

شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية



حل تجميعة أسئلة وفق الهيكل الوزاري

موقع المناهج ← المناهج الإماراتية ← الصف الحادي عشر ← علوم صحية ← الفصل الثاني ← الملف

التواصل الاجتماعي بحسب الصف الحادي عشر



روابط مواد الصف الحادي عشر على تلغرام

[الرياضيات](#)

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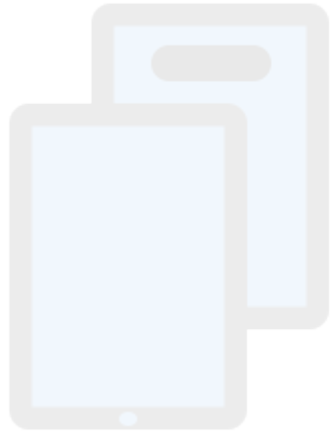
[التربية الاسلامية](#)

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

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Exam EOT2 Example Solution:

Grade: 11 - ADV



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موقع البحوث الإماراتية
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BEST WISHES 😊

15	1	Describe the approaches to health education.
	2	Differentiate between approaches to health promotion and health education.
HSC.1.2.01.001 Define health promotion and health education.		See practice questions.
		15

Match the approach of health education in the table with the correct description.

1. Individual approach	b
2. Group approach	a
3. Mass audience approach	c

a. When a health educator teaches a group of people about a health topic.
b. One-to-one health education with a doctor or health educator.
c. Using the media to teach a large population group about a health topic.

Group approach
The group approach is when a health educator or medical professional teaches a group of people about a topic related to health. This can happen in a medical setting, community setting, school or workplace.



Mass audience approach
The mass audience approach to health education uses the media to reach large population groups. Health education may be presented through television, radio, newspapers, social media, and other online sources. It aims to educate a lot of people to improve their health.

Which approach to health education uses the media to reach large population groups?



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1	Identify the meaning of a given health promotion poster
2	Explain the methods of doing health promotion.

Match the following words to their description.

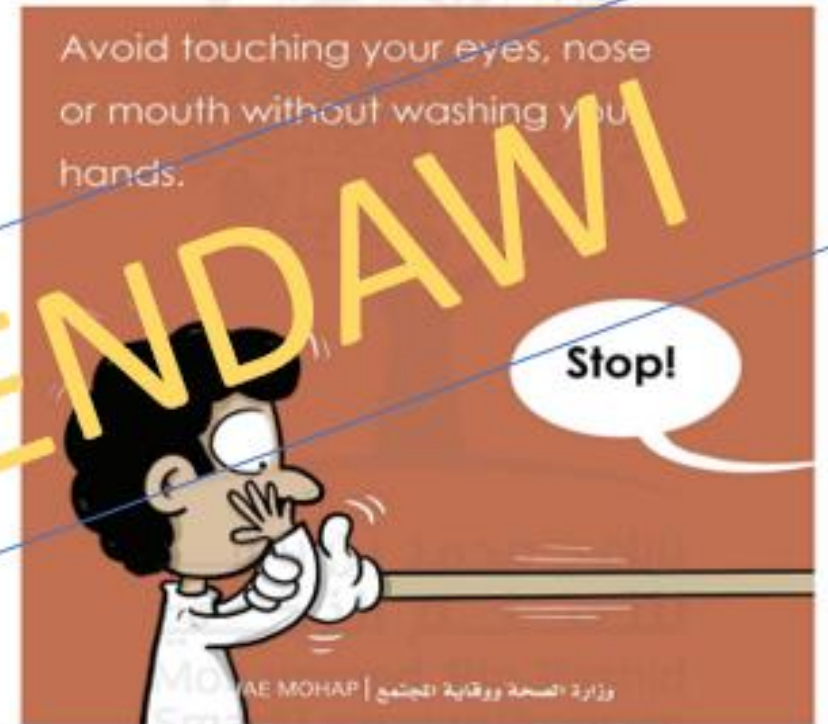
	Definition
Health promotion	٥
Health education	٩

a) An area of study

b) A type of advertisement

What does health promotion look like?

Have you ever seen adverts on television or other applications that encourage you to eat healthier or do more exercise? Have you ever seen posters or leaflets like the one below in hospitals, malls, or schools? Have you ever gone to your local hospital or pharmacy and seen notices about screening for things like diabetes or blood pressure checks? These are all examples of health promotion.



Think

Health promotion is all around you. You will see it regularly and you may not even notice what it is.

- 1 Identify the Ottawa charter.
- 2 Identify the pillars of health promotion.

Which pillar of health promotion uses laws and policies to encourage healthy behaviours?

- (A) Good environments
 (B) Health literacy
 (C) Healthy cities
 (D) Good governance

The WHO created a framework for health promotion. What is the framework called:

- (A) The Ottawa charter
 (B) The Toronto guidelines
 (C) The Vancouver directions
 (D) The Montreal promise

How many pillars of health promotion are there

- (A) 1
 (B) 2
 (C) 3
 (D) 4

The pillars of health promotion

Below, you will see the three pillars of health promotion as designed by the WHO, and some sentences explaining each one. Normally, a health promotion campaign or intervention will belong to one of the three pillars.



1. Good governance



Keyword

governance

the way that a city or country is controlled by the people who run it

Health promotion interventions that require laws and policies to be created are part of the good governance pillar. By creating laws and policies that encourage healthy behaviours, people tend to make healthier decisions.

Good governance

Imagine you have the power to create laws and policies for the UAE. What would you create to make the people of the UAE healthier?

Sections of the Ottawa Charter

The Ottawa Charter is divided into two sections. They are the basic strategies for health promotion and the areas for action. On the table below, write which headings from the Charter fit into each section.

The basic strategies	The areas for action

Mohammed Bin Rashid Smart Learning Program

2

Which law was introduced in 2017 that would reduce death and injury in car accidents in the UAE?

In 2017, a law was created in the UAE that states all passengers in the back seats of cars must wear a seat belt. Which pillar of health promotion does this belong to

- (A) Healthy cities
- (B) **Good governance**
- (C) Healthy literacy
- (D) None of the above



Further information

An example of good governance in the UAE is the 50% tax added to sugary drinks. This law was introduced in 2017 with the aim that people (especially school children) would buy less sugary drinks because they cost more money. If people are buying less sugary drinks, they are less likely to develop obesity and diabetes.

Another example of health promotion in the good governance pillar is the law that passengers in the back seats of cars must wear seat belts. This law was introduced in 2017 with fines given to people who break it. The aim is for fewer deaths in car accidents.



2. Healthy cities

Health promotion from the healthy cities pillar is all about creating spaces in towns and cities that allow people to have healthier lifestyles. It also includes organising events that encourage healthy behaviours such as fun runs and marathons.



3. Health literacy

Health literacy is about increasing people's knowledge about health. When people are more informed about their health, they will make better lifestyle choices.

Health literacy means more than being able to read leaflets, make doctor's appointments, understand food labels, or follow instructions from a doctor.

Health education is linked with health literacy. An example of health literacy is the use of warning messages on cigarette packets. Warning messages range from 'smoking kills' to 'smoking causes more than 25 diseases including cancer and heart disease.' These messages are used to teach people about the huge dangers of smoking. Some countries use images of real people who are suffering because of smoking to try to show smokers what damage they are doing.



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- 1 Describe the preventative medical approach to health promotion.
- 2 How many parts are there to the preventative medical approach to health promotion?

Secondary prevention

Secondary prevention aims to recognise a disease or injury that is already present but in the early stages. It is aimed at people who are at risk of developing a disease. Methods of secondary prevention include:

- health screening for early detection of disease.
- quick treatment as soon as a disease is diagnosed.
- regular health checks.

Tertiary prevention

Tertiary prevention aims to manage diseases and injuries which already exist and prolong a good quality of life for people who have long-term health problems. Methods of tertiary prevention include:

- health education about how to properly care for their disease.
- physiotherapy or rehabilitation programmes.
- regular medicine prescriptions.
- support groups for people who share the same illness.

Which approach to health promotion focuses on preventing diseases before they happen and treat existing conditions to avoid further diseases

- (A) Educational approach
- (B) Client-centered approach
- (C) Behavioral change approach
- (D) Preventative medical approach

Identify which approach to health promotion is being described in the following statement: offering vaccinations and screenings for diseases so that people are protected before the disease happens

- (A) Behavioural change approach
- (B) Client-centered approach
- (C) Socio-environmental approach
- (D) Preventative medical approach

Which of the following is an example of secondary prevention?

- (A) Health screening
- (B) Vaccination against disease
- (C) Laws to keep people safe
- (D) All of the above



5.3 Approaches to health promotion

Educational approach

This approach is aimed at groups of people. It uses health education to increase people's knowledge and understanding of health issues. This allows people to make decisions about their health based on the knowledge they have been given.



Preventative medical approach

This is the medical approach to health promotion. It focuses on preventing diseases before they happen and treating existing conditions to avoid further diseases. This may include immunisation against certain diseases and regular screenings. There are three categories of the preventative medical approach: primary, secondary, and tertiary.

Primary prevention

Primary prevention aims to stop a disease or injury before it happens. Ways to stop a disease or injury before it happens include:

- education about a healthy lifestyle.
- vaccinations against diseases.
- policies and laws to keep people safe.

1 What is a global contemporary health problem?

2 What is climate change and why is it a risk to health?

These contemporary health problems have caused 74% of deaths globally, one of them can be prevented, such as type 2 diabetes and heart disease.

Non-communicable diseases

This contemporary health problem is to do with changes in weather and pollution.

Climate change

This contemporary health problem is when people don't have a healthy and balanced diet and they don't do enough physical activity.

Nutrition and physical activity

This contemporary health problem can lead to a higher infant mortality rate, shorter life expectancy and lower quality of life.

Poverty

This contemporary health problem is the leading cause of illness and disability amongst young people.

Mental health

Examples of this contemporary health problem are stroke, chronic obstructive pulmonary disease (COPD).

Non-communicable diseases

5. Mental health

In the past, people didn't know a lot about mental health and its importance. Advances in education and research have helped create awareness regarding the importance of mental well-being as well as diagnosing and treating mental health disorders. Mental health disorder can have a long-term negative impact on people's overall health and quality of life. Mental health disorders have become a leading cause of illness and disability amongst young people.



Discussion: Mental health and COVID-19 pandemic.

The COVID-19 pandemic impacted people's mental health in different ways. Do you think the impact was negative, positive or both? Discuss with your class.

Contemporary health problems in UAE



Remember

In the UAE contemporary health problems refer to the current and ongoing health problems that are affecting people who live in the UAE.

In the UAE contemporary health problems are monitored by the Ministry of Health and Prevention. Government plans are created to improve health, quality of life and life expectancy in the UAE.



Did you know?

17th October is International Eradication of Poverty Day. The aim of this day is to raise awareness of the need to end poverty and acknowledge the efforts of people living in poverty in different areas, such as farming and agriculture.

2. Climate change

The increase of pollution and changes in temperatures and weather have become one of the biggest contemporary health problems in the world. They are causing many health problems for people, such as respiratory diseases, non-communicable diseases and even death.

3. Non-communicable diseases

Globally 7 out of 10 leading causes of death in 2019 were non-communicable diseases. This has made non-communicable disease become a contemporary health problem. Non-communicable diseases have caused 74% of deaths globally. Some of these diseases can be prevented, such as heart disease and type 2 diabetes.



Further information

Other non-communicable diseases that cause deaths globally are stroke, chronic obstructive pulmonary disease (COPD), lower respiratory infections, neonatal conditions, cancer, Alzheimer's disease, diarrhoeal diseases, and kidney diseases.



4. Nutrition and physical activity

Unhealthy lifestyle habits, such as eating too much fast food, drinking sugary drinks and not doing enough physical activity, are leading to very dangerous health problems, such as obesity, type 2 diabetes and heart diseases. These health problems are becoming more and more common globally making poor nutrition and lack of physical activity a major contemporary health problem.

3. Mental health and well-being

In the recent years, the UAE has focused a lot on the mental wellbeing of its citizens. In 2016, the UAE government chose a minister of happiness and wellbeing, whose job is to monitor the UAE plans, programs and policies to achieve a happier society. Some of the initiatives that have been made are; establishing offices for happiness and wellbeing around the country and transforming customer service centres into customer happiness centre. These centres do surveys and reports to measure happiness in all community parts.



Did you know?
 According to the World Happiness Report 2021, the UAE has ranked the highest in happiness among all Arab countries for the last seven consecutive years. It also ranked as the fourth best place in the world for people to live and work.

In the next lesson you will learn more about initiatives and programs that the UAE government is doing to manage contemporary health problems and promote health and well-being of its citizens and residents.

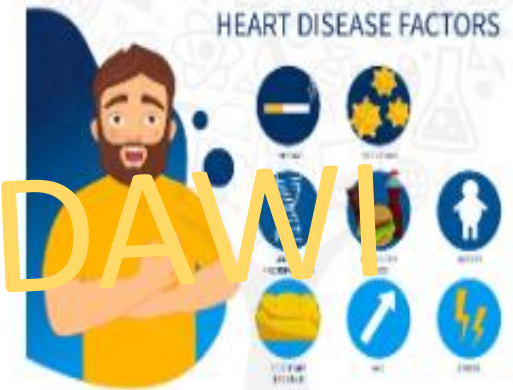
Match the images on the left to the correct contemporary health problem on the right.

Images	Contemporary health problem
	non-communicable diseases
	mental health
	poverty
	climate change

Some of the contemporary health problems in UAE, are:

1. Non-communicable diseases.

According to the World Health Organisation (WHO), non-communicable diseases, such as heart diseases, stroke, kidney disease, cancer and diabetes, have recently been the biggest causes of deaths in the UAE. As some of these problems are preventable, the UAE government is focusing on prevention through health education and promotion. In the next lesson you will learn more about the different programs that the UAE has launched to deal with this contemporary health problem.



2. Road accidents and injuries.

Road safety is currently a top priority for the UAE government. Health education and promotion interventions are targeting people from 25 to 34 years old, as road accidents and injuries are the biggest cause of death within this age group.



Which contemporary health problem in the UAE causes the largest number of deaths in people aged 25-34?

(A)	Non-communicable diseases
(B)	Road traffic accidents
(C)	Mental health
(D)	Poverty

Recall key terms when creating a health promotion programme or intervention plan.

1 Identify the meaning of a given health promotion poster.

2 Explain the methods of doing health promotion.

Which of the following should be completed before planning a health promotion campaign?

- (A) Health education
- (B) Needs assessment
- (C) Nutrition information labels
- (D) Basic first aid qualification

Planning the campaign

Once the target setting is complete, you can then start to fully plan for the campaign. You may also start to make materials such as videos, posters, websites, etc.



The plan will help you to meet the aims of the campaign. It should include all the information about the campaign, and how it is going to be presented to the target audience.



Remember

The target audience is the group of people the campaign is aimed at.

If the campaign is being done as a group, the plan should be created with every person in the group involved. Everybody must agree on all parts of the plan. If everybody agrees at the beginning, it will be easier to complete the campaign and there is less chance of disagreements happening between team members. It is also important that each team member is aware of every aspect of the plan in case they are needed to help with doing tasks that they are not involved with.



See practice questions.

45-48



The first thing that should be done when planning a campaign is working out the health needs of the population. This means thinking about what health issues or problems are important right now. You will need to do some research to decide who the target audience (who it is aimed at) of the campaign should be.

A needs assessment will tell you what areas of health need to be addressed, and which groups of people need to be targeted at that time.

How to complete a needs assessment

Information can be collected through interviews or questionnaires. This information should then be taken and reviewed to identify what areas of health need to be addressed using health promotion. The needs assessment should also show which areas of health are the most important, or need the most improvement to people right now.



Target setting



Keyword

target setting

developing a plan that can be used to guide people towards reaching a goal

After the needs assessment is finished, the aims of the campaign need to be created. This is done using target setting.

What does target setting involve?

Target setting should include all the basic details about the health promotion campaign. You need to use the information that you have analysed from the needs assessment to complete the target setting.

Some of the basic details that should be included in the target setting are:

- ⊖ The overall aim of the campaign
- ⊖ Who is the campaign aimed at?
- ⊖ What changes in health behaviour do you want to see?
- ⊖ How long will the campaign last?

Needs assessment questions

When doing a needs assessment, you must think about the type of questions you want to ask. You need to ask good questions in order to get the information you need. Some questions you might ask include:

- ⊖ What do you think the main health issue is right now?
- ⊖ What groups of people are affected most by this issue?
- ⊖ How common is this issue?
- ⊖ How dangerous is the issue?
- ⊖ How important is it to address this issue?
- ⊖ Do you think that this issue can be fixed?

1	Describe the purpose of the 'beat the habit' health promotion campaign.
2	Explain the approach to health promotion taken by the 'beat the habit' campaign.
1	What is the name given to the group of people that a health promotion campaign is aimed at?
2	Who might the target audience of a breast cancer campaign be?

During breast cancer awareness month, many hospitals and charities offer free or discounted breast cancer screenings for women. When is breast cancer awareness month?

- | | |
|-----|-----------|
| (A) | January |
| (B) | September |
| (C) | October |
| (D) | December |

Which health promotion campaign aims to raise awareness of cardiovascular disease and the risks associated with it?

- | | |
|-----|-----------------|
| (A) | Keep on Beating |
| (B) | Mention It |
| (C) | Health Heroes |
| (D) | Beat the habit |

Health Heroes mobile application



This mobile application created by MoHAP is also part of the Mo'kam for a healthier life programme. This health promotion campaign is targeted at children and the aim is to reduce childhood obesity in the UAE.

The app provides health information, helping them to have healthier lifestyles. The application educates children through a range of games. They are also encouraged to exercise regularly. It helps children make healthier choices when selecting food and it teaches good hygiene to prevent the spread of disease.

These are just two examples of health promotion from Mo'kam. There are many more Mo'kam campaigns you can find online.

Other campaign

October is breast cancer awareness month. During this month, many activities are carried out to raise awareness of breast cancer and the importance of screening for all women, especially those over the age of 40.

In October 2021, many hospitals and cancer charities with the correct screening equipment offered women free or discounted screenings in hospitals, malls and public places such as parks.



This is an example of a health promotion intervention organised by the UAE government aimed at everyone in the UAE.

This campaign aimed to show people the health risks from eating too many sugary foods and drinks. Adverts, like the video you have just watched, were shown on TV, the internet and social media. Posters at the gym, were shown in hospitals, malls, billboards, and community centres.

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1 Who is responsible for health promotion?

2 How do teachers do health promotion?

Who is responsible for health promotion

(A) Health professionals

(B) Schools

(C) Governments

(D) All of the above

If a doctor does not teach their patient how to manage or prevent illnesses, what is likely to happen?

(A) The patient is likely to be cured

(B) The patient is likely to recover faster

(C) The patient is likely to have future health problems

(D) The patient is likely to manage their disease better

Which of the following is a disease prevention strategy used by public health professionals?

(A) Health education

(B) Disinfection programmes

(C) Community vaccination

(D) All of the above

5.8 Healthcare professionals as health educators

Who is responsible for health promotion?

A lot of people have the job of promoting good health and healthy behaviours. For example, healthcare professionals, schools, health services and governments have the responsibility to promote health. These groups should work together. Each group should give information that helps to reduce disease and increase health.



The role of healthcare professionals



Discussion: Healthcare professionals as health educators

What do you think the role of a healthcare professional is in health education? Discuss in groups.



1	Why do we need energy?
2	What are nutrients?

1.	_____ is the process of taking energy and nutrients from food and drinks to maintain health.
(A)	Consumption
(B)	Nutrition
(C)	Calories
(D)	Eating

Your body needs nutrients to:

(A)	give you energy
(B)	help you to stay healthy and fight infection.
(C)	help your brain to function properly
(D)	All of the above

What is nutrition?

Nutrition is the process of taking energy and nutrients from food and drinks to maintain health. All living things must consume food and drinks to get nutrients.

Good nutrition means eating a wide range of foods and having a well-balanced diet. It is a very important part of a healthy lifestyle. Poor nutrition can lead to growth problems in children, and the development of diseases in people of all ages.

Different foods provide our bodies with various nutrients in different quantities. Therefore, it is important to eat a wide range of foods. It is not good to have too much of one food or nutrient, you should have a balanced diet.

What are food groups?



Discussion: What do you know about the food groups?

Discuss with your class the food groups you know about.



Foods that provide similar nutrients are grouped together. Each of these food groups are important for health. People can use food groups to help them understand the types of foods they should be eating to stay healthy. Food groups also help health professionals to explain healthy eating guidelines to patients.

9.	These foods are grouped together because they are rich in calcium and protein.	
(A)	Fruits and vegetables	
(B)	Milk and dairy products	
(C)	Fats and Oils	
(D)	Meat, Eggs and Legumes	

6.	This food group provides the body with protein and iron.	
(A)	Fruits and vegetables	
(B)	Meat, Eggs and Legume	
(C)	Fats and Oils	
(D)	Cereals and their products	

Meat, eggs and legumes

This food group provides the body with protein and iron. Protein is required for the growth and repair of muscle and tissues. Iron is required to help carry oxygen in the blood. Low-fat and lean meat should be chosen rather than meat with fat. It is important to eat some fish and non-meat sources of protein regularly including beans, peas and lentils.

Aim for at least two portions of fish a week, including a portion of oily fish. Oily fish includes salmon, sardines and fresh tuna. These provide the body with omega-3 which helps to lower blood cholesterol, which will reduce the risk of developing cardiovascular disease.



Foods from this food group include the following:

- ⊙ Red meat – beef and lamb
- ⊙ Poultry – chicken or turkey
- ⊙ Seafood – tuna, salmon, shrimps, lobster, hamour
- ⊙ Eggs
- ⊙ Nuts and seeds – pine nuts, almonds, hazelnuts, peanuts, pumpkin seeds, sesame seeds, sunflower seeds
- ⊙ Legumes – beans, lentils, chickpeas

Milk and dairy products

These foods are grouped together because they are rich in calcium and protein. Calcium is a mineral which is important for strong bones and has a role in muscle contractions.

Dietary guidelines recommend that people choose low-fat dairy products. This is because the full-fat versions have high levels of saturated fat (unhealthy fat). Some dairy foods have vitamin D added to them in the production process. This is called fortification.



1	Which macronutrient protects our organs and keeps us warm?
2	What is the function of carbohydrates in the body?

Carbohydrates

Carbohydrates provide you with most of your energy. Foods that are rich in carbohydrates mostly come from the cereals and their products food group, fruit and vegetables are also a good source of carbohydrates.



What is the function of fat in the body?

- (A) to repair body tissue and enable
- (B) to insulate the body and protect vital organs.
- (C) to increase body temperature
- (D) to make the immune system stronger

It is recommended that people eat 2-3 servings of dairy products every day.

Foods from this food group include the following:

- ⊙ Milk
- ⊙ Yoghurt
- ⊙ Cheese



Further Information

This food group also contains non-dairy alternatives to milk, such as almond, soy and oat drinks.

Fats and oils

There are different types of fats that can be found in food. Each type of fat has different recommendations.

The functions of fat in the body are to insulate the body and protect vital organs. Fat provides the biggest number of calories per gram of food, compared to the calories that are provided from other nutrients.



- | | |
|---|--|
| 1 | Identify vitamins. |
| 2 | Differentiate between vitamins and minerals. |

Which vitamins dissolve in fat?

- | | |
|-----|-----------------|
| (A) | Resistant |
| (B) | Fat-soluble |
| (C) | Water-soluble |
| (D) | Vitamin-soluble |

Which form of vitamins dissolve in water and are not stored in the body?

- | | |
|-----|-----------------|
| (A) | Resistant |
| (B) | Fat-soluble |
| (C) | Water-soluble |
| (D) | Vitamin-soluble |

Vitamins

Vitamins come from many different foods you eat. There are many vitamins and they have different functions. Vitamins are important for immune function and healthy organs. They also assist with blood clotting and many other processes. Vitamins are normally called after letters, some examples are vitamin A, C, D and E.



Further information

Vitamins can be broken down into two groups; water-soluble and fat-soluble.

Water-soluble means they dissolve in water. They are not stored in the body. Fat-soluble means they dissolve in fat. Our bodies are able to store fat-soluble vitamins in the liver and in fatty tissues for future use.

Water-soluble vitamins: Vitamin B₁, B₂, B₃, B₆, B₉, B₁₂, vitamin C and vitamin H.

Fat-soluble vitamins: Vitamin A, vitamin D, vitamin E and vitamin K.



Minerals

Minerals are just as important for health as vitamins. They are important for growth, bone health, fluid balance and many other processes. Examples of minerals include calcium, iron, and magnesium.



Remember

It is important to eat a wide variety of foods in order to have a sufficient intake of micronutrients.

- Calculate energy balance of a person who consumes 2874 calories and uses up 2385 calories using the energy balance equation [energy input – energy output = energy balance]
- Calculate energy balance of a person who consumes 2325 calories and uses up 2742 calories using the energy balance equation [energy input – energy output = energy balance]

$$2874 - 2385 = 489$$

$$2325 - 2742 = -417$$

Positive energy balance

If the result is a positive number, this is a positive energy balance. People with a positive energy balance are consuming more calories than they are burning. In this state, they will gain weight over time.

Negative energy balance

If the result is a negative number, this is a negative energy balance. People with a negative energy balance are consuming less calories than they are burning, in this state they will lose weight over time.



What is energy balance?

Energy balance is the difference between energy input (the number of calories that you put into your body) and energy output (or the number of calories you burn each day).

The equation for energy balance is as follows:

$$\text{Energy balance} = \text{energy input} - \text{energy output}$$

Energy input is your fuel. This means that energy input comes from the calories in the food that you eat.

Energy output comes from the calories that you burn.



Did you know?

Energy output is not just calories you burn when you exercise. Between 60-75% of the calories your body uses up each day is in order to simply survive and carry out processes such as digestion.

The energy balance result will belong to one of three categories; perfect energy balance, positive energy balance, or negative energy balance.



Perfect energy balance

If the result is zero, this means the person's body is in perfect energy balance. In this state of energy balance, the person will not gain or lose weight, as the amount of calories they consume is the same as the amount of calories they expend.

1	Describe positive energy balance.
2	Describe negative energy balance.

Positive energy balance

If the result is a positive number, this is a positive energy balance. People with a positive energy balance are consuming more calories than they are burning. In this state, they will gain weight over time.

Negative energy balance

If the result is a negative number, this is a negative energy balance. People with a negative energy balance are consuming less calories than they are burning. In this state they will lose weight over time.



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بن زايد آل نهيان
مohammed bin Rashid
Learning Program

- 1 What will happen to a person who has a positive energy balance for a long time?
- 2 Which type of energy balance is needed for a person to lose weight over time?

Positive energy balance

If the result is a positive number, this is a positive energy balance. People with a positive energy balance are consuming more calories than they are burning. In this state, they will gain weight over time.

Negative energy balance

If the result is a negative number, this is a negative energy balance. People with a negative energy balance are consuming less calories than they are burning. In this state they will lose weight over time.



1	Anoud consumes 1875 calories per day. What should her energy output be for her to have perfect energy balance? 1875
2	Hamda's energy output is 2127 calories per day. She does not want to lose or gain weight over time. How many calories should she consume to have perfect energy balance? 2127

What is the difference between energy input (the number of calories that you put into your body) and energy output (or the number of calories you burn each day)?

- (A) Calories
- (B) Energy input
- (C) Energy output
- (D) Energy balance**

This state of energy balance is when the person will not gain or lose weight, as the amount of calories they consume is the same as the amount of calories they expend.

- (A) Negative energy balance
- (B) Perfect energy balance**
- (C) Positive energy balance
- (D) Energy consumption

1 How can you decrease your energy input?

2 Doing more physical activity will affect which part of the energy balance equation?

_____ is when people are consuming more calories than they are burning and may gain weight over time.

(A) Negative energy balance

(B) Perfect energy balance

(C) Positive energy balance

(D) Energy consumption

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1 What are 'empty calories'?

2 What are nutrient dense foods?

Foods that have a high number of calories but they have low nutritional value from vitamins, minerals, protein and fibre are known as

- (A) Empty calories
 (B) Malnutrition
 (C) Undernutrition
 (D) Calories

Healthier foods tend to have fewer calories. Making healthy food choices is good for weight management and reduces the risk of developing diseases such as diabetes and heart disease. High fibre foods can help to keep you feeling fuller for longer. A diet low in salt can help to prevent high blood pressure.

It is better to get most of your calories from nutrient-dense foods (foods that have a lot of nutrients). This includes foods like fruit and vegetables and other foods that are recommended in dietary guidelines.

Empty calorie foods:



Nutrient dense foods:



Dietary guidelines

Dietary guidelines tell people the type of foods they should be eating and the amount of food from each food group that they need in order to get the right nutrients. Dietary guidelines help to educate people about healthy balanced diets.

Each country has its own food-based dietary guidelines. In most countries, their dietary guidelines communicate similar messages. Many countries use models to visualise their dietary guidelines. In the UAE, the model which is used is shaped like the Burj Khalifa.

2

Nutrition Facts	
8 servings per container	
Serving size 2/3 cup (55g)	
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 6g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

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Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

What is the total number of calories in this container?

$$230 \times 8 = 1840$$

How many servings are in this food item?

8

Nutrition facts

Follow the steps to reading nutrition facts.

1. Find the number of servings

Try to find out how many servings are in the pack. Most labels tell you this information.

If there are two servings per pack and you eat the whole pack, you will be eating double nutrients per serving.

The pack might state that one serving is 50g. You then must look for the total weight of pack. If the pack contains 250g, there would be 5 servings per pack.



2. How many calories?

You will then look for how many calories are in the pack or per serving. Most packs will state the calories per serving or per 100g. You may have to calculate this.



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1

How is pulse measured?

2

What should the temperature of a healthy adult be?

Body temperature:

- ⊙ A person's body temperature can be taken from many parts of the body including the mouth, ear canals, on the skin, or under the arm.
- ⊙ Digital thermometers are most commonly used.
- ⊙ For a healthy adult, the normal body temperature is between 36.5°C and 37.2°C.
- ⊙ The environment can influence a person's body temperature, especially if they are in a very cold or very hot place.

**Pulse rate:**

- ⊙ When the heart beats, blood is forced through the arteries. This force can be felt when pressing on the arteries that are located close to the surface of the skin.
- ⊙ For most people, it is easiest to take the pulse rate at the wrist, but you can also find a pulse on the side of the neck and on the inside of the elbow.
- ⊙ To check a person's pulse, simply use the first and second fingertips. Start pressing on the arteries until you feel a pulse, and then count the pulse for 60 seconds.

- ⊙ A normal pulse for a healthy adult at rest is 60-100 beats per minute.
- ⊙ A person's pulse rate can be influenced by medical conditions. It is important to take this into consideration when measuring pulse.

**Further information**

Generally, a lower resting heart rate suggests that the heart is working more efficiently and the person has good cardiovascular fitness. For example, an athlete's resting heart rate may be closer to 40 beats per minute.

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- | | |
|---|---|
| 1 | Which condition can be identified by taking a blood pressure reading? |
| 2 | What is the normal blood pressure rate for a healthy adult? |

The diastolic blood pressure reflects:

- | | |
|-----|---|
| (A) | the pressure inside the artery when the heart contracts and is filling with blood |
| (B) | the pressure inside the artery when the heart is at rest and filling with blood |
| (C) | the pressure inside the artery when the heart is at rest and is pumping blood |
| (D) | the pressure inside the artery when the heart contracts and pumps blood. |

For a healthy adult, the normal respiration rate at rest is

- | | |
|-----|-------------|
| (A) | 12-20 bpm |
| (B) | 40-60 bpm |
| (C) | 60-100 bpm |
| (D) | 100-120 bpm |

A vital sign reading that is recorded by two numbers

- | | |
|-----|------------------|
| (A) | Pulse |
| (B) | Blood pressure |
| (C) | Body temperature |
| (D) | Respiration. |

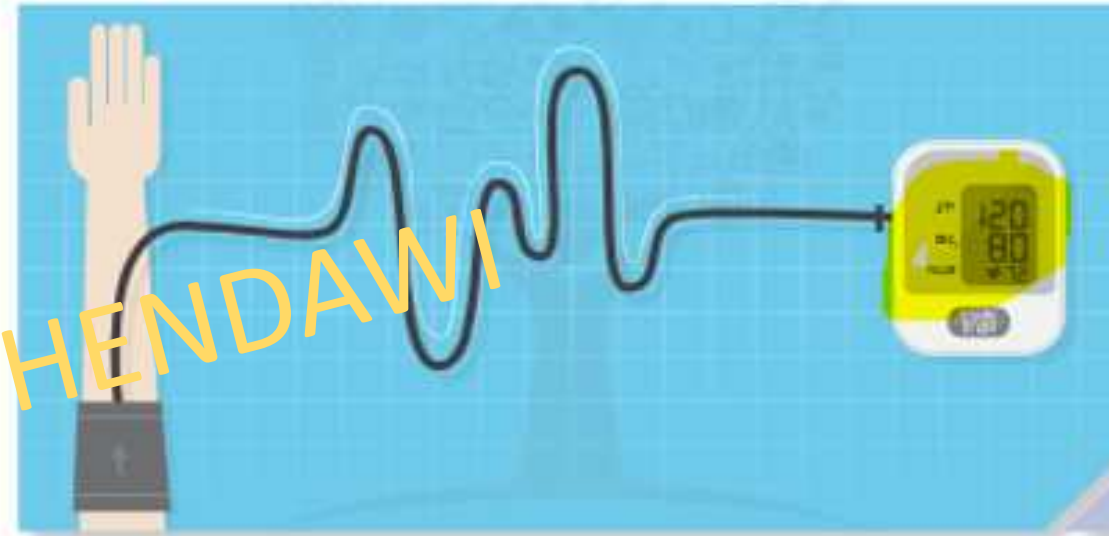
A person with a blood pressure reading of 150/95 is known to have

- | | |
|-----|------------------------------------|
| (A) | Low blood pressure (hypotension) |
| (B) | Regular blood pressure |
| (C) | High blood pressure (hypertension) |
| (D) | Regular heartbeat. |

Respiration rate:

- ⊙ This is the number of breaths a person takes per minute.
- ⊙ Measuring the respiration rate is done when a person is at rest, by counting the number of breaths they take for one minute. Every time the chest rises is considered one breath.
- ⊙ For a healthy adult, the normal respiration rate at rest is 12-20 breaths per minute.

Blood pressure:



- ⊙ This is the force of blood pushing against artery walls.
- ⊙ Two numbers are recorded when measuring blood pressure.
- ⊙ The higher number is known as systolic pressure. This is the pressure inside the artery when the heart contracts and pumps blood around the body.
- ⊙ The lower number is known as diastolic pressure. This is the pressure inside the artery when the heart is at rest and filling with blood.
- ⊙ A normal blood pressure reading for a healthy adult is a systolic pressure of 120 and a diastolic pressure of 80. This is written as 120/80mm Hg (millimetres of mercury).
- ⊙ A person whose blood pressure reading is greater than 140/90mm Hg is known to have hypertension (high blood pressure).

1 Label the chambers of the heart.

2 Describe what happens in each atrium of the heart.

Anatomy and physiology of the heart

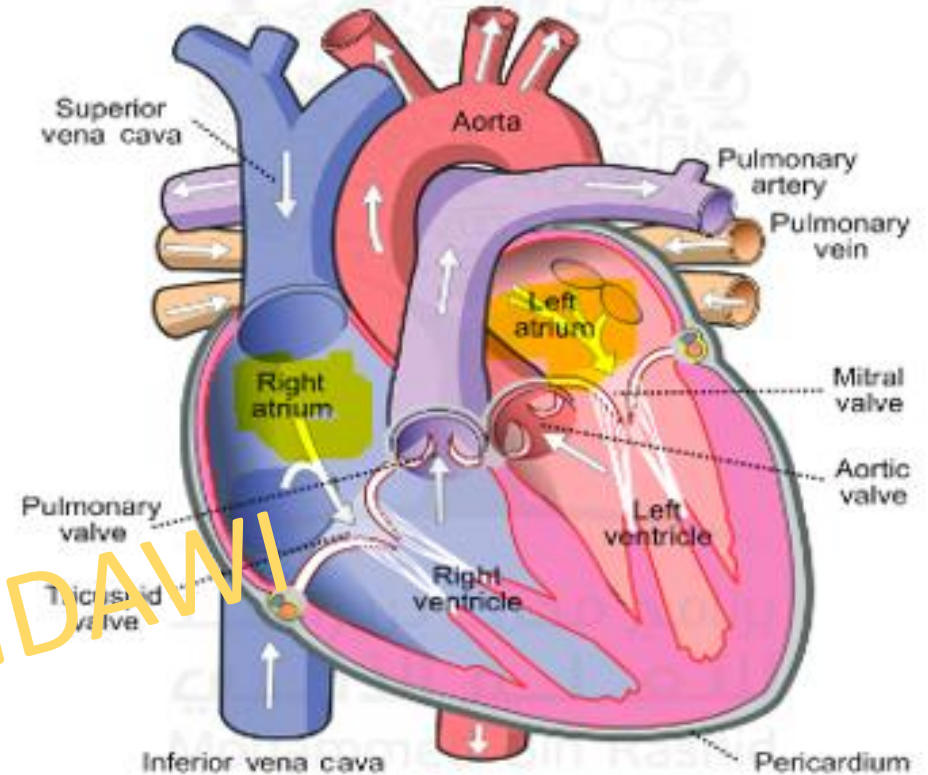
Last term, you learned about the systems of the body. One of these systems is the cardiovascular system, which is made of the heart and blood vessels. Remember, the heart is divided into four sections, the right atrium and left atrium, and the right ventricle and left ventricle.

The left side of the heart:

- | | |
|-----|---|
| (A) | Receives oxygen-poor blood from the rest of the bod |
| (B) | Receives oxygen-rich blood from the lungs |
| (C) | Pumps oxygen-poor blood to the lungs |
| (D) | Pumps oxygen-rich blood to the lungs |

The body system that is made up of the heart and blood vessels.

- | | |
|-----|---------------------------|
| (A) | The nervous system |
| (B) | The immune system |
| (C) | The cardiovascular system |
| (D) | The respiratory system |



The left side of the heart receives oxygen-rich blood from the lungs and carries this oxygen around the body. The right side of the heart receives oxygen-poor blood after it has been delivered to the organs in the body. The oxygen-poor blood contains carbon dioxide which returns to the lungs where it gets exhaled.

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Smart Learning Program

1 What is heart failure?

2 What is cardiac arrest?

_____ happens when the heart muscles weaken, which causes the ventricles to enlarge (become bigger).

- | | |
|-----|----------------|
| (A) | Cardiac arrest |
| (B) | Heart attack |
| (C) | Heart failure |
| (D) | Stroke. |

_____ is when the heart suddenly stops beating due to problems with the electrical systems in the heart.

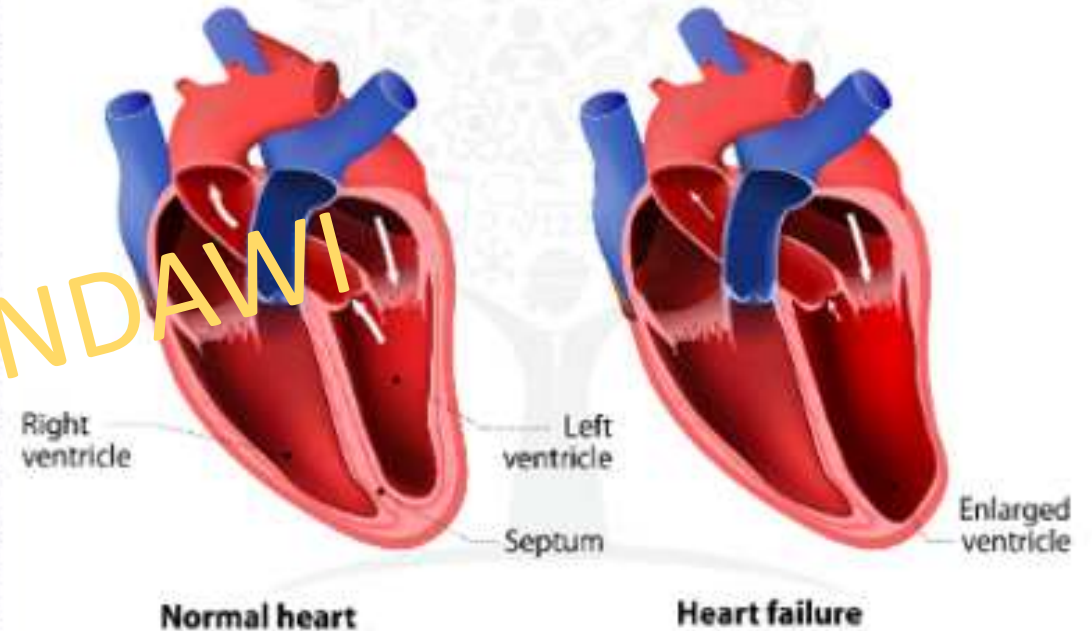
- | | |
|-----|----------------|
| (A) | Cardiac arrest |
| (B) | Heart attack |
| (C) | Heart failure |
| (D) | Stroke. |

A person with cardiac arrest

- | | |
|-----|-------------------|
| (A) | Is unresponsive |
| (B) | Has no pulse |
| (C) | Doesn't breathe |
| (D) | All of the above. |

1. Heart failure

Heart failure happens when the heart muscles weaken, which causes the ventricles to enlarge (become bigger). Because of this, it is unable to pump enough blood around the body. Blood carries oxygen, nutrients and energy to organs in the body. If there is not enough blood being taken to these organs, it is considered heart failure.



2. Cardiac arrest

Cardiac arrest is when the heart suddenly stops beating. This is usually due to problems with the electrical systems in the heart. This can quickly result in death if the correct steps are not taken after a person goes into cardiac arrest.



Did you know?

Cardiac arrest may be reversed if cardiopulmonary resuscitation (CPR) is performed and an automated external defibrillator (AED) is used to shock the heart and bring back the heart rhythm within minutes.

1 Describe the cause of a heart attack.

2 What is atherosclerosis?

The most common cause of cardiac arrest in adults is:

- | | |
|-----|--------------|
| (A) | Heart attack |
| (B) | Choking |
| (C) | Drowning |
| (D) | Hypothermia |

..... occurs when the blood flow that brings oxygen to the heart is severely reduced or stopped.

- | | |
|-----|----------------|
| (A) | Cardiac arrest |
| (B) | Heart attack |
| (C) | Heart failure |
| (D) | Stroke. |

This happens because coronary arteries become thicker and harder from a build-up of fat, cholesterol and other substances, called plaque. This slow process is known as

- | | |
|-----|-----------------|
| (A) | Cardiac arrest |
| (B) | hypertension |
| (C) | atherosclerosis |
| (D) | choking |

Causes of cardiac arrest

There are many possible causes of cardiac arrest. The most common cause of cardiac arrest is a heart attack.



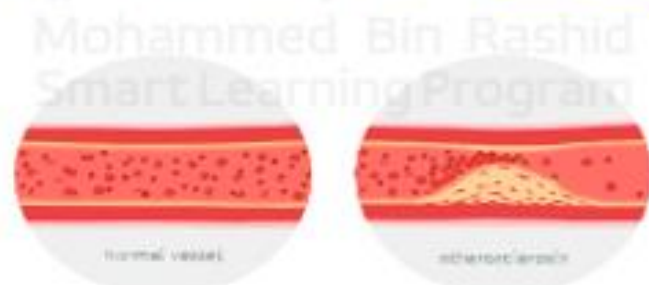
Further information

Other causes of cardiac arrest include:

- ⊗ Ventricular fibrillation – this is when the heart is not beating at a normal rhythm
- ⊗ Ventricular tachycardia – this is when the heart is beating too fast
- ⊗ Coronary heart disease
- ⊗ Pacemaker failure – a pacemaker is a small device that is fitted to someone whose heart does not beat properly on its own
- ⊗ Respiratory arrest – breathing stops due to lung failure
- ⊗ Choking
- ⊗ Drowning
- ⊗ Electrocutation
- ⊗ Hypothermia – dangerously low body temperature
- ⊗ Dramatic drop in blood pressure

Heart attack

A heart attack happens when the blood flow that brings oxygen to the heart is severely reduced or stopped. This happens because coronary arteries that supply the heart with blood can slowly become thicker and harder from a build-up of fat, cholesterol and other substances, called plaque. This slow process is known as atherosclerosis. If the plaque breaks open and a blood clot forms that blocks the blood flow, a heart attack occurs.



1 How many compressions should you give before giving breaths in CPR? **30**

2 How fast should you give compressions during CPR?

The correct (compression: breathing) rate in each CPR cycle

(A) 10:2

(B) 30:1

(C) 30:2

(D) 60:2

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CPR skills

CPR has two main skills:

- ⊙ Providing compressions
- ⊙ Giving breaths



Providing compressions



Keyword

compression:

the act of pushing hard and fast on the person's chest

When you give chest compressions, you pump blood to the brain and around the body. To do this successfully, it is important to remember the following points:

- ⊙ Give compressions that are deep enough.
- ⊙ Give compressions that are fast enough.
- ⊙ Let the chest come back up to its normal position after giving each compression.
- ⊙ Do not stop giving compressions for more than ten seconds, even when stopping to give breaths.

1	How should you give CPR to a baby?
2	How should you give CPR to an adult?

Most cardiac arrest in infants occur due to:

- (A) High blood pressure
- (B) Hypertension
- (C) Lack of oxygen
- (D) Heart attack

CPR for a baby

Most cardiac arrests in babies happen from lack of oxygen. This can be from drowning or choking. If you know the baby has an airway obstruction, perform first aid for choking. If you don't know why the baby isn't breathing, perform CPR.

Tap the baby's foot and watch for a response or any movement. DO NOT shake the baby. Taking no more than 10 seconds, put your ear near the baby's mouth and check for breathing. Look for chest motion, listen for breath sounds, and feel for breath on your cheek and ear.



Remember

If a baby is unresponsive and not breathing, you need to provide CPR.

If there is no response and they are not breathing, follow these steps:

Compressions

- ⊙ Place the baby on its back on a firm, flat surface, such as a table or the ground.
- ⊙ Imagine a horizontal line drawn between the baby's nipples. Place two fingers of one hand just below this line in the centre of the chest.
- ⊙ Gently compress the chest (about 4cm).
- ⊙ Use the same compression-breath rate as is used for adults: 30 compressions at a rate of 100 to 120 compressions per minute followed by 2 breaths.



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