



Nutrients are substances that are essential for maintaining our health and growth. We find them in the foods we eat. The main groups of nutrients are: carbohydrates, fats and proteins. Vitamins and minerals are also very important for our health.

Different foods contain different amounts of nutrients; some foods are claimed to be 'superfoods'. We are told they will slow down ageing, reduce depression and even increase our intelligence! However, there is little scientific evidence of this. Eating a varied diet full of lots of different nutrients is still the best way to maintain our health.

A healthy diet does not just include eating lots of nutrients. It is also important to eat foods that are produced sustainably and are good for the environment. Over the next 35 years, the world's population will increase to 9 billion and this will add to problems like global warming.

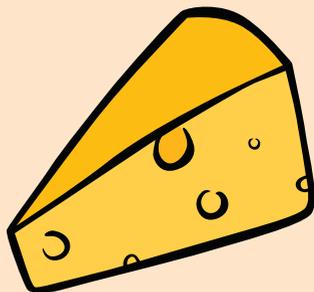
If we all try to eat foods that use less land and water, create less greenhouse gases (such as carbon dioxide, methane and nitrous oxide) and have a positive impact on our environment, this will help reduce the impact of food production on the planet.

FATS

Fats are a source of slow-release energy, and help us to absorb some vitamins.

Some fats are good for us. They help to build the cells in our bodies and send messages between them. Foods full of good fats (monounsaturated and polyunsaturated fats) include salmon, brazil nuts and olive oil.

Some types of fat are not good for us in large quantities. Saturated fats can cause fatty deposits to build around our arteries, making it difficult for blood to reach our organs. Foods high in saturated fats include biscuits, ice cream and cakes and these should be eaten in moderation.



VITAMINS AND MINERALS

The four micronutrients below are nutrients many young people are deficient in.

Iron

Iron is important for the production of red blood cells and the transport of oxygen around the body. Iron is found in meat, dried fruits and dark green leafy vegetables.

Riboflavin

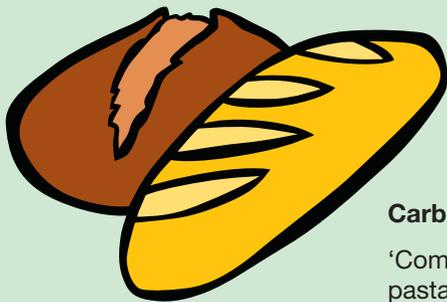
Riboflavin is a B vitamin that the body uses to help release energy from the food we eat and for our nervous system. Dairy products and fortified cereals are good sources of riboflavin, but these should be stored out of direct sunlight as UV light can destroy riboflavin.

Selenium

Selenium is a trace element, which means that our body only requires small amounts for health. Selenium plays an important role in our immune system and protecting our bodies from damage. Brazil nuts and meat are good sources of selenium.

Vitamin C

The body does not store vitamin C so we need to eat foods that contain it. For example, lots of fruits and vegetables including broccoli, peppers and oranges. Vitamin C helps with wound healing and the protection of cells in the body.



CARBOHYDRATES

Carbohydrates provide our bodies with energy.

‘Complex’ carbohydrates like starch, found in foods like pasta and potatoes, are broken down by the body more slowly. Wholegrain varieties of foods such as pasta and bread contain complex carbohydrates.

‘Simple’ carbohydrates are used by the body quickly e.g. sugars like glucose. Foods containing simple carbohydrates should be eaten in moderation.

These foods, along with beans and fruits and vegetables, are also high in fibre which is important for healthy bowel movements.



PROTEIN

Proteins contain amino acids. Our bodies use the amino acids to build and repair tissues in our body, including our muscles, skin, hair and nails.

Our bodies can't make all the essential amino acids that we need, so we need to get these from our diet. Some sources of protein are referred to as ‘complete’ protein as they contain all of the essential amino acids. These include chicken, eggs and other animal products

Some sources of animal protein are harmful to our environment. To make 1kg of beef, it takes about 15,000 litres of water – that's 1,500 buckets of water!





With special thanks to Dr Glenys Jones RNutr, Association for Nutrition and Suzanna Abraham, MRC Human Nutrition Unit for their specialist nutrition expertise and advice.



BIOCHEMICAL
SOCIETY



Royal Society of
Biology



THE
NUTRITION
SOCIETY
Advancing Nutritional Science