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Nutrients: Vitamins & Minerals

Food and Nutrition



Vitamin A



Vitamin A has several important functions, these include:

- Helping your body's natural defence against illness and infection (the immune system) work properly
- Helping vision in low light
- Keeping skin and the lining of some parts of the body, such as the nose healthy

Good sources of vitamin A (retinol) include:

- Cheese
- Eggs
- Oily fish

Beta-Carotene is converted into vitamin A in the body. The main food sources of beta-carotene are:

- yellow, red and green (leafy) vegetables, such as spinach, carrots, sweet potatoes and red peppers
- yellow fruit, such as mango, papaya and apricots

B Vitamins and Folic Acid

There are eight B vitamins that play a role in the body. They support metabolism and contribute to the body's ability to produce energy from food.

B vitamins are:

- thiamin (vitamin B1)
- riboflavin (vitamin B2)
- niacin (vitamin B3)
- pantothenic acid
- vitamin B6
- biotin (vitamin B7)
- folate and folic acid
- vitamin B12

To find out more about what each of these vitamins can do for our body and their foods sources see: [Vitamins and minerals - B vitamins and folic acid - NHS](#)



Folic acid is important in red blood cell formation and for healthy cell growth and function.

Good sources include: Leafy green vegetables, beans, citrus fruits and fortified foods e.g. breakfast cereals.

Folic acid also reduces the risk of neural tube defects in early pregnancy such as spina bifida.

As it can be difficult to eat enough folate rich foods, women planning a pregnancy are advised to take a daily supplement containing 400 micrograms of folic acid until the 12th week of pregnancy.

Vitamin C

Vitamin C has several important functions.

These include:

- helping to protect cells and keeping them healthy
- maintaining healthy skin, blood vessels, bones and cartilage
- helping with wound healing
- Supports our body to fight infection and support a healthy immune system.

Good sources include:

- citrus fruit, such as oranges and orange juice
- peppers
- strawberries
- blackcurrants
- broccoli



Vitamin D

Vitamin D helps regulate the amount of calcium and phosphate in the body.

These nutrients are needed to keep bones, teeth and muscles healthy.

The main source of vitamin D is sunlight, but can also be found in:

- oily fish – such as salmon, sardines, herring and mackerel
- red meat
- liver (liver is not recommended for women who are pregnant due to the high vitamin A content. Vitamin A can be harmful to the developing baby)
- egg yolks



Vitamin D Supplements

Between late March or early April to the end of September, most people can make all the vitamin D they need through sunlight on their skin and from a balanced diet.

During the autumn and winter, the sun is not strong enough for the body to make vitamin D.

It's difficult for people to get enough vitamin D from food alone, so everyone should consider taking a daily supplement containing 10 micrograms of vitamin D during the autumn and winter.

Adults and children over 4 may also benefit from taking a daily supplement containing 10 micrograms of vitamin D throughout the year if they:

- are not often outdoors – for example, if they're frail or housebound
- are in an institution like a care home
- usually wear clothes that cover up most of their skin when outdoors
- people with dark skin – for example people from African, African-Caribbean or south Asian background

Vitamin E

Vitamin E helps maintain healthy skin and eyes and strengthen the body's natural defence against illness and infection (the immune system).

Good sources include:

- plant oils – such as rapeseed (vegetable oil), sunflower, soya, corn and olive oil
- nuts and seeds
- wheatgerm – found in cereals and cereal product



Vitamin K

Vitamin K is a group of vitamins that the body needs for blood clotting, helping wounds to heal.

Vitamin K is found in:

- green leafy vegetables – such as broccoli and spinach
- vegetable oils
- cereal grains
- Small amounts can also be found in meat and dairy foods.



Calcium

Calcium has several important functions

These include:

- helping build bones and keep teeth healthy
- regulating muscle contractions, including your heartbeat
- making sure blood clots normally

Sources of calcium include:

- milk, cheese and other dairy foods
- green leafy vegetables – such as kale and okra



Plant based drinks

- Fortified and unsweetened (without free sugars or non-sugar sweeteners) almond, oat and soya drinks are an acceptable alternative to cows' milk.
- Plant-based drinks should be fortified with calcium, vitamin D, vitamin A, riboflavin, vitamin B12, and iodine at levels comparable with those found in semi-skimmed cows' milk.

[Reference: SACN and COT assessment of the health benefits and risks of consuming plant-based drinks: summary - GOV.UK](#)

Iron

Iron is important in making red blood cells, which carry oxygen around the body.

A lack of iron can lead to iron deficiency known as anaemia. Iron deficiency anaemia can cause tiredness, poor concentration and reduced appetite and commonly affects infants (6-12 months), and teenage girls due to menstruation.

Good sources of iron include:

- Liver, red meat
- beans, such as red kidney beans, edamame beans and chickpeas
- nuts



Trace Minerals

Trace minerals or micro-minerals are essential for human health and development, they are needed in smaller amounts and can be found in a balanced diet. These include:

- **Chromium:** Wholegrains, nuts, seeds and cheese.
- **Copper:** Beef, fruits, vegetables, nuts and beans.
- **Fluoride:** fish, some teas and water.
- **Magnesium:** Plants.
- **Iodine:** Seafood and dairy products.
- **Selenium:** Grains, meat and seafood.
- **Zinc:** Meat, fish, vegetables and some grains.



Vitamins and Minerals

Vitamins and minerals are nutrients your body need to work properly and stay healthy.

If we aim to eat a balanced diet with plenty of variety, we should consume all the vitamins and minerals we need to live a healthy life. In some cases, we may need to take vitamin supplements to support us to maintain good health. These include those related to:

- **Health conditions:** Some health conditions can make vitamin absorption very difficult.
- **Age:** In later life especially those who are disabled or chronically ill may need to take supplements to support them.
- **Pregnancy:** Pregnant women should take folic acid to support the growth of their babies.
- **Sun Exposure:** all adults and children should consider taking a daily supplement containing 10 micrograms of vitamin D during the autumn and winter. Adults and children over 4 who get little sunlight, live in care settings, keep most of their skin covered outdoors, or have darker skin are recommended to take a daily 10-microgram vitamin D supplement throughout the year.
- **Other factors** such as heavy menstrual cycles, lifestyle choices and dietary choices may require supplementation.

Further information on vitamins and minerals: <https://www.nhs.uk/conditions/vitamins-and-minerals/>



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