

4. The digestive system

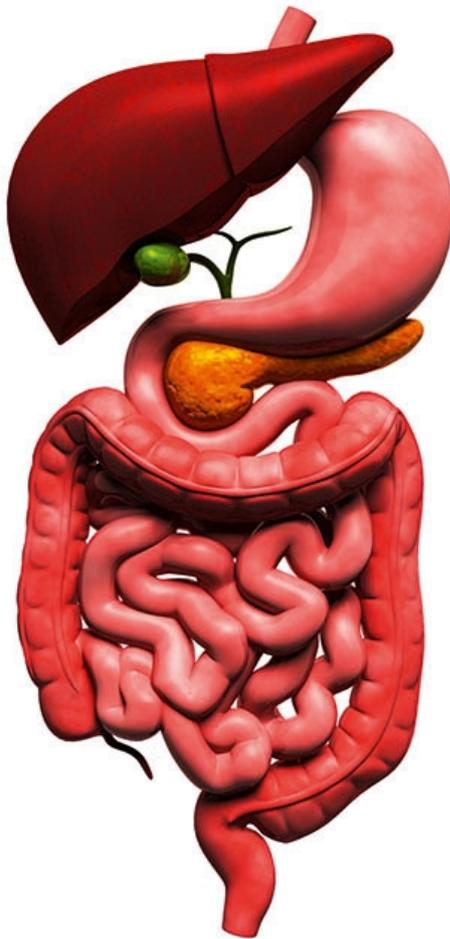
4.3 Historical representations of digestion

4.3.4

Today

DIGESTION

Nowadays, we are aware that digestion is a complicated process. What happens is that food is firstly ground, then moistened as it is chewed. At this point, carbohydrates start to be broken down by salivary enzymes. Once swallowed, food quickly travels down the oesophagus.



Contractions churn the alimentary bolus in the stomach, mixing it with the gastric juices. Together, this churning and stomach enzymes produce a kind of liquid which can penetrate into the small intestine. Pancreatic juices and bile complete the digestive process and enable nutrients to be absorbed. What has not been assimilated goes into the large intestine, and here water and minerals are absorbed by the body. Finally, waste materials are emptied away through the anus.

4.3.4 Today

We now know that digestion is not a sequence of mechanical and chemical transformations.

- False
- True

Today, we know that digestion is a very simple process.

- True
- False

Food is ground up and moistened in the mouth. This process is called...

- inhalation
- digestion
- mastication

Saliva begins to break down proteins.

- False
- True

The bolus travels through the stomach before reaching the oesophagus.

- True
- False

Food in the stomach is only transformed mechanically.

- True
- False

Pancreatic juice and bile help digest proteins, lipids and some carbohydrates.

- False
- True

Most digested nutrients are absorbed in the intestines.

- False
- True

What is not absorbed in the large intestine?

- Fibre
- Minerals
- Water

Waste products from digestion are eliminated via...

- the anus
- the large intestine
- the colon

Answers

We now know that digestion is not a sequence of mechanical and chemical transformations.

- False**
Well done! Even though knowledge continues to advance, the discoveries of the 20th century remain valid today.
- True**
Wrong! That is not the right answer.

Today, we know that digestion is a very simple process.

- True**
Wrong. A nice try, though!
- False**
Well done! On the contrary, digestion is a complex process comprising many steps.

Food is ground up and moistened in the mouth. This process is called...

- inhalation**
Wrong! Watch out, that would be the wrong track!
- digestion**
Wrong! Nice try, but here we are only talking about one of the steps in the digestion process.
- mastication**
Well done! Chewing is the first step in digestion.

Saliva begins to break down proteins.

- False**
Well done! Saliva does not begin to break down proteins, but it contains an enzyme which begins to break down starch, a complex carbohydrate.
- True**
Wrong! Proteins are broken down at a later stage of the digestion process.

The bolus travels through the stomach before reaching the oesophagus.

- True**
Wrong! Think about the order of the organs in your digestive tract.
- False**
Well done! That's right!

Food in the stomach is only transformed mechanically.

- True**
Wrong! There is another type of transformation too.
- False**
Well done! Digestion is a sequence of mechanical and chemical transformations.

Pancreatic juice and bile help digest proteins, lipids and some carbohydrates.

- False**
Wrong! Bile helps digest lipids, and pancreatic juice helps digest proteins and carbohydrates.
- True**
Well done! That's right! Bile takes charge of the lipids, and pancreatic juice focuses on the proteins and carbohydrates.

Most digested nutrients are absorbed in the intestines.

- False**
Wrong! Try again!
- True**
Well done! That's right!

What is not absorbed in the large intestine?

- Fibre**
Well done! Fibre is much too bulky to be absorbed; however, part of it is fermented and the rest exits your digestive tract via your anus.
- Minerals**
Wrong! Minerals are absorbed in your large intestine.
- Water**
Wrong! Water is absorbed in your large intestine.

Waste products from digestion are eliminated via...

- the anus**
Well done! This is the end of the journey for food that entered your mouth more than 20 hours previously.
- the large intestine**
Wrong! The large intestine and the colon are two names for the same organ. Waste matter is concentrated as it travels through it.
- the colon**
Wrong! The large intestine and the colon are two names for the same organ. Waste matter is concentrated as it travels through it.