

## Iron deficiency - adults

Iron is an important dietary mineral that is involved in various bodily functions, including the transport of oxygen in the blood. This is essential in providing energy for daily life. Iron deficiency means less oxygen is delivered to the cells. This can lead to fatigue, tiredness and decreased immunity.

Keeping your iron levels within healthy limits is important. In some cases, supplements may be required. However, too much iron in the body can build up and result in toxicity and even death. Don't self-diagnose and don't take iron supplements unless advised by your doctor.

### Iron deficiency is a common health problem

Iron deficiency is common. High-risk groups include menstruating women, pregnant women, babies and toddlers, teenage girls and female athletes. Without intervention, a person whose dietary intake of iron is inadequate to meet their body's needs will eventually deplete their iron stores and develop iron deficiency anaemia. It is important that you see your doctor if you suspect you may be iron deficient.

### Causes of iron deficiency

Some of the common causes of iron deficiency in adults include:

- **Inadequate dietary intake** – the two types of iron include haem iron (found in animal foods) and non-haem iron (from plant products). The body absorbs haem iron much more easily than non-haem iron. There are many reasons why the dietary intake of iron could be inadequate, including a poorly balanced vegetarian diet, chronic fad dieting or limited access to a wide range of fresh foods – for example, as a result of living in remote areas or having a low income.
- **Blood loss** – iron deficiency easily occurs in situations of chronic blood loss. Common causes include heavy menstrual periods, regular blood donation, chronic disorders that involve bleeding (such as peptic ulcers, polyps or cancers in the large intestine) and certain medications, particularly aspirin.
- **Increased need** – the adolescent growth spurt, pregnancy and breastfeeding are situations when the body requires more iron. If this increased need isn't met, a deficiency can quickly occur.
- **Exercise** – athletes are prone to iron deficiency because regular exercise increases the body's need for iron in a number of ways. For example, hard training promotes red blood cell production, while iron is lost through sweating.
- **Inability to absorb iron** – healthy adults absorb about ten to 15 per cent of dietary iron, but some people's bodies are unable to absorb or use iron from food.

### A gradual decline in iron

Every red blood cell contains haemoglobin, a complex protein that carries oxygen. Haemoglobin is partly made from iron and accounts for about two thirds of the body's iron supply. The body stores iron for use during times when dietary intake is inadequate.

If your need for dietary iron isn't met, your body's iron stores will decline over time due to:

- **Iron depletion** – haemoglobin levels are normal, but the body only has a small amount of stored iron, which will soon run out. This stage usually has no obvious symptoms.
- **Iron deficiency** – stored and blood-borne iron stores are low and haemoglobin levels have dropped below normal. You may experience some symptoms, including tiredness.

- **Iron deficiency anaemia** – haemoglobin levels are so low that the blood is unable to deliver enough oxygen to the cells. Symptoms include looking very pale, breathlessness, dizziness and fatigue. Reduced immune function and impaired growth and cognition can also be symptoms.

## Treatment for iron deficiency

Your iron status is easily checked by a blood test.

Treatment depends on your iron status and may include:

- **Treatment for an underlying problem** – it is very important that the cause of the iron deficiency is investigated and, if it has a medical cause, that it be treated appropriately.
- **Iron depletion** – information on iron-rich foods is given. Another blood test is taken around six months later to check that your iron level has improved.
- **Iron deficiency** – dietary advice is given and is closely monitored. Iron-rich foods are encouraged, while foods and drinks such as bran, tea and coffee that can interfere with iron absorption are not recommended. Iron status is regularly reviewed and supplements may be prescribed.
- **Iron deficiency anaemia** – the diet is targeted as for iron deficiency and iron supplements are prescribed. It may take six months to one year for the body to restock its iron stores. Your iron levels are regularly reviewed with blood tests.

## Don't self-diagnose iron deficiency

Taking iron supplements when you feel tired and run down will not help unless you have actually been diagnosed with iron deficiency. There may be another cause for your symptoms.

Since iron supplements are available over the counter, it can be tempting to self-diagnose, but this would be a mistake for many reasons, including:

- Fatigue, paleness, dizziness and breathlessness are symptomatic of many other conditions and disorders, not just iron deficiency anaemia. Some of these other conditions are serious. Generally speaking, seeking treatment in the early stages of a disease offers a greater chance of recovery. You may waste valuable time if you self-medicate rather than seeing your doctor.
- The supplements won't alleviate your symptoms if you don't have iron deficiency anaemia. You're spending money unnecessarily on tablets you don't need.
- Unnecessary iron supplementation can interfere with your body's absorption of other minerals, including zinc and copper.
- The body doesn't excrete (get rid of) excess iron very well and it can build up in body tissues and organs, such as the liver and heart, when normal 'storage sites' are full. If this happens, you're in danger of overloading your body.
- Doses of iron prescribed for iron deficiency anaemia in adults are associated with constipation, nausea, vomiting and diarrhoea, especially if supplements are taken on an empty stomach.
- About one in 300 people have haemochromatosis, which is an inherited disorder that prompts the body to absorb more iron than normal. Excess iron damages the body's tissues and increases the risk of cancers and heart disease. People with such a condition need to limit how much iron they consume.

## Iron can be toxic

Iron overdose is poisoning that occurs when you take an excessive amount of supplements that contain iron. Iron is toxic in large amounts and can be fatal at high doses. Children are especially at risk as they commonly mistake the red tablets for lollies.

Iron supplements must be kept tightly capped and away from children's reach. If you suspect iron overdose, call your doctor or the Victorian Poisons Information Centre on 13 11 26 immediately or visit your local hospital emergency department.

## Iron-rich foods

Iron absorption by the body can be affected by the amount and type of iron consumed, dietary factors that enhance or inhibit iron absorption and a person's need for iron (when the body is low in iron, it absorbs a higher percentage from food). Absorption of iron from food is about 18 per cent from a typical western diet (including animal foods) and about ten per cent from a vegetarian diet.

Consult with your doctor for more information about building iron into a healthy diet. Some suggestions include:

- High-risk groups such as vegetarians, adolescent girls and women athletes need to eat iron-rich foods each day (combined with foods that are high in vitamin C).
- Wholegrain cereals, meat, poultry and fish are good sources of dietary iron.
- Liver is an especially rich source of iron, but **pregnant women should avoid this source because of its high content of vitamin A.**
- Choose iron-fortified breakfast cereals and breads.
- Vegetarians who exclude all animal products from their diet may need almost twice as much dietary iron each day as non-vegetarians. Sources include dark green leafy vegetables, such as spinach, broccoli, prunes, dried apricots, raisins, nuts, seeds, dried beans and peas, and iron-fortified cereals, breads and pastas.
- Vitamin C increases iron absorption, so eat more brightly coloured fruits and vegetables.
- Cut back on the amount of tea and coffee you drink, especially around mealtimes, since the tannins in tea and coffee bind to the iron and interfere with absorption.

## Where to get help

- Your doctor
- An Accredited Practising Dietitian, contact the Dietitians Association of Australia
- Victorian Poisons Information Centre Tel. 13 11 26 – seven days a week, 24 hours a day – for advice about poisonings, suspected poisonings, bites and stings, mistakes with medicines and poisoning prevention advice.

## Things to remember

- Common causes of iron deficiency in adults include inadequate dietary intake, chronic blood loss, times of increased need such as pregnancy, and vigorous exercise. For some people, an inability to absorb iron may be the cause.
- Treatment for iron deficiency anaemia includes adding iron-rich foods to the diet and may also mean taking iron supplements for up to 12 months under medical supervision.
- Don't take iron supplements unless advised by your doctor.

**This page has been produced in consultation with, and approved by:**

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