

Year 8 KNOWLEDGE ORGANISER - Nutrition

Food and drinks contains different **substances** that are needed to keep the body alive and healthy. These are called **NUTRIENTS**.

There are **seven** main classes of nutrients that the body needs. These are **carbohydrates, proteins, fats, vitamins, minerals, fibre and water**. They all have different **functions** in the body.

It is important that everyone consumes these seven nutrients on a daily basis to help them build their bodies and maintain their health

Key words:

Function – the job something does

Source – where it is found

Nutrients, MACRO and MICRO.

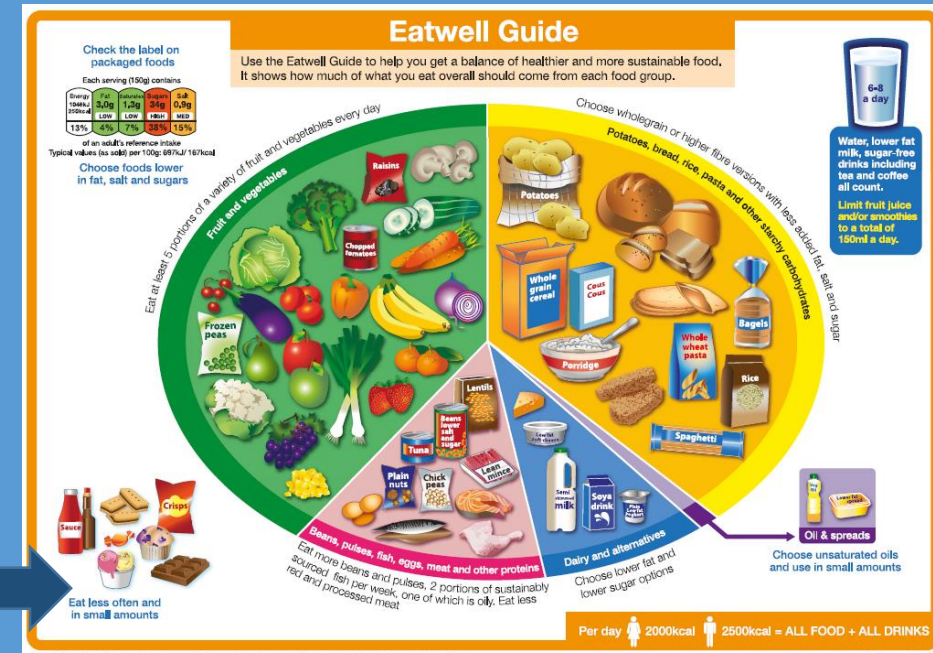


Nutrients are split into 2 groups: MACRO and MICRO

These are the MACRO nutrients and are needed in larger amounts by the body; carbohydrate, protein, fat.

The MICRO nutrients are vitamins and minerals and are needed in smaller amounts but still do essential jobs.

To help us get all the nutrients we need, we should eat a variety of food from the Eatwell Guide food groups. This is called a balanced diet and makes sure our body has got each of the nutrients needed so it performs at it's best – like putting the correct fuel in a car or motor bike!



• PROTEIN

- Proteins **build and repair the cells** in your body. They are the main component of muscle tissue and your organs. Almost ALL food provide protein but some are **GOOD** sources such as meat, fish, eggs and dairy whereas others are poorer sources such as celery and salad.



• FAT

- Fats store **energy** and provide **warmth and insulation** for your body. Any energy which is taken in but not used is converted by your body into fat. This is why it is important not to eat more than your body needs.

CARBOHYDRATE

The main function of carbohydrates is to give you **energy**. There are two types of carbohydrates

Simple Carbohydrates (sugars)

These are found naturally in fruit and milk. However, cakes and sweets contain **refined** or **processed** sugars. They provide your body with a **quick source of energy**; a BOOST which doesn't last long.

Complex Carbohydrates (starches)

These are found in potatoes, rice and oats. They provide your body with a **longer term, steady supply** of energy throughout the day.



MINERALS and VITAMINS

These are naturally occurring compounds that your body needs in order to remain healthy.

They are particularly useful for our hair, skin, nails, bones, blood and immune system.

Only small amounts of vitamins and minerals are needed each day. Too much can be bad for us and too little can cause diseases



Think of it like Goldilocks and the Three Bears: not too little, not too much, but just *the right* amount of vitamins and minerals are necessary to keep the body in tip top condition!



Each vitamin has a name but to make it easier they are labelled with letters. The most common ones are: A, D, E, K, B and C.

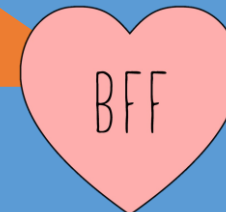
DIETARY SOURCES OF MINERALS



Minerals are needed for general good health. There are lots of different minerals too but the common ones are CALCIUM and IRON.

Some vitamins and minerals WORK together (Vitamin D and calcium, Vitamin C and iron.)

Your body needs Vitamin D to absorb calcium, which keeps your bones, teeth and muscles strong.



Vitamin C helps iron absorption; iron makes haemoglobin which carries the oxygen from the lungs to the rest of the body.

The functions of vitamins and minerals

Calcium from milk, cheese and some cereals help us to have strong bones and teeth.



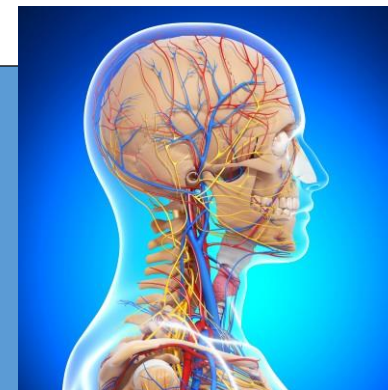
Vitamin A helps us to see well. It also helps our skin and hair to be strong and healthy.



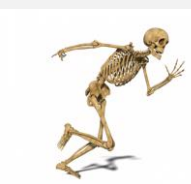
Vitamin C helps to heal cuts and prevents skin problems. It also helps our immune system



The Vitamin B group have 8 different ones. They have lots of functions from helping our brains to work, helping our nerves to function, making DNA and preventing spina bifida in babies.



Vitamin D helps our bones to grow strong and prevents rickets (bent leg bones)



Iron from red meat or spinach, beans and lentils helps our red blood cells carry oxygen so that we are not anaemic



Vitamin K is needed for our blood to clot.

