

Vitamins and minerals

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This article is for people who want to know about vitamins and minerals. It discusses whether people have different needs depending on gender and age.

What are vitamins?

Vitamins are nutrients that everyone needs in small amounts for the body to work properly. Different vitamins have different functions. For example, some enzymes need particular vitamins to work. Your body can't make most vitamins apart from vitamin D, so you have to get them from the food you eat.

There are two types of vitamins:

- water-soluble vitamins - these can't be stored in your body and need to be replaced regularly in your diet
- fat-soluble vitamin - these can be stored in your body, but should still be part of a healthy diet

Water-soluble vitamins (such as vitamins B6, B12, C and folic acid) are found in fresh fruit and green vegetables. It's best to eat green vegetables raw, steamed or grilled rather than boiled because the vitamins can easily be destroyed by cooking.

What are minerals and trace elements?

Minerals and trace elements are inorganic elements that are needed in small amounts for your body to function. They are as essential as vitamins and your body needs to get them from the food you eat. For example, you need:

- calcium to make strong bones
- sodium for fluid balance and nerve function
- iron for oxygen transport in the blood and energy metabolism
- iodine for thyroid hormone function

Minerals and trace elements are mainly found in meat, cereals, fish, milk and dairy foods, vegetables, dried fruit and nuts.

How much do I need?

Nutritional needs vary from person to person, depending on gender, age and activity levels.

The Department of Health gives guidance on the correct levels of nutrients in the diet although these are not exact recommendations. They are called dietary reference values (DRVs) and are usually listed on food and supplement packets. DRVs show the amount

of energy or an individual nutrient that a group of people of a certain age range (and sometimes gender) need for good health.

How can I get enough vitamins and minerals?

You should be able to get all the vitamins and minerals you need by eating a healthy balanced diet. You should aim to eat at least five servings of fruit and vegetables each day. Your meals should contain starchy foods (such as bread, potatoes and pasta) and moderate amounts of protein-rich foods (such as dairy products, meat, fish and pulses).

What about supplements?

Generally, you shouldn't take vitamin supplements unless your doctor or dietician has told you to for medical reasons. For example, you may need an iron supplement if you have anaemia.

Some vitamins, particularly fat-soluble vitamins, can be harmful in excessive quantities. For example too much vitamin A can cause headaches, skin changes and damage your liver. If you are pregnant it can harm your unborn baby.

Vitamins and minerals at different life stages

Special circumstances mean that we sometimes have to rethink our diets.

People over 50

It's especially important to eat plenty of iron-rich food to stay healthy, such as red meat, sardines, eggs and wholemeal bread. This lowers the risk of developing iron deficiency anaemia. Iron deficiency anaemia can cause tiredness and weaken your immune system. Tea interferes with your body's ability to absorb iron and other nutrients, so if you enjoy drinking tea don't have it with or immediately after a meal. Instead, drink fruit juice as this will actually help your body to absorb iron. Aim to eat five servings of fruit and vegetables each day to keep your immune system healthy.

Osteoporosis is a major health issue for older people, particularly women, so it's vital to have plenty of calcium. Dairy products, such as milk, cheese and yoghurt, are an excellent source of calcium as is canned fish with bones, such as pilchards and sardines.

If you think you may need a food supplement, talk to your doctor. He or she will check that you are getting the right dose and ensure any supplements don't affect your medication.

Pregnant women

It's especially important to eat a healthy, balanced diet when you are pregnant. Your body's iron supplies can drop during pregnancy, so iron is a vital mineral for mothers-to-be.

Red meat, pulses, fortified breakfast cereals and green leafy vegetables are all good sources of iron. Drink fruit juice with your meals to help your body absorb iron.

It's also important to eat plenty of folate rich foods (the natural form of folic acid). Good sources include broccoli, oranges and wholegrain foods. Eating plenty of dairy foods will provide lots of calcium for your baby's growing bones.

As well as eating a healthy diet, the Food Standards Agency (FSA) recommends that women take a 400µg (micrograms) folic acid supplement while trying for a baby and during the first three months of pregnancy. This helps to reduce your baby's risk of spina bifida and other neural tube defects. The FSA also suggests you take a 10µg vitamin D supplement while pregnant and while breastfeeding. Speak to your GP or midwife if you are in any doubt about which supplements are safe to take during pregnancy.

Vegetarians and vegans

It's perfectly possible to get all the vitamins and minerals you need from a vegetarian diet. You should aim to:

- eat five servings of fruit and vegetables every day
- eat plenty of iron-rich foods (such as green vegetables and fortified breakfast cereals)
- base your meals on starchy foods (such as bread, rice and pasta) and a good source of protein (such as dairy or soya products, pulses and nuts)
- eat seeds and nuts to help keep your selenium levels up
- drink soya, rice or oat drinks fortified with calcium to keep your calcium levels up

Key points

- A healthy balanced diet should provide all the vitamins and minerals your body needs.
- You should aim to eat at least five servings of fruit and vegetables each day.
- Speak to your doctor or a registered dietician for advice if you think you are not getting enough vitamins and minerals to support your health.

Further information

Beat (formerly the Eating Disorders Association)

www.b-eat.co.uk

Weightwise

www.bdaweightwise.com