

Iron

What is iron and why do we need it?

Iron is a mineral found in every cell in the body. It is an essential part of haemoglobin in red blood cells, which carries oxygen around the body. If you don't have sufficient levels of iron, your body can't make enough healthy haemoglobin to carry the oxygen, meaning the cells all over your body will not get adequate levels of oxygen. This leads to fatigue which can affect everything from your brain function to your immune system's ability to fight off infections.

Why iron is important for women

How much iron you need each day depends on your age, gender, and overall health. Iron is not excreted from the body in urine or faeces, but it is lost in blood, sweat and other secretions.

Women need more iron than men during the years that they have periods because they lose iron in menstrual blood each month. That's why women from ages 19 to 50 are recommended more than double the amount of iron than men.

After menopause, a woman's iron needs drop as her menstrual cycle ends and recommendations of iron requirements are then the same as for men. If you are still having periods over 50 years, iron requirements for menstruating women still apply.

If your periods stop earlier than 50 years (as they do for many women) your needs would be the same as for over 50s.

The hormone estradiol can interfere with how the body metabolises iron. Many menopausal women can also have low iron even if they are not having periods.

How much iron should I have every day?

The NHS recommends daily iron intake to be:

14.8mg a day for women aged 19 to 50, or older if still having periods

8.7mg a day for men, and women over 50 years who are no longer having periods

Too little iron – iron deficiency anaemia

Many people's diet does not contain adequate sources of iron, however despite this, 95% of the UK population has enough iron in their blood to not be considered iron deficient.

Iron deficiency anaemia is caused by a lack of iron, often because of blood loss. Girls and women of reproductive age are particularly at risk, especially if they have heavy periods.

For men, and for women whose periods have stopped, iron deficiency anaemia can be a sign of unrecognised or unseen blood loss. This can be due to a number of conditions such as inflammation or ulcers in the stomach or duodenum (the upper part of the small intestine), due to medications such as ibuprofen or aspirin or a common bacteria in the stomach called 'H pylori'. It can also be caused by 'silent' bleeding from the bowel due to a polyp or even a growth, or from inflammation of the bowel (colitis). On rare occasions, visible bleeding from piles can cause iron deficiency.

Finally, coeliac disease should also always be kept in mind; this affects approximately 1 in 100–200 people around the world, depending on where you are from, can often cause no symptoms at all and can present with iron deficiency. Any other conditions or actions that cause blood loss could lead to iron deficiency anaemia.

People often don't know they have anaemia until some of the following symptoms appear: looking pale, feeling fatigued, difficulty exercising, feeling short of breath, having cold hands and feet, having brittle nails or hair loss, or sores at the corner of the mouth or on the tongue.

Diagnosing iron deficiency anaemia usually requires a blood test and it is treated with iron tablets prescribed by a GP, and by eating iron-rich foods. It is always important to try to identify the cause of iron deficiency – be it diet or heavy periods – as unexplained iron deficiency should be investigated further.

If left untreated, iron deficiency anaemia can make you more at risk of illness and infection, as your immune system will not be functioning at 100%, it may also increase your risk of developing complications that affect the heart or lungs, such as an abnormally fast heartbeat (tachycardia) or heart failure.

Too much iron and iron supplements

It is difficult for adults to overdose on iron just from food and taking supplements in the recommended amount because an adult body has systems in place to regulate the amount of iron it absorbs.

Unlike other supplements however, when it comes to iron, more is definitely not better. Adults should not take any more than 45mg of iron a day, unless they are being treated with iron under close medical supervision. Taking high doses of iron supplements can cause nausea, vomiting, and stomach pain.

People with certain genetic disorders (such as hemochromatosis) are at risk of iron overload as their body does not regulate and control iron absorption from their diet in the normal way, and iron stores build up gradually over time. Menstruating women are relatively protected from this due to monthly blood loss.

If you are taking iron supplements, they must be kept well away from children as an overdose of iron in children can be toxic. Symptoms of iron poisoning include severe vomiting, diarrhoea, abdominal pain, dehydration, and bloody stools.

Food sources of iron

Aiming to get your daily iron requirements from food is the best way to ensure your body has the iron it needs, as many of the foods rich in iron also contain other vitamins and minerals that work synergistically in your body to help it absorb and use the iron.

The most easily absorbable form of iron is from meats, especially liver and kidney, and from seafood, particularly oysters, mussels and sardines. However, meat and seafood need to be eaten with vegetables rich in vitamin C, to help your body absorb the iron. Although meat and seafood are rich in iron they should be eaten in moderation and be balanced out by eating plenty of plant-based sources of iron as well.

Other good sources of iron are:

- ✓ almonds, walnuts, sesame seeds, sunflower and pumpkin seeds
- ✓ lentils, red kidney beans, cannellini white beans, black beans, soya beans
- ✓ dried apricots, dried figs, raisins, prunes
- ✓ green leafy vegetables such as watercress and kale
- ✓ Jerusalem artichokes and leeks
- ✓ parsley and thyme
- ✓ jacket potatoes

- ✓ tomato paste
- ✓ eggs
- ✓ cereals and bread with added iron (fortified)

While these plant-based foods are relatively high in iron, they are still low compared to animal-based proteins like meat and shellfish. So for example, 2 full heads of broccoli (not florets) will give you 4.4g of iron or 13 tablespoons of lentils (160g) will give you 5.6 g of iron. So it can be challenging to meet your iron requirements daily if you are following a fully plant-based diet. Some foods and drinks make it harder for your body to absorb iron, so if you are purposefully eating iron-rich foods, you may want to have less of these:

- x tea
- x coffee
- x milk and dairy foods
- x foods with high levels of phytic acid, such as wholegrain cereals

Iron supplements

It may be beneficial to take an iron supplement, particularly if you are still having periods, or if you are not getting enough iron in your diet. You may be advised to take a supplement if you have been diagnosed as iron deficient anaemic, and this may be more than the recommended daily requirement. Taking more than the daily recommendation is not advised without medical supervision.

Iron supplements can cause side effects, the most common one being stomach upset or nausea; other side effects are diarrhoea, dark stools, or constipation. Adding extra fibre to your diet or taking a stool softener remedy can help relieve the constipation.

Side effects may be minimised if you start with a low dose of iron and then gradually increase the dose to the daily recommended amount. You can also try taking the supplement with food.

Iron supplements can decrease the effects of certain medications, including those for treating restless leg syndrome and thyroid problems. Reflux medications can reduce the amount of iron that the body absorbs from food and supplements.

It may be worth discussing iron supplements with your doctor, if you take any prescription medication.

Getting the right balance

The best way to achieve optimal levels of iron is through your diet, rather than with the use of supplements. This minimises the risk of iron overload and ensures good iron intake, as well as giving your body other nutrients that will help you absorb the iron. It is important to have a balance of plant-based sources of iron as well as the iron-rich sources from meat or seafood.

If you think you may be lacking in iron because you are experiencing some of the symptoms listed, speak to your healthcare professional and ask to have your iron checked.

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