GCSE Biology 1.3 Digestion knowledge organiser

Why digest food?

The food we eat is made from large insoluble molecules. We need to be able to break these down in our digestive system into small soluble molecules which can move through the wall of the small intestine and into the blood to be carried around the body and to the cells.



A balanced diet

A balanced diet contains

- Proteins Build bodies
- Carbohydrates for energy
- Fats provide energy
- Minerals iron- for haemoglobin in blood
- Vitamins vit C- maintains healthy tissues
- Fibre provides bulk
- Water- essential for body processes and functions.

Excess amounts of any of these can cause health problems.

- Excess high energy foods will be stored as fat leading to obesity.
- Excess sugar can lead to type II diabetes, tooth decay and obesity
- Excess fat can lead to obesity, heart disease and circulatory disease.
- Excess salt can lead to high blood pressure.

Food tests

Food	Chemical used	Colour change
Starch	lodine	Brown to blue/black
Glucose	Benedict's	Blue to brick red
Protein	Biuret	Blue to violet



The digestive system







Waves of muscular contraction and relaxation force food along the oesophagus and through the gut. This is called peristalsis.



Pancreas - secretes all enzymes

Large intestine - absorption of water

Blood carries the digested food to the cells. Fatty acids, glycerol and glucose provide energy. Glucose could also be stored as glycogen. Amino acids are used to build new proteins.

Anus