

Iron deficiency and pregnancy

Maternity Unit Patient information

What is iron deficiency anaemia?

Blood is a complex fluid containing lots of proteins and a number of different types of cells to help our body to function correctly. These include white cells to help fight infection, platelets to help form clots when we bleed, and red cells to carry oxygen. Oxygen is carried by the red cells to all our organs, such as the heart and muscles, to help them convert food into energy for the body to work. Red blood cells last about 120 days, so the body (bone marrow) has to constantly make new ones to replace them.

Anaemia is usually the result of either not having enough red cells to take oxygen around the body, or having faulty red cells that are unable to carry enough oxygen. It is measured in the blood by the level of haemoglobin, sometimes called 'Hb'.

The most common cause of anaemia in the UK is due to a lack of 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.

What happens in pregnancy?

During pregnancy, your body produces more blood to support the growth of your baby. If you're not getting enough iron or B vitamins, your body might not be able to produce the amount of red blood cells it needs to contribute to this additional blood.

It's normal to have mild anaemia due to natural dilution in pregnancy, but you may have more severe anaemia from low iron or vitamin levels, or from other reasons.

Anaemia can leave you feeling tired and weak. If it is severe but goes untreated, it can increase your risk of serious complications like preterm delivery and need for blood transfusion. Good iron levels in the mother/birthing person are also important for breastfed babies to get their iron needs met. After giving birth, iron deficiency can make you tired and reduce your milk production. There have also been links between iron deficiency and postnatal depression.

What causes low iron levels?

There are multiple causes of low iron in the body, such as:

- lack of iron intake from your diet
- the gut not being able to absorb enough iron from your diet
- increase in demand from your body - your baby needs a lot of iron when it's growing in the womb.
- through heavy bleeding e.g. heavy menstrual bleeding before pregnancy, and medications which increase bleeding.

It is possible to have more than one cause of anaemia and over 20% of women in Europe experience anaemia during pregnancy. All women in the UK expecting a baby are screened for anaemia at their booking visit and at 28 weeks.

There are some risk factors which can make you more likely to experience anaemia during pregnancy, which are:

- history of low iron levels before pregnancy
- pre-existing blood conditions like sickle cell
- inflammatory diseases which affect gut absorption e.g coeliac disease
- expecting more than one baby
- being under 20 years old
- having given birth less than a year ago
- history of anaemia during pregnancy

Diagnosis

A simple blood test is used to determine if you are anaemic. Since anaemia is a common condition during pregnancy, your doctor/midwife will routinely check your haemoglobin levels. All pregnant women will be checked for anaemia at their booking visit and at 28 weeks gestation. If you have any of the risk factors above you may be checked more frequently.

Signs and symptoms of anaemia include:

- tiredness and lack of energy
- shortness of breath
- noticeable heartbeats (heart palpitations)
- pale skin
- headaches
- irritability

Treatment

Having a healthy balanced diet is important for obtaining enough iron during pregnancy. Most of the iron we can absorb comes from red meat, poultry and fish. However, iron is also found in lentils, fortified cereals and green leafy vegetables e.g. spinach.

Having vitamin C can help your body absorb the iron from food and this can be found in fruit, juices and vegetables. Food containing calcium should be avoided at the time of eating iron rich food as this can reduce the amount of iron absorbed by the body.

Iron tablets are very effective at replacing the iron needed by the body for haemoglobin production. Some iron preparations are combined with other vitamins like folic acid and vitamin C to increase absorption.

There many different types of iron tablets, however the preferred option is Ferrous Sulfate. These tablets are best taken one hour before food with a glass of orange juice, or other juices rich in vitamin C. How often you take the tablets will be decided by your midwife or GP. We now recommend taking 1 tablet (200mg) ONCE a day, preferably in the morning on an empty stomach (30 minutes before breakfast). This dose is lower than treatment doses recommended in the packs, but has been shown to increase haemoglobin levels at a similar rate, with fewer or no side effects.

Side effects of oral iron

The most common side effects while taking oral iron tablets are:

- constipation
- stomach upset
- diarrhoea

- nausea
- stool darkening

If you experience side effects, talk to your pharmacist, midwife or GP for advice about managing them, or looking at alternative iron tablets/ liquids.

Response to treatment

Your haemoglobin levels should be tested after two to four weeks of treatment. If your haemoglobin levels are rising steadily, you can simply continue taking the tablets. Once your levels are back to normal, you should continue taking the tablets for a further three months as it takes this long to boost the stores of iron in your body and prevent you from becoming anaemic again. If you give birth before the three months is over, complete the original three month course. You may need longer treatment if your haemoglobin is still low after birth.

If there is little improvement in your haemoglobin levels, your GP/midwife will first check to see if you are taking the medication regularly and correctly. You may need further blood tests to rule out other causes of anaemia.

You may be referred to hospital for intravenous iron if:

- the tablets are not working
- you suffer from side effects which stop you taking the tablets/ liquid - alternative tablets/ liquid that you may tolerate better, should be tried first
- the tablets are not working quickly enough
- there is not enough time to improve your anaemia before your baby is due.

Intravenous (IV) iron infusion

Intravenous iron is an infusion fluid containing iron which can be given via your veins. It is a quicker way to increase haemoglobin levels, but there is risk of allergic reactions. You can eat normally and continue to take your usual medication beforehand. You will need to come into hospital for the infusion. You will be monitored regularly during it and if you are still pregnant, your baby will also be monitored.

After the infusion you can resume taking oral iron tablets/ liquid after five days to help prevent the anaemia from coming back. Your haemoglobin level should be checked again two to four weeks after having the infusion to check it has worked.

Contact details

Maternity Unit

Antenatal ward: **0300 019 2336**

Postnatal ward: **0300 019 2519**

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