good communication skills. Each person will have lots of relationships. These include family, friends and people in your school such as classmates and teachers.
- ⊙ **Mental health** – refers to the functioning of the brain. This includes how we think, feel and act. It determines how we handle stress, deal with other people and our mood. Mental health has a direct impact on all the dimensions of health.
- ⊙ **Emotional health** – refers to feelings and emotions. This can be confused with mental health. Being emotionally healthy means a person can identify and manage their emotions and deal with them in an appropriate way.

Q.5: A person who can create and maintain healthy and supportive relationships with _____ others has good _____ health

- a. physical
- b. social
- c. mental
- d. emotional

Q.7: Body weight and food intake have the biggest impact on which dimension of health

- a. Physical
- b. Social
- c. Mental
- d. Emotional

T.KAWTHAR HENDAWI

Building positive relationships is needed for good _____ health.

- (A) physical
- (B) mental
- (C) emotional
- (D) social

Which of the following is a barrier to health?

- | | |
|-----|---------------------------------------|
| (A) | Good communication |
| (B) | Food shortages |
| (C) | Having good relationships with others |
| (D) | Doing regular physical activity |

?Q.4: Which of the following is a barrier to health

Living far from the nearest hospital .a

Cooler weather making it easier to exercise outdoors .b

Sleeping for 8 hours each night .c

Eating fruit and vegetables every day .d

Which of the following is a barrier to health?

- | | |
|-----|---|
| (A) | Preventing the spread of gossip |
| (B) | Spending lots of time exercising outdoors |
| (C) | Living near to a hospital |
| (D) | Living far from a hospital |

THE DIMENSIONS OF HEALTH

Barriers to health

It is very difficult to say if a person is 'healthy' or 'unhealthy' at any one time. They might be physically healthy but not emotionally or mentally healthy.



Think

Think of a reason why your emotional health might change from feeling sad to feeling happy.

Everyone's health status is constantly changing. There are many challenges within the environment that can affect your state of health. These are known as barriers. Barriers to health are things that affect health that you as an individual cannot control.

Let's look at some of the barriers to health:

The weather

The weather has been proven to impact people's mood – when the weather is nice, people feel happy so their emotional health improves. The weather can also impact the ability to do physical activity. In the summer months it is very hot and humid so people may find that they exercise less.



The local healthcare facilities

Depending on the local area, it could be very far to the nearest hospital or emergency facility. This might stop people from getting the medical treatment they need, especially in an emergency.

Other people's behaviour

As humans, we are programmed to copy others. However, the way in which other people behave can have a negative impact on some dimensions of health. Giving in to peer pressure is an aspect of emotional health which, depending on the situation, can cause damage to physical health.



Keyword

peer pressure

a feeling that you must do the same things as people in order to gain their respect



The spread of gossip and rumours can also be quite damaging to mental health. Spreading rumours about other people, or current affairs (events happening in the world right now) can lead to emotional, social and mental health problems.

The food available

The choice of food available is different from place to place. In times of a crisis, people might panic buy a lot of food items. This would then leave a shortage of stock for other customers. Fruit and vegetable growers may have periods of bad weather, so they do not grow as many crops as normal. This would result in a shortage in supply in shops. The shortage of food available may lead to physical illnesses, as well as mental and emotional illness.

How to improve physical health

Physical health is important for overall health. It is the most visible dimension. Physical health can have an impact on social, mental and emotional health.

Eat a healthy balanced diet

A balanced diet will help to improve all dimensions of health. Healthy balanced diets should contain the right amount of carbohydrates, proteins, fats, vitamins and minerals. These nutrients should come from a wide range of foods.



Get enough physical activity

Doing regular physical activity has many health benefits. Physical activity can help to reduce the risk of developing certain diseases. It can also help people manage illness, and improve mental and emotional health. There are many different types of physical activity that you can do, ranging from walking to playing sports.

The WHO defines physical activity as "any bodily movement produced by skeletal muscles that requires energy expenditure."

Adults should do at least 75 minutes of vigorous activity per week, or at least 150 minutes of moderate intensity activity per week.



Stay hydrated



Keyword

hydrate

to give water or moisture to the body

Our bodies are made up of approximately 60% water, so staying hydrated is very important for physical health. Staying properly hydrated helps the body's cells to function properly. Water is the best form of hydration as it does not damage your teeth in the same way sugary drinks do and it does not contain caffeine like coffee or tea do.



Avoid harmful substances

Substances that have an impact on brain function or other body processes should not be used. Caffeine should only be consumed in moderation.



Keep a healthy body weight

It is important to keep a healthy body weight. A healthy weight depends on a person's age, gender and height. Body Mass Index (BMI) can be used as a guide to determine if a person has a healthy weight for their height. Some of the factors that can affect body weight include diet, physical activity, family history and genetics.

?Q.17: Which factors can affect a person's weight

Physical activity .a

Diet .b

Genetics .c

All of the above .d

Seeing someone in a negative way because of their mental illness is called

- (A) Discrimination
- (B) Adolescence
- (C) Stigma**
- (D) Disappointing

?Q.14: Which of the following is an example of discrimination

- a** Making sure your friends are always included in activities in school
- b** Talking to your friend who suffers from anxiety
- c** Checking on your friend that is having problems at home
- d** Going to the cinema without your friend because they are sad all the time

What is stigma in mental health?

- a. When someone views you in a negative way for having a mental health disorder**
- b. One of the main causes of mental health disorders in teenagers
- c. A method of improving mental health
- d. The medical professional who deals with patients with mental health disorders

T.KAWTHAR HENDAWI

Stigma and discrimination can make a person's mental health problems worse and can prevent them from asking for help.	
(A)	True
(B)	False

What is stigma?
What is discrimination?

1.5 Mental health

Stigma and discrimination

Stigma is when someone sees you in a negative way because of a particular characteristic, such as skin colour, cultural background, a disability or a mental illness.

Discrimination is when someone treats you in a negative way because of a particular characteristic, such as your mental illness.



Stigma happens when a person identifies someone by their illness rather than who they are as an individual. For example, they might be labelled 'crazy' rather than 'a person experiencing bipolar disorder'.

For people with mental health issues, the stigma and discrimination they experience can make their problems worse, making it harder to recover. It may cause the person to avoid getting the help they need because of the fear of being stigmatised.



The harmful effects of stigma

Some of the effects of stigma include:

- ⊙ feelings of shame, hopelessness and isolation.
- ⊙ refusing to ask for help or to get treatment.
- ⊙ lack of understanding by family, friends or others.
- ⊙ fewer opportunities for employment or social interaction.
- ⊙ bullying or physical violence.
- ⊙ self-doubt – the belief that you will never overcome your illness or be able to achieve what you want in life.

Dealing with stigma

It is everyone's duty to break down the stigmatisation of mental illness.



Here are some ways to do this:

- ⊙ Do not let fear of being labelled with a mental illness stop you from getting help.
- ⊙ Mental illness is not a sign of weakness and it is not something that you can deal with alone. Talk about your mental health with healthcare professionals.
- ⊙ Reach out to people you trust such as family, friends or teachers. They can give you the support that you need.
- ⊙ Connect with others who feel the same way as you. This can help you to realise that you are not alone in your feelings.
- ⊙ Remember that other people's judgements come from a lack of understanding of mental illness. Do not believe that their views reflect you personally.

You will learn more about mental health throughout this year in your Health Sciences lessons.

People who have good emotional health have .

- (A) less energy
- (B) low self-esteem
- (C) high self-esteem**
- (D) poor relationships

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- a. physical
- b. emotional
- c. social
- d. mental

?Q.21: How can emotional health be improved

- Do mindfulness activities .a**
- Eat a balanced diet .b
- Avoid smoking .c
- Drink lots of water .d

**Why is emotional health important?
How does emotional health affect self-esteem?**

The importance of emotional health

Improving emotional health is just as important as improving physical health. People who work on their emotional health have:

- ⊙ **stronger relationships.** When you have the skills to manage your emotions, it is easier to connect with other people and show more empathy. You are able to talk through your feelings instead of causing arguments.
- ⊙ **higher self-esteem.** Your thoughts, feelings and experiences will change the way you feel about yourself. Good emotional health will help you to see the best in yourself even on your worst days.
- ⊙ **more energy.** A positive outlook makes you feel energised, helps you to focus and think clearly. Poor emotional health leads to exhaustion.

How to improve emotional health



Remember

Having good emotional health does not mean you are always happy or free from negative emotions. It's about having the skills and ability to manage the ups and downs of everyday life.

Practise emotional regulation

Emotions can sometimes get the best of you but learning some ways to cope can help you to respond positively in upsetting situations.

Some ways to regulate your emotions include:

- ⊙ Meditation
- ⊙ Listening to music
- ⊙ Talking to a friend or family member
- ⊙ Writing a journal
- ⊙ Reading a book
- ⊙ Practicing breathing exercises
- ⊙ Doing yoga



?Q.3: What is a foetus

The human life cycle

Human development is a process that happens continuously throughout life. The human life cycle is divided into different stages:

- Ⓐ foetal development
- Ⓑ infancy
- Ⓒ childhood
- Ⓓ adolescence
- Ⓔ adulthood
- Ⓕ older adulthood



Foetal development



Keyword

foetus
developing baby that has not been born yet

The first stage of the human life cycle starts before a baby is even born.

A human starts life as an embryo, which develops into a foetus in the womb of its mother. The foetal development stage starts around 10 weeks into pregnancy. Before the foetus is formed, there are already a lot of physical developments.



What is the first stage of the human lifecycle?

- (A) Childhood
- (B) Infancy
- (C) Foetal development**
- (D) Adolescence

Further information

During the foetal stage, a lot of the key characteristics that started in the embryo continue to develop. The table below shows the changes that occur.

Weeks of pregnancy	Foetal development
13 - 16	The foetus will start to move; muscles develop, liver and pancreas secretes hormones and enzymes.
14	Develop male or female physical characteristics.
19	Heartbeat can be heard with a stethoscope.
23	Lungs and alveoli develop, the nervous system starts to function.
31	Tissues and body systems are present, more growth and development occurs until birth.
36 - 40	The foetus is ready to be born.

Infancy

An infant is a baby from birth to two years old. There are some huge changes that occur in this time. An infant's weight normally doubles in the first six months and triples by the age of one year old. Brain development is also very fast at this stage. Infants develop motor skills during this stage in line with their physical growth.



During which weeks of pregnancy does a foetus develop male or female physical characteristics?

- a. 23 weeks
- b. 14 weeks
- c. 19 weeks
- d. 31 weeks

A developing baby that has not been born yet .a

A baby aged 0-2 years .b

A child aged 2-11 years .c

The physical changes experienced as a teenager .d

?Q.12: Sara is 7 years old. Which stage of the lifecycle is she in

Foetal development .a

Infancy .b

Childhood .c

Adolescence .d

When does the foetal development stage begin?

- (A) 0 weeks
- (B) 3 weeks
- (C) 6 weeks
- (D) 10 weeks**

During which stage of the life cycle does a boy's voice get deeper?

- a. Adulthood
- b. Infancy
- c. Childhood
- d. Adolescence

Adolescence



This is the period of change between childhood and adulthood. Each of the dimensions of health face huge changes in adolescence. Puberty is a change that everybody goes through in adolescence. This is the physical process of maturing to an adult. Some physical changes experienced during this time include:

Boys	Girls
Grow taller	Grow taller
Voice gets deeper	Hips widen
Skin gets oily	Breasts develop
Facial and body hair grows	Menstruation cycle starts (periods)
Pubic hair grows	Pubic hair grows



Further information

The puberty stage takes different lengths of time for different people, but in general it lasts around six years. The age that puberty starts at also varies between people and between genders. Girls normally begin puberty before boys.

In general, adolescents are healthy people. However, obesity and some mental health disorders (e.g. eating disorders and depression) are common at this stage of the life cycle. This is due to adolescents trying to get used to the chemical and physical changes that are happening to their bodies. Adolescents often compare themselves to other people of the same age, particularly physically. This can also have an impact on their mental well-being.



2.1 first aid

How can you become a certified first aider?

You could become a certified first aider by doing a first aid training. Those trainings are done in different places in the emirate where you live, for example you could do other training through the National Ambulance in the emirate where you live.



There are different levels of first aid training, for example:

- Basic Life Support (BLS) *دعم الحياة الاساسي*
- Advanced Cardiovascular Life Support (ACLS) *دعم للقلب والاربعية*

Other first aid trainings could be very specific, such as:

- First aid at work *الاسعافات في العادة*
- Paediatric First Aid *والاطفال*
- First On The Scene *والطرق*

When choosing a first aid training, make sure that the training is accredited and recognised locally and internationally. For example, check that the training is accredited by the American Heart Association (AHA).

جمعية القلب الامريكية

كيف اصبح صديق اولي

في دورات وسبورة تعليمية

انواع الدورات

T.KAWTHAR HENDAWI

Who can provide first aid?

A certified first aider

من يقدم الرعاية الصحية مثل الممرضة او مسعفاو

A certified first aider can be a healthcare professional, such as a nurse or a paramedic, or any person who has completed a certified and accredited first aid course.



Keyword

accredited *مُعتمد*

when a certificate or qualification is officially recognised by an educational institution and/or the government



Did you know?

In 2020 the UAE government announced a change to the law of emergency medical care. The new law says, "if you want to give help or assistance in an emergency and the person gets harmed or injured as a result, you will not be punished." This concept is known as the Good Samaritan Law and it protects people who act with good intentions to help people whose lives could be at danger.

عدم المعاقبة اذا قدمت اسعافات اولية بدون شهادة معتمده

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What is First aid?

- The treatment a patient receives in hospital after they finish surgery
- The process of being referred to a specialist doctor such as a cardiologist
- The emergency help given to an injured person until they get full medical attention
- The exercises given by a physiotherapist to teach a patient how to walk again.

First aid kits

A first aid kit is a box or bag that contains supplies and equipment used to give medical treatment.

Discussion: What's in a first aid kit?
Discuss the items you may find inside a first aid kit.



There are many different types of first aid kits available. The contents will depend on the needs of the person or company. They come in different sizes depending on the number of people they are meant to treat and the types of injuries that are expected to happen.

Some common first aid kits are as follows:

- Personal
- Family
- Workplace

It is important to know how many people will be using the first aid kit before you buy one. Having a kit that is too small may mean you don't have enough supplies to treat people during an emergency. A first aid kit that is too large may mean that supplies expire before they are used, this is a waste of money and materials.

Basic first aid kits contents

A basic first aid kit should contain the following:

- Plasters in different sizes
- Gauze dressings
- Sterile eye pad
- Sterile wound dressings
- Triangular bandages
- Rolled bandages
- Safety pins
- Disposable gloves
- Tweezers
- Scissors
- Cleansing wipes
- Sticky tape
- Thermometer
- Clean water



2.2 First aid kits



Further information

Preparing your own first aid kit

You can buy a first aid kit online or from a pharmacy. If you want to create a kit for yourself or your family, here are some things you'll need to think about.

The number of people and types of injuries

Figure out how many people will have access to the first aid kit. This will determine the number of supplies you will need to buy. You also need to think about what types of injuries you expect. The types of injuries that a sports team would expect are different from the types of injuries you expect to get at home.

Select the right container

Once you have decided on the number of people that may use the kit and their needs, you need the right size of container. All the items needed should easily fit into the first aid kit. It should also be easy to carry around if needed.

Make a checklist

A list should be made of all the items that are in the first aid kit. This will make it easier for yourself or others to check the kit has all the items needed in the future.

List three items found in a first aid kit.

- a. • Plasters
- Gloves
- b. • Sterile eye pad
- Safety pins
- c. • Cleansing wipes
- Thermometer

T.KAWTHAR HENDAWI

The recovery position

If the person is breathing normally, unresponsive and has no major injuries (such as massive blood loss), they should be put into the recovery position. This will help to maintain an open airway and keep them safe until emergency medical help arrives.

Follow the steps to place someone into the recovery position.

1. Kneel down beside the casualty.
2. Remove any phones or bulky items from their pockets.
3. Take the arm closest to you and place it at a right angle to their body (with their palm facing up).



4. Move the other arm across their chest and place the back of their hand on their cheek.



5. Lift the far knee up until the foot is flat on the floor.
6. While keeping the casualty's hand pressed against their cheek, hold the raised knee and roll them towards you.
7. Once fully over, re-adjust the head position if needed and place the top leg at a 90° angle.



Calling for emergency medical help

If the casualty is safely in the recovery position but still no one is around to help, you should call the emergency services. Try to give them as much information as you can.

Check for any medical information jewellery. This can tell you if someone has an existing medical condition.



Once the emergency services have been called, stay with the casualty and monitor the condition until the ambulance arrives.

If the casualty starts to have trouble or stops breathing, be ready to give CPR. Update the emergency services about the casualty's condition change.



Remember

You should phone for an ambulance (998) and ask for help whenever:

- ☐ someone is seriously ill or injured.
- ☐ you are not sure what to do in an emergency.
- ☐ you are not qualified to give first aid.

When should you put a casualty into the recovery position?

- | | |
|------------|---|
| (A) | If the casualty is not breathing |
| (B) | If the casualty is responsive and has no major injuries |
| (C) | If the casualty is breathing normally and unresponsive |
| (D) | If the casualty is gasping for breath |

Which of the following casualties should be placed in the recovery position?

- | | |
|------------|--|
| (A) | A casualty who is gasping for breath |
| (B) | A casualty who is breathing normally and answering questions |
| (C) | A casualty who has a suspected spine or neck injury |
| (D) | A casualty who is unresponsive and breathing normally |

You have found a person on the ground who is unresponsive. You have already assessed the scene and it is safe to enter. The person is not breathing. What should you do next?

- | | | |
|----|--|----------------------------------|
| a. | Roll the casualty so that they are face down on the ground | <input type="radio"/> |
| b. | Begin cardiopulmonary resuscitation | <input checked="" type="radio"/> |
| c. | Press on the soft part of their chin to block their airway | <input type="radio"/> |
| d. | Gently, place the person in the recovery position | <input type="radio"/> |

Why should you put a casualty that is unresponsive and breathing normally into the recovery position?

- To take the public's attention away from the casualty
- To reduce the casualty's ability to breathe
- To make sure the casualty's airway stays open until medical help arrives**
- It is the only way to make the casualty responsive again

How should you open the airway of an unresponsive casualty?

- | | | |
|----|---|----------------------------------|
| a. | Tilt the head back and lift the chin up using the soft part of the chin | <input type="radio"/> |
| b. | Tilt the head back and lift the chin up using the solid part of the chin | <input checked="" type="radio"/> |
| c. | Tilt the head forward and make sure the chin is touching the casualty's chest | <input type="radio"/> |
| d. | Look to see if their chest is rising and falling for at least 5-10 seconds | <input type="radio"/> |

A casualty should be put into the _____ when they are unresponsive and breathing normally to make sure their airway stays open.

- safety position
- recovery position**
- breathing position
- casualty position

T.KAWTHAR HENDAWI

Bleeding from different blood vessels

When someone has a cut that is bleeding, it is important to know what type of bleeding it is; is it due to a tear in the artery, vein or capillary?

Which blood vessel is cut?	How serious is it?
Artery	This is a very serious injury. A cut artery will bleed very fast. Artery blood is normally bright red and spurts out of the wound. It will not stop by itself, and the person could lose consciousness very quickly. This is because blood pressure becomes low. If untreated, the person could be dead within minutes.
Vein	If a person has a cut through a vein, it is a slightly less serious injury. The blood is usually dark red and oozes from the wound. In rare situations, it could result in death if not treated. Generally, you will have a few hours to get medical attention. The person may need to get stitches to close the wound.
Capillary	If a person has a cut through a capillary, the blood trickles out of the wound with low pressure. The cut will usually clot and stop bleeding by itself.

Remember
If you need to treat a patient who is bleeding, always wear gloves. Protective gloves will keep you safe from infection. They will also protect the patient from contamination.



A person has a cut that is bleeding very fast and is spurting out of the wound. The blood is bright red and is not stopping by itself. Which type of blood vessel is cut?

- a. Avulsion
- b. Artery
- c. Capillary
- d. Vein

A person stepped on a sharp nail which has gone through their foot. What type of soft tissue injury is this?

- a. Puncture
- b. Abrasion
- c. Amputation
- d. Avulsion

A boy has fallen and grazed the skin on his knees. What type of injury is this?

- (A) Laceration
- (B) Amputation
- (C) Avulsion
- (D) Abrasion

T.KAWTHAR HENDAWI

Which blood vessel has thick muscular walls and deals with high pressure blood being pumped from the heart?

- (A) Arteries
- (B) Veins
- (C) Capillaries
- (D) Valves

When cut, which of the following will ooze dark red blood from the wound?

- (A) Artery
- (B) Vein
- (C) Capillary
- (D) Circulation

First aid for amputation

If treated properly, it can be possible to reattach amputated fingers or toes. It is very important to know what to do in this situation. Your actions will increase the chance of successful reattachment.

Follow these steps to give first aid for a finger amputation.

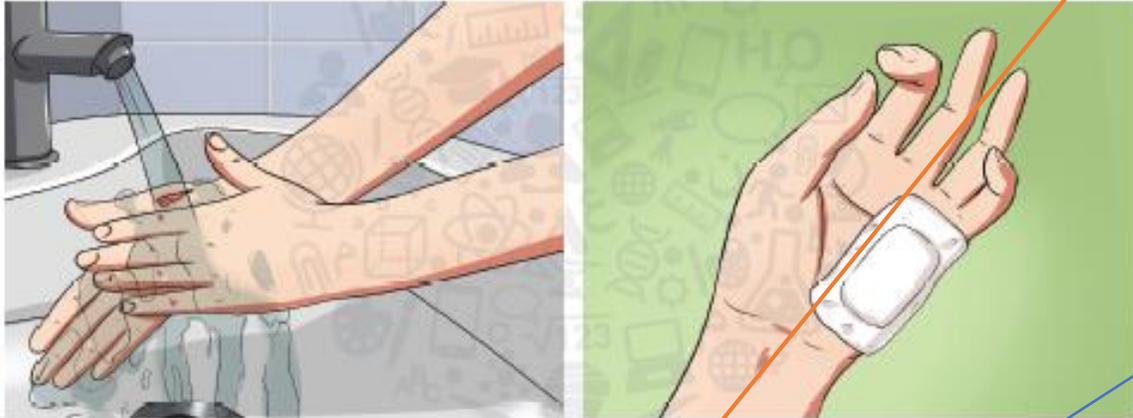
- ⦿ Call an ambulance, or get someone else to if possible, and get a first aid kit and AED if available.
- ⦿ Wear PPE such as gloves.
- ⦿ Stop the bleeding from the injured area by applying pressure. Keep firm pressure on the wound for as long as needed to slow and stop the bleeding.
- ⦿ Find the amputated part.
- ⦿ Rinse the amputated part with clean water.
- ⦿ Wrap it in a clean dressing.
- ⦿ Put it in a plastic bag that is tightly sealed and will not allow any water to get in.
- ⦿ Put that bag in another bag, or bowl of ice and cold water.
- ⦿ Label the bag with the time of amputation and the person's name.
- ⦿ Make sure it goes to the hospital with the injured person.



Do not put the amputated body part directly in ice. This may cause further damage.

How to control bleeding

If the patient's cut is small and not bleeding heavily, wash it under water and apply a dressing such as a plaster.



Large cuts

Knowing how to correctly use a bandage is very important to help stop bleeding. The bandage will hold the gauze in place. This will free up your hands to do other tasks, such as:

- ⊙ calling 998 if needed.
- ⊙ treating other injuries on a casualty.
- ⊙ treating other patients who need help.

A bandage can also prevent infection or further harm. This is because the bandage acts as a shield protecting the open wound from infection.

There are many different types of bandages for different types of injuries.

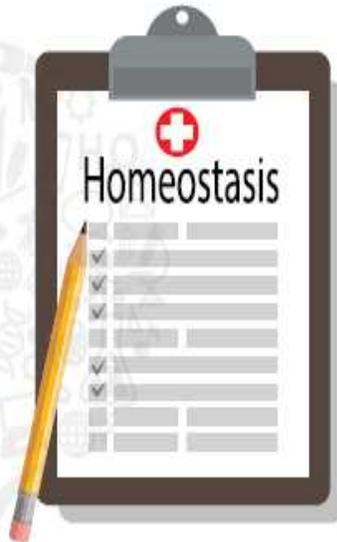


Homeostasis

Homeostasis is happening all the time within our bodies. It includes any process that controls our body's internal environment no matter what happens in the external environment. This needs to be done so that the body can work at its best level.

Our external environment is constantly changing. When you exercise or go outdoors your body may be exposed to a higher temperature. When you find yourself in a situation that makes you stressed, this can cause your blood pressure to rise.

Homeostasis is carried out in these instances to make sure your body continues to work at its best level.



Which system of the body controls homeostasis?

a. Digestive system

b. Musculoskeletal system

c. Nervous system

d. Respiratory system



Further information

The three components of homeostasis

There are three components involved in regulation of the body. These components are:

- Ⓐ The receptor
- Ⓑ The control centre
- Ⓒ The effector

The **receptor** senses a change in the environment and sends a signal to the control centre (in the brain). The **control centre** decides how to respond to the change in environment. It sends a signal to the **effector** in the body and changes are made.

Which part of homeostasis is responsible for sensing any changes in the environment?

Ⓐ The receptor

Ⓑ The control centre

Ⓒ The effector

Ⓓ The controller

Describe the thermoregulation process that occurs when a person's body temperature increases.

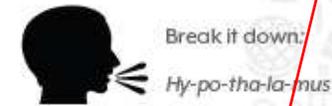
The hypothalamus recognises the temperature increase and it sends signals to glands in the body to produce sweat. This sweat causes heat loss. The hypothalamus also signals for the hairs on the body to lay flat and release pockets of warm air. The muscle walls of blood vessels will relax, causing an increase of blood flow to the capillaries in the skin. This allows more heat to escape.

Which of the following describes the function of thermoregulation?

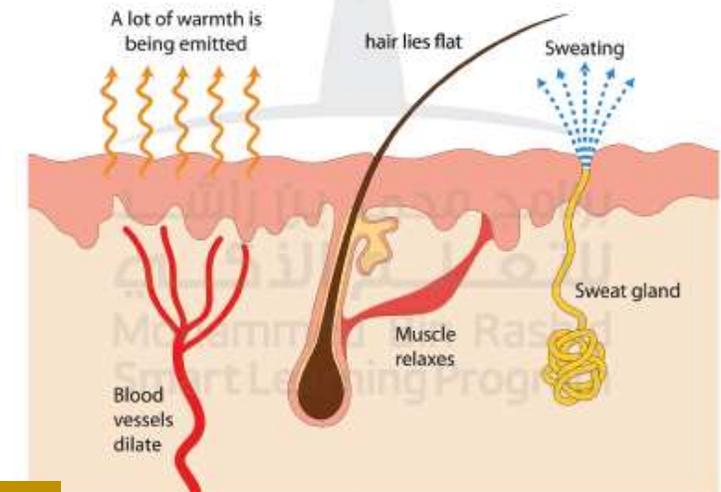
- | | |
|------------|--|
| (A) | To regulate the amount of blood in the body |
| (B) | To prevent the backflow of blood in the body |
| (C) | To regulate the body's temperature |
| (D) | To supply oxygen to the body |

Thermoregulation is the process of regulating temperature within the body. If you go outside on a hot day, your body carries out homeostasis in order to regulate its internal temperature. This prevents your body from overheating and making you feel unwell.

When your body temperature increases, receptors on your skin and other internal parts of the body send signals to part of the brain called the hypothalamus.



The hypothalamus recognises the temperature increase and it sends signals to glands in the body to produce sweat. This sweat causes heat loss. The hypothalamus also signals for the hairs on the body to lay flat and release pockets of warm air. The muscle walls of blood vessels will relax, causing an increase of blood flow to the capillaries in the skin. This allows more heat to escape.



Epithelial tissue

Epithelial tissue contains cells that line the outer surfaces of the organs and blood vessels. They also cover the inside parts of internal organs. Skin is an example of epithelial tissue.

Epithelial tissue forms a protective barrier between the body and the external (outside) environment.

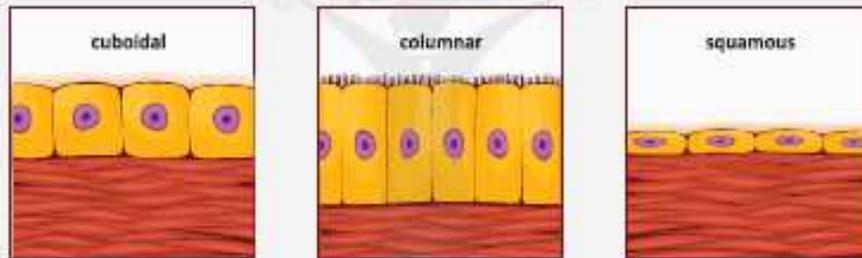


Further information

There are three main shapes of epithelial cells. They are:

- ⊙ Cuboidal
- ⊙ Columnar
- ⊙ Squamous

You can see the shapes of each type of cell below.



Nervous tissue

Nervous tissue is found in the nervous system. Nervous tissue is made of cells called neurones. Neurones send and receive messages from the nerves.

The nervous system is responsible for controlling the body's movement, mental activity and homeostasis.

Which type of human tissue protects the body from the outside environment?

- | | |
|------------|-------------------|
| (A) | Muscle tissue |
| (B) | Epithelial tissue |
| (C) | Nervous tissue |
| (D) | Connective tissue |

What is the circulatory system?

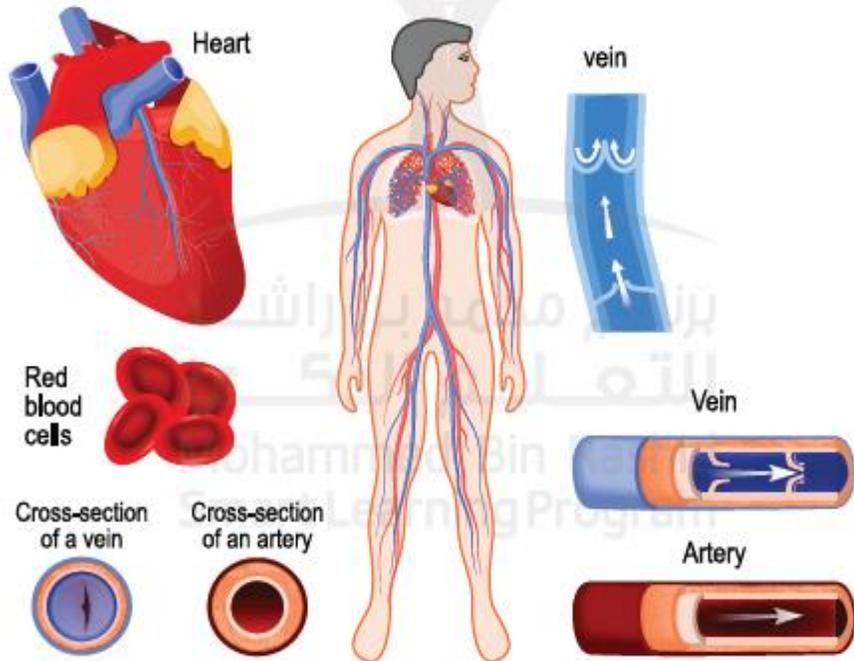


Discussion: The circulatory system

What do you already know about the circulatory system? Do you know the parts of the body within this system?

The circulatory system contains the heart, blood vessels (arteries, veins and capillaries) and blood.

Circulatory system



Which system of the body is responsible for carrying oxygen-rich blood around the body?

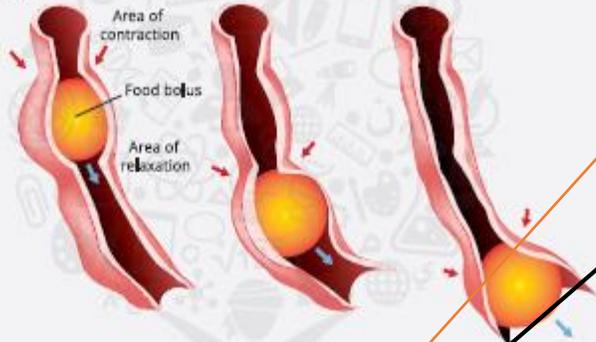
- (A) Musculoskeletal system
- (B) Respiratory system
- (C) Immune system
- (D) Circulatory system

What are the organs of the digestive system that food does not travel through? What is the function of the liver?



Further information

Food is able to pass through the organs of the GI tract because of a process called peristalsis. During this process, smooth muscles in each of the organs contract and relax in a wave-like motion. This moves the food along. These muscle contractions are involuntary, meaning you cannot physically control this process.



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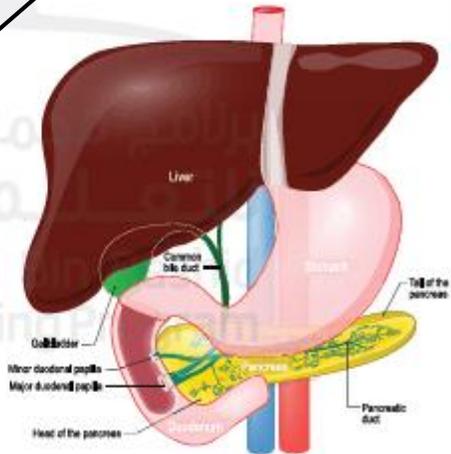
The liver, gallbladder and pancreas

Although food does not travel through the liver, gallbladder and pancreas, these organs are still an important part of the digestive system.

The pancreas - The pancreas produces enzymes that help to digest proteins, fats, and carbohydrates.

The liver - Nutrient-rich blood goes to the liver for processing. The liver filters out harmful substances and waste. It sends nutrients to the rest of the body or stores them in the liver for when they are needed. The liver also produces a substance called bile which helps the body absorb fat.

The gallbladder - stores bile from the liver until it is needed. The enzymes and bile travel directly into the small intestine. This is where they help to digest food.



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Which system of the body is responsible for turning food into energy?	
(A)	Respiratory system
(B)	Circulatory system
(C)	Musculoskeletal system
(D)	Digestive system

Immunity

Immunity means that the body can protect itself from disease.

There are three types of immunity:

Passive immunity – Passive immunity is 'borrowed' from another source and lasts for a short time. For example, the antibodies in a mother's breastmilk give a baby temporary immunity to any diseases the mother has been exposed to.

Innate immunity – Everyone is born with innate (natural) immunity. Innate immunity is a general type of protection. For example, the skin blocks germs from entering the body.

Adaptive immunity – Adaptive (or active) immunity develops throughout your lifetime. People develop adaptive immunity when they are exposed to diseases.



Example

If you get a disease like chickenpox, you probably won't get it again. This is because the body has already made antibodies to protect you against this infection.



Further information

Some vaccines work in the same way as adaptive immunity to prevent some diseases.

The traditional style of vaccination introduces a small amount of a particular disease antigen to the body; however, it does not introduce enough to cause illness. This tells the body's immune system to make antibodies. These antibodies will protect the body from this disease in the future.



A person is injected with a small amount of a disease antigen which causes their immune system to make antibodies. The person is now protected from the disease in the future. What type of immunity is described?

- | | |
|-----|----------|
| (A) | Passive |
| (B) | Innate |
| (C) | Adaptive |
| (D) | Herd |

Antibodies in a mother's breastmilk give a baby temporary immunity to any diseases the mother has been exposed to. What is this type of immunity known as?

- a. Passive immunity
- b. Innate immunity
- c. Herd immunity
- d. Adaptive immunity

What is the function of the immune system?

- a. To fight diseases that enter the body
- b. To pump blood around the body
- c. To break food down into smaller pieces
- d. To provide stability and movement of the body

Name one type of immunity.

Passive
Innate
Adaptive

Secondary care

Secondary care providers are specialists in a particular area. They are the people that your primary care provider will refer you to. They will specialise in a certain area of the body or a particular disease. For example, cardiologists specialise in the heart and oncologists specialise in cancer.

Tertiary care

Tertiary care is specialised care usually given in a hospital setting. Patients may be referred by the primary or secondary care provider to get tertiary care for further medical investigations or treatment. Examples of tertiary care include cancer treatment, neurosurgery, cardiac surgery, and burns treatment.

