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2. Food and nutrients

2.3 The role of nutrients

2.3.4

Hydration, circulation and cleaning

WATER

Every nutrient plays a specific role in the body and each is vital for health. This is also true of water. Water does not provide energy but is the main component of the human body and is found in all cells. We refer to intracellular water to mean the water contained in cells and extracellular water to refer to the water that surrounds cells. On average, water represents 60% of body weight, but this proportion depends on age, weight and size. The thinner a person is, the higher the percentage of water. However, this proportion diminishes with age since body tissue dehydrates with age.

HYDRATION

Some people compare the body to a sponge which needs to be constantly soaked to ensure it does not dehydrate. The body constantly loses water through perspiration, excretion and even breathing. Although we can store energy, we cannot store water. This means that any loss of water has to be replaced by new supplies every day. Which is why we cannot survive very long without water. You cannot go without water for more than 2 to 5 days, as a loss of 20% of the water in the body can be fatal.

OTHER FUNCTIONS OF WATER

The role of water does not stop there. It takes part in numerous chemical reactions. It therefore plays an important role in body function. It also helps to keep body temperature constant via perspiration.

Keywords > Circulation

Water carries blood cells and nutrients. It carries the substances our cells need, such as vitamins and minerals, inside our cells.

Finally it helps clean the body by helping the kidneys eliminate waste through urine.

In summary, water can be considered as a separate substance. This substance is the main component of the human body and allows it to function. This 'multi-purpose' substance regulates, transports and cleans. This substance is so ordinary we sometimes forget just how important it is.

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Hydration, circulation and cleaning	
On average, what percentage of body weight is water?	Breathing eliminates water. O True
O 40%	O False
O 60% O 80%	Regarding the role water plays in your body, which of the following
Our cells contain water.	statements is false?
O True O False	O Water is involved in chemical reactions. O Water provides energy. O Water transports nutrients.
The proportion of water in the body is not determined by	Food provides the body with usable water.
O age O weight O mood	O True O False
Drinking water helps us avoid	Water helps cleanse the body.
O distillation O dehydration O depression	O True O False

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Answers

On average, what percentage of body weight is water?

O 40%

Wrong! It's more than that.

• 60%

Well done! That's right!

O 80%

Wrong! It's less than that.

Our cells contain water.

• True

Well done! Cells contain intracellular water.

O False

Wrong! Try again!

The proportion of water in the body is not determined by...

O age

Wrong! The older a person is, the more their skin dehydrates.

O weight

Wrong! The thinner a person is, the higher the proportion of water.

• mood

Well done! The proportion of water in your body does not depend on your mood.

Drinking water helps us avoid...

O distillation

Wrong! Nice try, but that's not right.

dehydration

Well done! Your body does not store water, so you have to keep up your water intake to compensate for water loss.

O depression

Wrong! Try again!

Breathing eliminates water.

• True

Well done! That's right. You can actually see this if you breathe on a cold window.

O False

Wrong! That's not the right answer.

Regarding the role water plays in your body, which of the following statements is false?

O Water is involved in chemical reactions.

Wrong! Water is essential for your body to function as it plays a part in chemical reactions.

Water provides energy. Well done! Water does not provide your body with energy, but is essential for your body to

with energy, but is essential for your body to function.

O Water transports nutrients.

Wrong! Water does transport nutrients into your cells.

Food provides the body with usable water.

• True

Well done! Food contains water and provides your body with 1 to 2 litres a day.

O False

Wrong! Try again!

Water helps cleanse the body.

• True

Well done! Water helps your kidneys do their work and the elimination of waste through urine.

O False

Wrong! That's not the right answer.