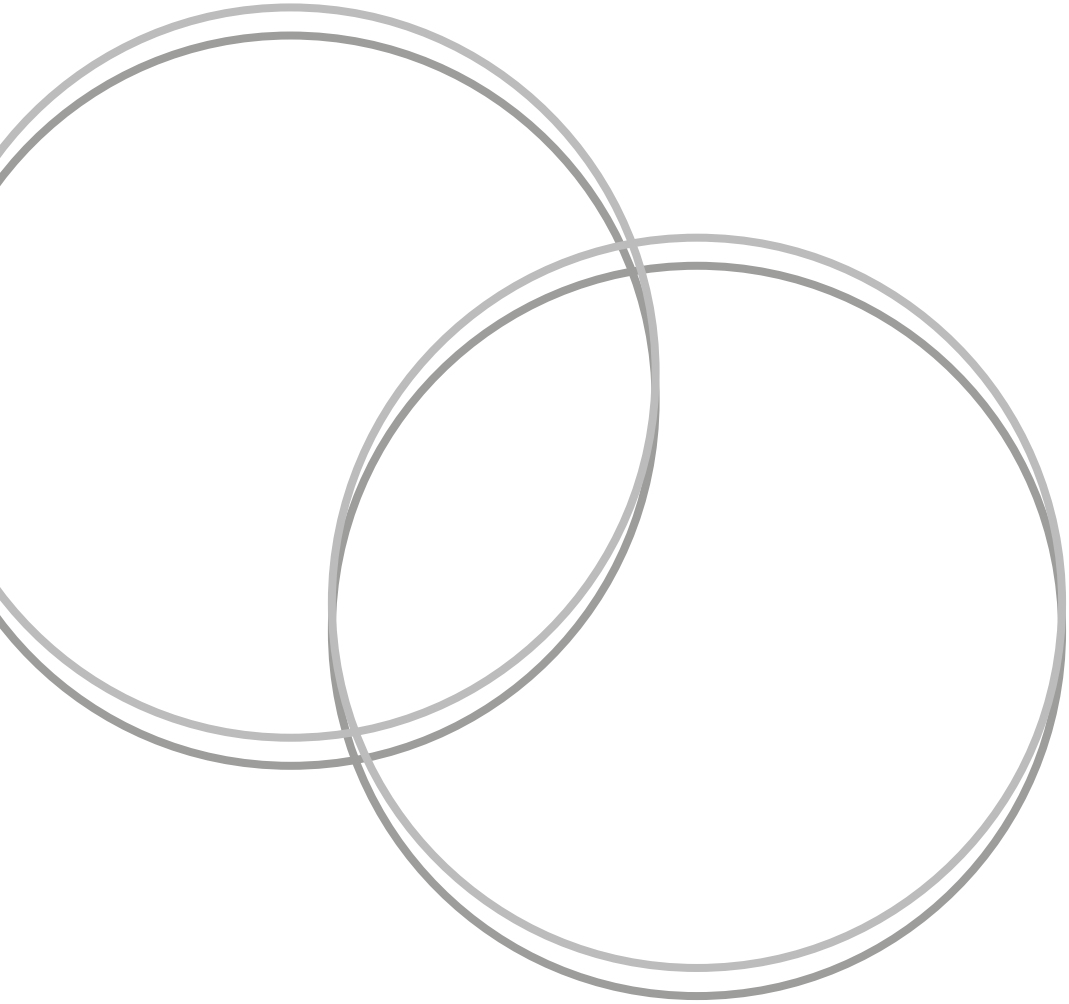
Oxford University Hospitals
NHS Foundation Trust

Iron Deficiency Anaemia in Pregnancy

Information for patients



What is iron deficiency anaemia?

This is a condition caused by a lack of red blood cells or haemoglobin. In the UK, the most common reason for developing anaemia is not having enough iron.

Haemoglobin is a protein found in red blood cells. It traps oxygen from the lungs and carries it around the body. A key ingredient used to make haemoglobin is iron. If there isn't enough iron stored in the body, then the amount of haemoglobin drops.

When haemoglobin reaches a low level, less oxygen can be carried in the blood. This can cause symptoms, such as:

- tiredness
- breathlessness
- heart palpitations (feelings that your heart is pounding or racing)
- weakness
- headache
- dizziness
- chest pain
- irritability (feeling easily frustrated or upset).

Why do I have iron deficiency anaemia?

There are several reasons why you might not have enough iron in your body:

- There might not be enough iron in your diet.
- Your gut may not absorb enough iron from your food (even if you have an iron-rich diet).
- Your iron requirement might be so high that you can't get enough from your diet (your baby needs a lot of extra iron when it's growing in the uterus (womb)). Your baby gets the iron from you, which means that your own iron stores can become lower.
- You may lose iron through bleeding, such as by having heavy periods before pregnancy, or because you have another medical condition.

It is possible to have more than one of these causes, especially during pregnancy. In fact, over 18 in every 100 pregnant women in Europe are anaemic during pregnancy!

Who is more likely to get anaemia in pregnancy?

The main risk factors for developing anaemia in pregnancy are:

- already having low iron stores before becoming pregnant
- having a pre-existing blood condition, such as sickle cell disease and thalassaemia
- having an inflammatory disorder which affects the gut's ability to absorb iron from food. Examples of these include inflammatory bowel disease, coeliac disease, and previous surgery to the gut
- having higher demands for iron, such as having twins or triplets
- being under 20 years old when you become pregnant
- giving birth to your previous child less than 1 year ago
- having anaemia in a previous pregnancy.

It is normal to lose some blood when you give birth. However, there is also a chance of becoming anaemic after giving birth. This is often due to losing blood during or shortly after the birth.

How is anaemia diagnosed?

Anaemia can be detected by a simple blood test. As anaemia is so common in pregnancy, your health care professional will routinely check your haemoglobin levels. All pregnant women are screened for anaemia at their first booking visit and at 28 weeks of pregnancy. If you have an increased chance of anaemia, you may be screened more frequently.

What are the risks of having anaemia?

Most people with anaemia in pregnancy go on to have a healthy pregnancy and baby.

However anaemia in pregnancy has been linked with a range of problems for both mother and baby.

Iron deficiency anaemia can affect your muscle function, ability to exercise (such as climbing the stairs) and gut function (how well your body digests and absorbs nutrients from the food you eat and gets rid of waste). In pregnancy, iron deficiency also increases the chance of having a low birth weight baby and of giving birth prematurely (early).

Another reason why we will want to treat your iron deficiency anaemia is to reduce the chance of you needing a blood transfusion during or after giving birth. It is normal to lose some blood during giving birth. However, if you have iron deficiency anaemia it will increase your chance of needing a blood transfusion following birth. There are risks associated with receiving blood transfusions, so we are keen to avoid the need for this if possible.

After giving birth, iron deficiency anaemia can also affect you by causing tiredness and reducing your milk production. It is also associated with postnatal depression. Your baby may have low iron stores at birth too.

What happens next?

If you are less than 36 weeks pregnant, your health care professional will usually give you a course of iron tablets. They will then arrange to see you again in 2 to 4 weeks' time, to recheck the haemoglobin (iron) level in your blood.

If the iron tablets work properly, the level of haemoglobin in your blood should rise. If you had symptoms of a low haemoglobin level, you should start to feel better. This treatment will be explained in more detail in the iron tablets section.

However, sometimes the iron tablets don't work effectively enough, even when you take them regularly and follow all the instructions. If this happens, your health care professional will ask for some extra blood tests. These will include:

- **B12 and folate** – these are important nutrients also used to make red blood cells. Low B12 or folate can also make you anaemic, even without iron deficiency. However, this is less common than iron deficiency anaemia.
- **Ferritin** – this is a protein in the blood which acts as an iron storage system. If your ferritin level is low, this confirms that you don't have enough iron.

If you are **more than 36 weeks pregnant**, there may not be enough time for iron tablets to work before your baby is born.

In this situation, you might need to be given iron directly into your bloodstream. This is called intravenous iron (IV iron), and is explained further in the IV iron section.

How is anaemia treated?

Diet

A good balanced diet is vital to make sure you receive enough iron. The most easily absorbed iron comes from red meat, fish and poultry. However, other vegetarian options exist, including lentils, fortified cereals and green leafy vegetables, such as spinach.

Vitamin C can help your body to absorb iron from food; this is found in orange juice and other fruits and vegetables.

Some foods can reduce your ability to absorb iron, so should be avoided around the time you eat iron-rich foods and/or take your iron tablets. These include tea, coffee and foods containing calcium, such as milk and other dairy products and dairy alternatives, some seeds, pulses and vegetables, and many multi-vitamin tablets.

For further information about iron-rich foods and foods to avoid please visit the NHS Choices website:

www.nhs.uk/Conditions/vitamins-minerals/Pages/Iron.aspx

Iron tablets

Oral iron tablets (taken by mouth) are very effective at replacing the iron needed for haemoglobin levels to rise. Some iron tablets can also come with folic acid and vitamin C, which helps with the absorption of iron from the gut (intestine).

The recommended tablets for treating iron deficiency anaemia are ferrous fumarate tablets. How well these iron tablets work is greatly affected by how they are taken. The tablets should be taken once a day or every other day (they must not be taken more often than this as they won't be absorbed properly).

The tablets should be taken:

- early in the morning
- on an empty stomach
- with a glass of water or orange juice
- one hour before food, drink or other medications.

If you don't drink orange juice, then another drink containing vitamin C will also work. Your midwife or doctor will be able to advise you on alternative drinks.

Your **Health Care Professional** or midwife will give you further guidance on how many iron tablets to take per day.

Side effects of iron tablets

The most common side effects of taking iron tablets are nausea, darker colour stools (poo), bloating and constipation. If this stops you from being able to take the tablets, your health care professional can swap you onto a different type of iron tablet to see if the side effects reduce.

Response to treatment

After 2 to 4 weeks you will have another blood test to check if the iron tablets are working. If they are working, your haemoglobin level should rise. If your haemoglobin level is rising steadily and at a good speed, you can simply keep taking the tablets.

Once your haemoglobin level has come back to normal, you should keep taking the tablets for another three months. This helps to boost your body's stores of iron, to prevent you from becoming anaemic again. If you give birth before the three months are up, you only need to continue taking the tablets for another six weeks after the birth, or as guided by your doctor.

If the iron tablets aren't working, your health care professional will firstly check that you are taking them regularly and correctly. You may need more blood tests to look for other causes of anaemia.

Your doctor may refer you to hospital to have intravenous iron, if iron deficiency is confirmed but:

- the tablets are not working
- you suffer from side effects which stop you from taking the tablets
- the tablets are not working quickly enough
- there is not enough time before your baby is due to improve your anaemia with iron tablets.

Intravenous (IV) iron infusion

What does ‘intravenous iron infusion’ mean?

An intravenous iron infusion is a fluid containing iron which is given to you through a drip into a vein. This is a quicker way to increase haemoglobin levels than iron tablets, as the iron is delivered directly into your bloodstream.

How long does an infusion take?

Infusions take about 10 to 15 minutes to complete. Usually only one infusion is needed.

What happens at the appointment?

You do not need to prepare for an iron infusion, so you can continue to eat normally and still take your usual medications. You will need to come to hospital for the treatment.

Your baby’s heart rate will be checked and a nurse, midwife or doctor will go through your medical history, checking for any allergies or other problems.

You will then have a cannula (small plastic tube) put into a vein in your hand or arm, through which the iron infusion will be given. You can bring a book or magazine or something else to keep you occupied during the infusion.

When the infusion is completed you will need to stay in the building for another 60 minutes, so we can make sure you don’t have a reaction to the infusion. After this time, you can go home, as long as you haven’t had a reaction.

You should resume taking your oral iron tablets one week later, as these will help to prevent you becoming anaemic again. Your haemoglobin level will be re-tested in 2 to 4 weeks’ time, to check the infusion has worked.

Are there any side effects of IV iron?

Side effects of IV iron are extremely rare. The doctor, nurse or midwife will go through the information with you. If you feel unwell or have any symptoms during or after the infusion, you should tell one of the healthcare staff. If you are at home and think you are having a side effect, please contact your health care professional or the **Maternity Assessment Unit on 01865 220 221**.

The most common side effect is a headache, which can occur in the first 24 hours after an infusion. Your blood pressure is monitored during the infusion because this can become a little high or a little low. There are other less common side effects, such as a high temperature, feeling flushed, and shivering. There is also a small chance that the iron-rich fluid will leak into the nearby skin, which can result in skin discolouration, so you must tell the nurse if you experience any discomfort during the infusion.

The most important side effect that we watch for is an allergic reaction. This is rare, but it is important that we monitor you for a reaction, which is why you must stay in the hospital for 60 minutes after the infusion. This is also why the nurse, midwife or doctor checks your medical history particularly for any allergic reactions.

Blood transfusions

Most pregnant women with anaemia can be successfully treated with a change in diet and iron supplementation (with tablets or intravenously). However, if your haemoglobin levels become very low, or you are experiencing severe symptoms of anaemia, you may need a blood transfusion.

Blood transfusions have some risks, particularly because the blood you receive is donated from another person. This is why we try to minimise the need for transfusion by supplementing your iron level with tablets or through intravenous infusion.

However, blood transfusions are the only way to quickly correct severe anaemia. This could occur after a large bleed during giving birth. If you need a blood transfusion, a doctor or midwife will explain this procedure further.

Where can I find more information?

For more information, the best person to speak to is your health care professional, obstetrician (hospital doctor) or midwife. There are also some useful online resources:

www.patient.info/health/anaemia-leaflet

www.nhs.uk/conditions/iron-deficiency-anaemia

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

Author: Consultant Obstetric Physician
April 2024
Review: April 2027
Oxford University Hospitals NHS Foundation Trust
www.ouh.nhs.uk/information

We would like to thank the Oxford Maternity Voices Partnership for their contribution in the development of this leaflet.

Leaflet reference number: OMI 103645