

## 1. Nutrients

Nutrient	Where it is found	Role in the body
<b>Carbohydrate</b>	Potatoes, rice, pasta, bread	Main source of energy
<b>Lipids</b>	Oils, butter, cheese, meats	Provides energy and insulation
<b>Protein</b>	Meat, fish, dairy	Growth and repair of body tissues
<b>Vitamins and minerals</b>	Fruits and vegetables	Iron – makes red blood cells. Calcium – strengthens teeth and bones
<b>Water</b>	Fruit, vegetable and drinks	Needed in all cells and body fluids
<b>Fibre</b>	Fruit, vegetables and cereal grains	Provides bulk to food to keep it moving through the digestive system

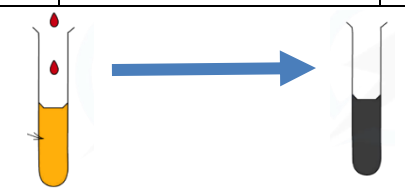
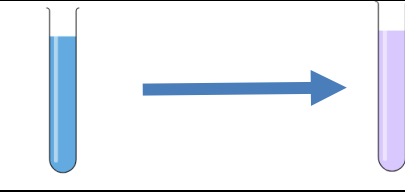
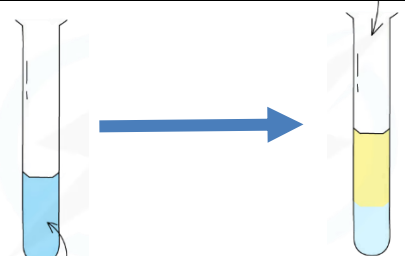
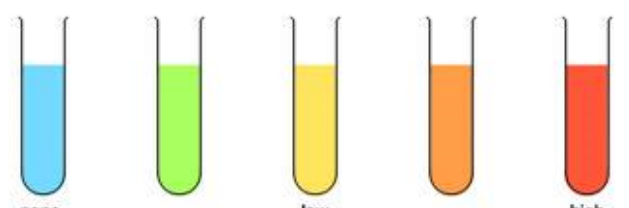
## 2. Effects of an unhealthy diet

A balanced diet involves eating the right amount of nutrients for your body to function.

Not eating enough of a nutrient can cause a deficiency (lack of) which can lead to disease.

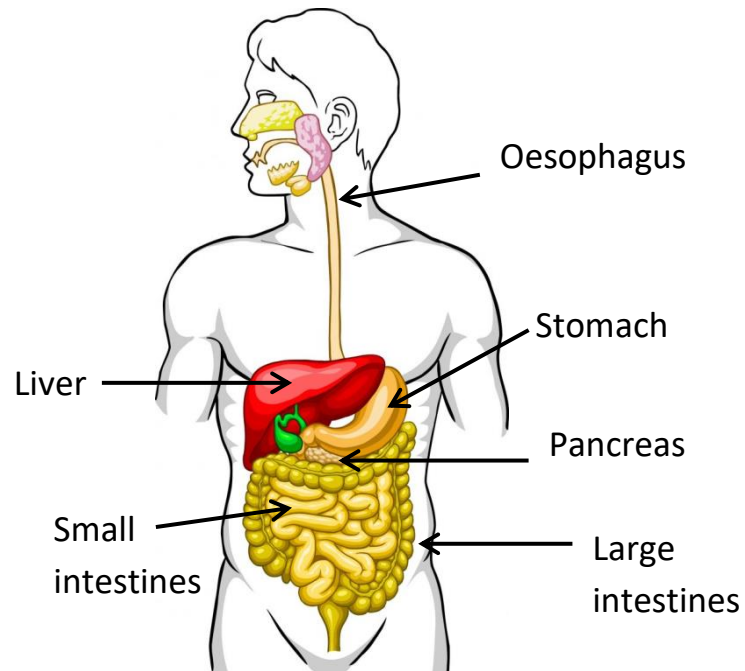
Under-eating	Over-eating	Deficiency	
Some people do not eat enough and become underweight.	Some people eat more than their body needs and become overweight	Some people do not eat enough of a particular nutrient.	
Risks	Risks	Diseases	
Suffer from health problems e.g. poor immune system	Heart disease	Iron	Anaemia
Lack of energy, tiredness	Stroke	Vitamin C	Scurvy
Likely to suffer from deficiency diseases	diabetes	Vitamin D	Rickets

## 3. Food tests

	Tests for	Food test	Positive result
1	<b>Starch</b>	Iodine	Turns blue/black
			
	Tests for	Food test	Positive result
2	<b>Protein</b>	Biuret's reagent	Turns purple
			
	Tests for	Food test	Positive result
3	<b>Ethanol</b>	Lipids	Turns cloudy
			
	Tests for	Food test	Positive result
4	<b>Sugars</b>	Benedict's solution	Turns yellow, orange and red
			

## 4. Digestive system

	Organ	Function
1	Oesophagus	Muscle contractions push food into the stomach.
2	Stomach	Hydrochloric acid and pepsin chemically digest food, stomach muscles churn the food.
3	Liver	Produced bile that is added into the first part of the small intestines called the duodenum.
4	Pancreas	Produces enzymes that are released into the small intestines to complete digestion.
5	Small Intestines	Chemical digestion continues and small soluble molecules are absorbed into the blood.
6	Large intestines	Water is removed from the waste faeces and absorbed back into the blood.



## 5. Enzymes

Enzymes are **biological catalysts** that speed up the digestion of large insoluble molecules to small soluble ones that can be absorbed into the blood.

Enzyme	Released from	Function
Amylase	Salivary glands, pancreas and small Intestines.	Breaks down starch into glucose.
Protease (Pepsin)	Stomach (pepsin), pancreas and small intestines.	Breaks down proteins into amino acids.
Lipase	Pancreas and small intestines.	Breaks down fats into fatty acids and glycerol.