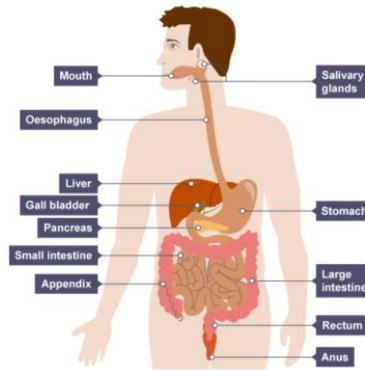


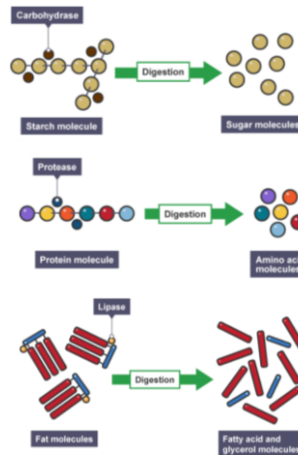
Keyword	Definition
Digestion	The breakdown of large insoluble food molecules into smaller soluble ones.
Digestive System	Organ system involved in breaking food down so that it can be absorbed into the bloodstream.
Absorbed	When a substance is taken in by something or moved across a barrier such as a cell membrane.
Amylase	An enzyme that can break down starch into simple sugars.
Lipase	Enzyme that breaks down lipids (fats & oils).
Carbohydrase	Enzyme that breaks down carbohydrates.
Protease	Enzyme that breaks down proteins.
Enzyme	A protein which catalyses or speeds up a chemical reaction.
Surface Area	The area of the surface of an organism or membrane.
Villi	Finger-like projections in the small intestine that provide a large surface area for the absorption of food.
Capillary	Tiny blood vessels with walls one-cell thick where exchange of materials occurs.
Bile	Substance produced in the liver. It emulsifies fats to prepare them for digestion.
Pancreas	Produces biological catalysts called enzymes which speeds up the digestive reactions.
Excretion	Process by which waste products from chemical reactions in an organism are removed.

The food we eat has to be broken down into other substances that our bodies can use. This is called digestion. Without this process, we could not absorb the food into our bodies and use it.



Organ	Function
Oesophagus	Also known as the gullet. Connects the mouth to the stomach. Food is pushed down using contractions of muscles.
Liver	Production of bile.
Stomach	Churns and mixes the food with hydrochloric acid and enzymes.
Pancreas	Produces biological catalysts called enzymes which speeds up the digestive reactions.
Small Intestine	Absorption of digested food into the bloodstream, production of enzymes to aid digestion.
Large Intestine	Absorption of excess water.
Rectum	Storage of faeces (undigested material) before excretion.
Anus	Where faeces are excreted (removed from the body).

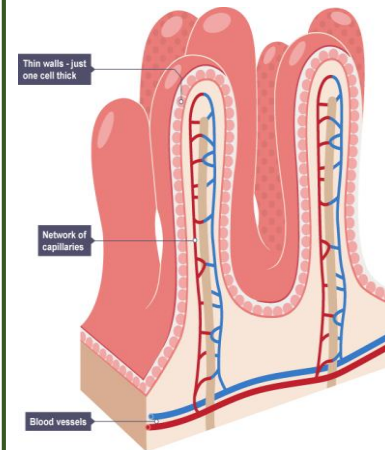
Enzymes are not living things. They are special proteins that can break large molecules into smaller molecules.



Minerals, vitamins and water are already small enough to be absorbed by the body without being broken down, so they're not digested.

Digestive enzymes cannot break down dietary fibre, which is why the body cannot absorb it.

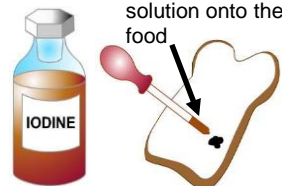
Adaptations of the Small Intestine



The small intestine is adapted for efficient absorption of digested food into the blood stream by:

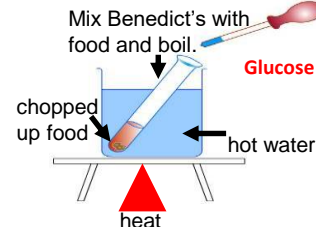
- Having a very large surface area.
- Surrounded by lots of blood capillaries.
- Thin walls (1 cell thick) for faster absorption.

Starch Test



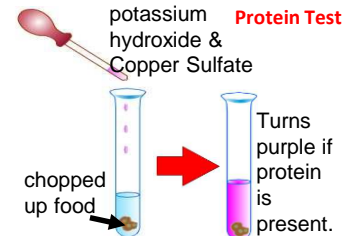
Drop iodine solution onto the food

Mix Benedict's with food and boil.



Glucose Test

potassium hydroxide & Copper Sulfate



Turns purple if protein is present.

Further Reading:

- <https://www.bbc.com/bitesize/guides/z9pv34j/revision/1>
- <https://www.bbc.com/bitesize/guides/zwqycdm/revision/1>