

## The role of the food groups

### HYDRATION AND CIRCULATION



The human body is an aqueous environment. Water is an essential component of cells and represents about 60% of body weight. We need to absorb two to three litres of water every day to hydrate the body. Of those 2 to 3 litres, only 1 or 2 litres should be consumed as drinks. The rest is provided by food, which almost always contains water.

For example, tomatoes are particularly rich in water. Between 90 and 95%! Water also transports nutrients throughout the body, to our cells where they are used.



**Keywords > The water content of a tomato: 90 – 95%**

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It is important to absorb water in DIGESTIX. If not, you will quickly dehydrate and will have to start the level you were on all over again.

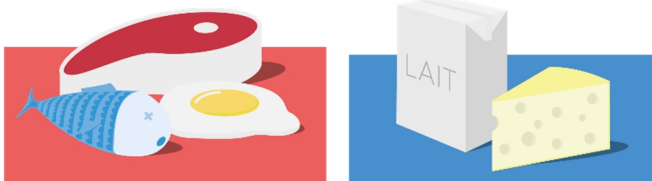
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### FUNCTION AND PROTECTION



The fruit and vegetable group plays a role in body function and protection, especially thanks to vitamins, which protect us against illness and allow the body to use the nutrients it receives.

### BUILDING



The meat group helps build the body. It primarily contains proteins which are needed to build muscles and skin. The 'dairy products group' contain minerals such as calcium. These minerals are vital for building bones and teeth.

The meat and dairy products groups both help 'build' the body. This is why they are sometimes called **construction** groups or groups with a **structural role**.

## ENERGY



There are three groups left: cereals, fats and sweets. These groups primarily perform an **energy-giving role**. The body constantly requires energy, even when asleep. It needs energy to keep the heart beating and blood circulating and to breathe, walk, run and carry out a wide range of other activities! Carbohydrates provide immediate energy, while fats are considered as 'reserve' energy the body can store. This reserve energy allows us to keep going during long-term energy expenditure.

## The role of the food groups

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Approximately how much of the human body is water?

- ☐ 20%
- ☐ 60%
- ☐ 95%

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How much water do we each absorb every day?

- ☐ 1 to 2 litres
- ☐ 0.5 to 1 litre
- ☐ 2 to 3 litres

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Besides hydration, what other role does water play in the body?

- ☐ Building
- ☐ Circulation
- ☐ Protection

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What is the role of fruit and vegetables in the body?

- ☐ Function and building
- ☐ Cleaning and building
- ☐ Function and protection

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Which food is involved in building the body?

- ☐ Meat and dairy products
- ☐ Cereals and fats
- ☐ Drinks, fruit and vegetables

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Which food provides the body with energy?

- ☐ Cereals, sugary products and fats
- ☐ Dairy products and meat
- ☐ Drinks, fruit and vegetables

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Your body needs energy even when you are asleep.

- ☐ False
- ☐ True

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Which nutrient provides a source of energy the body can access quickly?

- ☐ Proteins
- ☐ Lipids
- ☐ Carbohydrates

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What should we eat before going on a one-kilometre run?

- ☐ Vegetables
- ☐ Pasta
- ☐ Ice cream

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Carbohydrates supply the body with a reserve of energy, which is essential for prolonged energy use.

- ☐ False
- ☐ True

## Answers

### Approximately how much of the human body is water?

- ☐ 20%  
*Wrong! That's how much water there is in a dried apricot.*
- ☒ 60%  
*Well done! Around two thirds of your body is water. This is why it is essential that you renew your water reserves every day.*
- ☐ 95%  
*Wrong! That's how much water there is in a jellyfish.*

### How much water do we each absorb every day?

- ☐ 1 to 2 litres  
*Wrong! That is the amount of water we get from drinks. Remember, food also contains a lot of water.*
- ☐ 0.5 to 1 litre  
*Wrong! That would not be enough to make up for water losses.*
- ☒ 2 to 3 litres  
*Well done! Drinks provide us with 1 to 2 litres of water and the rest comes from food.*

### Besides hydration, what other role does water play in the body?

- ☐ Building  
*Wrong! Other nutrients fulfil this role.*
- ☒ Circulation  
*Well done! Water helps nutrients circulate through your body.*
- ☐ Protection  
*Wrong! Other nutrients fulfil this role.*

### What is the role of fruit and vegetables in the body?

- ☐ Function and building  
*Wrong! Other nutrients fulfil the building role, but you're on the right track.*
- ☐ Cleaning and building  
*Wrong! Other nutrients fulfil these roles.*
- ☒ Function and protection  
*Well done! Fruit and vegetables are rich in vitamins, which help your body use nutrients and also protect you against illnesses.*

### Which food is involved in building the body?

- ☒ Meat and dairy products  
*Well done! Meat mainly contains proteins required by your muscles and skin. Dairy products provide the minerals that your teeth and bones require.*
- ☐ Cereals and fats  
*Wrong! These contain carbohydrates or lipids which provide you with energy.*
- ☐ Drinks, fruit and vegetables  
*Wrong! Drinks hydrate your body while fruit and vegetables provide vitamins to protect it and help it to function.*

### Which food provides the body with energy?

- ☒ Cereals, sugary products and fats  
*Well done! This kind of food contains carbohydrates and lipids, which provide the energy required for your body to function.*
- ☐ Dairy products and meat  
*Wrong! This food is mainly responsible for building your body.*
- ☐ Drinks, fruit and vegetables  
*Wrong! Fruit and vegetables play a protective role and drinks hydrate your body.*

### Your body needs energy even when you are asleep.

- ☐ False  
*Wrong! Does your body stop functioning when you are asleep?*
- ☒ True  
*Well done! Energy helps you walk, eat and work when you are awake but, when you are asleep, your heart continues to beat and you continue to breathe, so you need energy for your body to keep these functions going.*

### Which nutrient provides a source of energy the body can access quickly?

- ☐ Proteins  
*Wrong! Proteins are building elements for your body.*
- ☐ Lipids  
*Wrong! Lipids are a source of energy, but your body stores them and uses them later, when it needs them.*
- ☒ Carbohydrates  
*Well done! Carbohydrates are a source of energy your body uses immediately.*

### What should we eat before going on a one-kilometre run?

- ☐ Vegetables  
*Wrong! Vegetables are not a source of energy for your body.*
- ☒ Pasta  
*Well done! Pasta is rich in carbohydrates, a great source of energy for activities that only last a short time.*
- ☐ Ice cream  
*Wrong! Ice cream is rich in carbohydrates, but is not the best source of energy for activities that only last a short time.*

### Carbohydrates supply the body with a reserve of energy, which is essential for prolonged energy use.

- ☒ False  
*Well done! Carbohydrates are a source of energy that your body uses immediately.*
- ☐ True  
*Wrong! Your body stores lipids as a reserve of energy, ready to be used for activities that last a long time.*

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## Nutritional role

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*[11-13 years old and 14-16 years old]*

List two foodstuffs for each nutritional role.

**Function:**

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**Building:**

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**Energy:**

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## Answers

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### Nutritional role

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*[11-13 years old and 14-16 years old]*

List two foodstuffs for each nutritional role.

**Function:**

(Foods from the fruits and vegetables group)

**Building:**

(Foods from the . Meat, fish and eggs group and the dairy group)

**Energy:**




















(Foods from the cereals potatoes and pulses group, the fats groups and the sugary group)

## Water content

[14-16 years old]

Estimate the water content of the following foodstuffs.

Tomatoes, for example, contain a lot of water. They are in fact 90 to 95% water!

 Lemons __%	 Broccoli __%	 Cow's milk __%	 Apricots __%	 Melon __%
 Potatoes __%	 Olives __%	 Peas __%	 Eggs __%	 Bananas __%
 Avocados __%	 Camembert cheese __%	 Bread __%	 Emmental cheese __%	 Jam __%
 Butter __%	 Crackers __%	 Chocolate __%	 Oil __%	

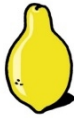

















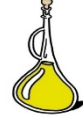
## Answers

### Water content

[14-16 years old]

Estimate the water content of the following foodstuffs.

Tomatoes, for example, contain a lot of water. They are in fact 90 to 95% water!

 Lemons 90%	 Broccoli 89%	 Cow's milk 87%	 Apricots 85%	 Melon 85%
 Potatoes 78%	 Olives 75%	 Peas 75%	 Eggs 75%	 Bananas 74%
 Avocados 67%	 Camembert cheese 51%	 Bread 40%	 Emmental cheese 35%	 Jam 33%
 Butter 15%	 Crackers 6%	 Chocolate 2%	 Oil 0%	