



Iron deficiency

Quick take:

- Iron deficiency is common in pregnancy
- It is generally not dangerous for the baby
- Iron is important for your well-being and to prepare for the birth
- It can be corrected by increasing iron rich food in your diet, and taking a daily iron supplement such as Maltofer or Ferrograd C
- Sometimes an iron infusion is needed if oral iron is not tolerated or not effective

More details

Iron is an important mineral that is involved in various bodily functions, including the transport of oxygen in the blood. Red blood cells contain haemoglobin, a complex protein that carries oxygen from the lungs to the rest of the body.

Anaemia occurs when either the level of red blood cells or the level of haemoglobin in your body is lower than normal, which means that your body cannot be delivered as much oxygen as it requires. Symptoms often include fatigue, poor concentration, dizziness, shortness of breath, pale skin or palpitations.

Anaemia isn't a disease in itself, but a result of something not working properly in your body. Low iron levels (iron deficiency) is the most common cause of anaemia.

Australia prevalence rates are estimated at 25%, with elevated risk for Aboriginal and Torres Strait Islander women.

Anaemia is defined by the WHO as a haemoglobin level less than 110g/L at any stage of pregnancy.

Physiological changes occur in the 2nd trimester, increasing blood volume alongside a smaller increase in red cell mass resulting in haemodilution – recognised as physiological anaemia. Therefore a threshold of Hb <105 g/L is widely used after 28 weeks.

Ferritin levels are used to assess iron stores in pregnancy, on average a level below 30ng/mL is commonly used to diagnose iron deficiency in a non pregnant woman, and below 15ng/mL in pregnancy.

Australian recommendations for dietary intake of iron for women in pregnancy averages out to 27mg/day as physiological demand for iron is three times greater during pregnancy.

There are two main types of iron in food:

1. Haem iron (from animal foods)
2. Non-haem iron (from plant foods)

Haem iron is absorbed by the body about 10 times more easily than non-haem foods. Foods that contain haem iron include meats (beef, lamb, pork and kangaroo), poultry (chicken and turkey), fish/shellfish (salmon, sardines and tuna) and offal (liver and kidney).

Foods containing non-haem iron include iron fortified breads and cereals, legumes (kidney beans, baked beans, chickpeas), green leafy vegetables, nuts and dried fruit, and eggs. Eating Vitamin C rich foods with your meal will increase iron absorption.

Tea, coffee, unprocessed bran, calcium rich foods, some soy proteins and medications can block the body's absorption of non-haem iron. Avoid eating or drinking iron blockers at the same time as iron-rich foods.

Haem Iron Foods

Food	Iron Content per 100g
Chicken liver	11mg
Beef	3.5mg
Kangaroo	3.2mg
Lamb	2.5mg
Salmon	1.28mg
Tinned Tuna	1.07mg
Pork	0.8mg
Chicken	0.4mg
Snapper	0.3mg

Non-haem Iron Foods

Food	Serving Size	Iron Content
Weet-bix	30g	4.2mg
All-bran	30g	3.2mg
Kidney beans	1 cup	3.1mg
Green lentils	1 cup	3.0mg
Tofu	100g	2.96mg
Chickpeas	1 cup	2.7mg
Cooked wholemeal pasta	140g (1 cup)	2.3mg
Cashew nuts	30g (20 nuts)	1.5mg
Raw spinach	1 cup	1.2mg
Rolled oats	30g	1.1mg
Almonds	30g	1.1mg
Dried apricot	30g (5 apricots)	0.93mg
Broccoli	1 cup	0.86mg
Cooked brown rice	140g (1 cup)	0.7mg
Wholegrain bread	1 slice	0.4mg

Oral therapy is the first line treatment for iron deficiency anaemia that cannot be rectified with diet alone. Iron supplements are not created equally!

Supplement Name	Elemental Iron Content
Ferro-Grad C	105mg
Ferro-Gradumet	105mg
Maltofer Tablets	100mg
Maltofer syrup	Per 5ml = 50mg
Ferro-F-Tab	100mg
Fefol delayed release iron	87.4mg
FGF	80mg
Ferro-Tab	65.7mg
Ferro-Liquid	Per 5ml = 30mg
Elevit	60mg
Elevit Women's Multi	5mg
Floradix	Per 10ml = 7.5mg
Spatone	25ml sachet = 5mg

Our preference is generally Ferro-grad C or Maltofer.

Techniques to maximise absorption

Iron is better absorbed in the morning when hepcidin (a protein that regulates the entry of iron into circulation) is at its lowest. Ferro-grad C is ideally taken on an empty stomach (1 hour before breakfast), Maltofer can be taken with food. Avoid iron blocker foods eg tea, coffee, cereals and calcium rich foods (your typical breakfast foods!) which impair absorption and do not take at the same time as antacids. Vitamin C promotes absorption.

Side effects

Common side effects of iron supplements are a metallic taste, nausea, diarrhoea, flatulence, dark stools and constipation. You can manage the constipation by making sure you are well hydrated and maintain a high fibre diet or fibre supplement (such a *Metamucil*, *Benefibre*). If these alone aren't enough, osmotic laxatives such as *Lactulose* or *Movicol*, taken as directed, can be helpful.

We will usually let you know how often to take your iron supplement. Many side effects can be minimised by initially taking them on alternate days, and if tolerated, increase to daily supplementation if required.