

## Women's and Children's Services

# Iron deficiency anaemia in pregnancy

Many women have low stores of iron during their child bearing years. In pregnancy, the mother and baby use lots of iron which consumes the mother's stores. This can cause problems for both mother and baby during pregnancy and after your baby is born. We check every pregnant woman for iron deficiency and want to correct the body stores of iron. Treatment options include diet changes, iron tablets and, for some giving iron through a drip. Very occasionally patients who do not respond to treatment will need a blood transfusion.

The details of all the above are shown on FAQ attached and some more web based information is available

## 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 picks up 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.
- Weakness.
- Headache.
- Dizziness.
- Chest pain.
- Irritability.



## 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 womb. It gets the iron from you which means that your own 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. Over 20% of pregnant women in Europe are anaemic during pregnancy. A small proportion of cases of anaemia are due to other reasons, such as vitamin B12 or folate deficiency, or other medical conditions. We should be able to pick these up before giving oral iron.

## 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 bowel 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 a higher demand 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.

You may also be at risk of becoming anaemic after giving birth. This is often due to losing blood during or shortly after giving birth.

## How is it diagnosed?

Anaemia can be detected by a simple blood test. As anaemia is so common in pregnancy, your community midwife 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 are at increased risk of anaemia you may be screened more frequently.

## What are the risks of having anaemia?

Anaemia during pregnancy is associated with many problems for both the mother and the baby.

Iron deficiency anaemia can affect your muscle function, ability to exercise (such as climbing the stairs) and gut function. In pregnancy, iron deficiency also increases the risk of having a low birth weight baby and a premature delivery.

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

Another reason why we will want to treat your iron deficiency anaemia is to reduce the risk of you needing a blood transfusion during or after delivery. Giving birth often involves bleeding and sometimes this can be heavy bleeding. If you have iron deficiency anaemia it will increase your likelihood of needing a blood transfusion.

## What happens next?

If you are **earlier in your pregnancy**, you will usually be given a course of iron tablets. We will then arrange to see you again in 2-4 weeks' time to recheck your haemoglobin level.

If the iron tablets work properly, your haemoglobin should increase. If you had symptoms, you should start to feel better. This treatment will be explained in more detail in the iron tablets section.

Sometimes iron tablets don't work effectively enough, even when you take them every day and follow all the instructions. If this happens your GP will ask for some additional blood tests. These will include:

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- **B12 and folate** – these are important nutrients also used to make red blood cells. Low vitamin 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 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. There are also vegetarian options, including lentils, fortified cereals and leafy green 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 multivitamin tablets.

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

<https://www.nhs.uk/conditions/vitamins-and-minerals/iron/>

### Iron tablets

Oral iron tablets 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.

The recommended tablets for treating iron deficiency anaemia are ferrous sulfate tablets. How well these iron tablets work is greatly affected by how

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they are taken. The best way to use them is to take a tablet with orange juice one hour before breakfast. 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 GP or midwife will give you further guidance on how many iron tablets to take per day. As a general rule, you should take one tablet per day at most, and if it gives side effects then take one every alternate day. Taking more than one tablet per day is very unlikely to give any extra benefit and may just make side effects worse.

## Side effects of iron tablets

The most common side effects of taking iron tablets are nausea, bloating and constipation. If this stops you from being able to take the tablets, your GP can swap you onto a different type of iron tablet (ferrous fumarate) to see if the side effects reduce.

## Response to treatment

After 2-4 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 increasing steadily and at good speed you can simply keep taking the tablets.

Once your haemoglobin is back to normal, you should keep taking the iron tablets for another 3 months. This helps to boost your body's stores of iron, to prevent you from becoming anaemic again.

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

Your doctor may refer you to hospital to have intravenous iron, if:

- 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 to make things better before your baby is due.

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If you do require an intravenous iron infusion, information will be given to you in a separate leaflet. Please ask for this if not offered.

## 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 extremely 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 by another person. This is why we try to minimise the need for transfusion by supplementing iron with tablets or with IV infusion.

However, blood transfusions are the only way to quickly correct severe anaemia. This could occur after a large bleed during delivery. 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 doctor (obstetrician, anaesthetist or GP) or midwife. There are also some useful online resources:

<https://www.nhs.uk/conditions/iron-deficiency-anaemia/>

<https://patient.info/allergies-blood-immune/anaemia-leaflet>

*This leaflet has been adapted with permission from one used at Oxford University Hospitals NHS Foundation Trust*

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