

Fact Sheet

Anaemia in pregnancy.

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What is anaemia?

Anaemia occurs:

- when you have less than the normal number of red blood cells (RBCs) in your blood
- when the red cells in your blood don't have enough normal haemoglobin inside them.

Haemoglobin (Hb) is an iron-containing protein whose main job is to carry oxygen from your lungs to all parts of your body. If you have anaemia, your blood carries less oxygen and so your organs and tissues may not work as well as they should.

Depending on its cause, anaemia can cause you to feel tired and weak, dizzy and headachy, have shortness of breath and sometimes even chest pain.

What are the common types and causes of anaemia?

- haemoglobin contains both iron and globin chains and anaemia can result from problems with either
- a shortage of iron is the most common cause of anaemia all around the world
- a shortage of globin chains or a small change in the globin structure is another common cause. This is a genetic variation (that is, you are born with it) and many different types exist across different ethnic groups

- common examples are the thalassaemias and sickle cell disease. Women with these conditions often have no health problems at all but some may have
- thalassaemia and sickle cell disease are genetic conditions, so it is important to check the woman's partner as well, to see if the baby is at risk of a 'double-dose' of the gene (please refer to these fact sheets)
- it is also important not to over treat globin-chain anaemia with iron as this may cause health problems
- extra folate is needed however, as these red blood cells are replaced by the body more often
- vitamin B 12 deficiency can also result in anaemia but it is not common. Vitamin B12 is found in meat, chicken, seafood, eggs and dairy so not getting enough is rare except in vegans
- deficiency can also rarely occur in those with a serious bowel problem that prevents B12 absorption.
- folate deficiency is another infrequent cause of anaemia but since 2009 folate has been added to flour so deficiency is less common.

Folate is best found in:

- leafy green vegetables, salad, beans, peas, chickpeas, lentils, banana, avocado and vegemite.



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Testing for Anaemia in Pregnancy

The usual test is a full blood count (**FBC**). This tells us if the haemoglobin (**Hb**) level is normal. Your FBC is checked at the beginning of pregnancy and repeated at 28 weeks.

- normal Hb result for non-pregnant women is 115 – 155 g/L
- in pregnancy, your Hb level is lower due to the plasma (*the 'water' part of blood*) increases more than the red blood cells

This dilution means that a normal Hb in pregnancy is:

- above 110 g / L before 28 weeks
- above 105 g / L after 28 weeks

Anaemia is defined as a Hb below normal levels.

- moderate to severe anaemia is Hb below 90 g/L

It is important to note that nature expects a woman's blood to get 'thinner' in pregnancy and for her Hb to fall.

- this has important benefits for both mother and baby and it is not recommended to increase the Hb back to the upper non-pregnant range
- a Hb above 130 g / L in pregnancy is probably too high. There is concern that levels above this may make the blood too 'thick' to circulate well through the placenta and that this might affect the baby's growth.

If your FBC shows a low Hb (anaemia) the next test is a serum ferritin level to check if you have enough iron in your body.

While the Hb is usually the first thing we look at in a FBC, we also look at the other results, especially the size of the RBCs.

If they are smaller than normal, that might suggest iron deficiency or thalassaemia; if they are larger than normal that might suggest possible Vitamin B12 or folate deficiency. Your caregiver will use this information to decide if you need any further tests.

What causes Iron Deficiency in Women?

Common reasons for young women to become deficient in iron include:

- blood loss – heavy periods are a common cause
- pregnancy, especially several pregnancies close together
- the baby and your own blood expansion require quite a lot of iron and take this from you
- your iron stores can take a while to rebuild after you have delivered, especially if you have lost a lot of blood at delivery
- not eating foods rich in iron. Vegetarian women are more likely to have a diet low in iron
- gut absorption problems – there might be plenty of iron in the diet but there is a bowel disease such as coeliac disease or Crohn's disease which stops the iron being absorbed

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What can I do to prevent anaemia? Before pregnancy.

Try and make sure you go into your pregnancy with good iron stores. Things you can do to help this are:

- if you have heavy periods, see someone about ways to improve them
- if you have 'unexplained' iron deficiency have it looked into before pregnancy, you may have an absorption problem
- take iron supplements for up to 3-6 months, if you have lost a lot of blood (more than 1000 mL) after a previous birth. It can take up to 3-6 months to rebuild your iron stores
- try not to have your babies too close together (not closer than 18 months if possible) to allow your body time to rebuild it's iron stores.
- eat a diet rich in iron and add in some vitamin C foods to help increase absorption
- reduce tea/coffee/alcohol and calcium containing foods during meals as this can reduce absorption.

During pregnancy

- a pregnant woman requires about 30 mg per day
- a breastfeeding woman about 10mg per day(because of not having periods) unless she has lost a lot of blood at her delivery
- some pregnant women will easily get their requirements of iron in their diet while others won't.

The best foods for iron are

- red meat, pork, poultry, seafood
- dark green leafy vegetables such as spinach, silverbeet, broccoli
- beans and lentils
- nuts and seeds and dried fruit
- wholegrain bread, brown rice, iron-fortified breakfast cereals

Taking an iron supplement

- many women do not require an iron supplement. Your caregiver will advise you if it is required and what dosage to take
- some women may complain of nausea and constipation (occasionally diarrhoea) from iron and the higher the dose the more likely this is to occur. Discuss this with your caregiver your required dosage to take.
- taking your iron supplement 2 – 3 times a week can have the same benefit as daily iron, this may limit the side effects mentioned above. Discuss with your caregiver.

There is no need to have specific testing if your FBC is normal

We welcome further feedback on this brochure as a way of continually improving our service.

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