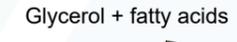


Why digest food?

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.

Food	Structure	Broken down by:	Enzymes produced by:
Carbohydrates	 Starch →  Glucose	Carbohydrase enzymes	Mouth, pancreas and small intestine
Proteins	 Protein →  Amino acids	Protease enzymes	Stomach, pancreas and small intestine
Lipids (fats)	 Fat →  Glycerol + fatty acids	Lipase enzymes	Lipase enzymes

A balanced diet

A balanced diet contains

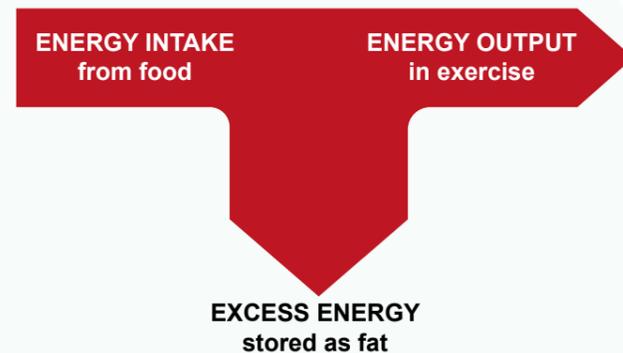
- Proteins - Build bodies
- Carbohydrates - for energy
- Fats - provide energy
- Minerals – iron- for haemoglobin in blood
- Vitamins - vit C- maintains healthy tissues
- Fibre - provides bulk
- Water- essential for body processes and functions.

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	Iodine	Brown to blue/black
Glucose	Benedict's	Blue to brick red
Protein	Biuret	Blue to violet



The digestive system

