



# Iron deficiency anaemia

**This information sheet from Great Ormond Street Hospital (GOSH) explains the causes, symptoms and treatment of iron deficiency anaemia and where to get help.**

Anaemia is a very common condition where the number of red blood cells or the amount of haemoglobin in red blood cells is less than normal. Red blood cells contain haemoglobin, which is the substance that makes blood red. Its main purpose is to carry oxygen around the body. If the body does not receive enough oxygen, various symptoms occur. These include tiredness, weakness and lack of energy. If the anaemia becomes more severe, it can become life threatening.

**Iron deficiency anaemia is a specific type of anaemia caused by a lack of the mineral iron in the body. Iron is important in the formation of haemoglobin so a reduced iron level causes a reduced haemoglobin level in the blood.**

There are many other types of anaemia that affect children, some of which are extremely rare and explained further in our Rare anaemias information.

## What causes iron deficiency anaemia?

Iron deficiency anaemia is the most common form of anaemia. Iron is present in many foods that we eat, such as red meat, fish and leafy green vegetables. If someone's diet does not contain enough of these foods, they can develop iron deficiency anaemia.

It can also be caused if the body does not absorb iron from the food that we eat for example, this can occur if someone drinks a lot of cow's milk as this blocks iron absorption.

It can also develop because of long-term blood loss such as might occur in some girls when they start to have periods if they cannot replace the iron lost in periods.

## What are the signs and symptoms of iron deficiency anaemia?

Some children with mild anaemia do not show any symptoms at all, but common signs and symptoms include pale skin, lack of energy and breathlessness.

## How is iron deficiency anaemia diagnosed?

Iron deficiency anaemia is usually diagnosed using blood tests. The doctors will take a small sample of blood and send it to a laboratory. The test will count the number of each type of blood cell present in a sample (full blood count) and then check how much haemoglobin is contained in the red blood cells. They may also carry out other tests to see how much iron is contained in the haemoglobin. All of these test results provide information to the doctor about whether anaemia is present and if so, how severe it is.

If a child has anaemia, further tests may be needed to work out what is causing the anaemia if iron deficiency anaemia is unlikely. Rarely, a sample of bone marrow may be taken to see if red blood cells are forming as they should.



## How is iron deficiency anaemia treated?

The most common treatment is a course of iron tablets or liquid to be taken by mouth. Although iron is best absorbed on an empty stomach, taking it this way commonly causes a feeling of sickness. This can be prevented by taking it with some food and vitamin C (for example in orange juice) which increases the absorption. Iron absorption is reduced by milk, tea, coffee and certain medicines, which should not be taken at the same time. Children taking iron supplements will have black stools. There are ways to increase the amount of iron in the diet as well as medication.

Foods rich in iron include:

- Meat
- Beans and lentils
- Eggs
- Fish
- Apricots, prunes and raisins
- Leafy green vegetables
- Oatmeal
- Tuna

Giving young children fortified formula and/or cereal is also a useful way of boosting iron intake. If you have any questions about how to improve your child's iron intake, you could ask for a referral to a dietician either in your local community or at your local hospital.

## What happens next?

Iron deficiency anaemia is usually short lived with haemoglobin levels usually returning to normal within a month or two. Doctors will usually advise continuing to give your child iron medication for a few more months to make sure that blood levels remain stable and the body builds up a 'store' of iron for the future.