



Iron is an essential mineral needed for transporting oxygen around the body



During pregnancy, the need for iron is significantly increased, which also increases the risk of deficiency

Iron is a mineral that is found in a compound called haemoglobin. The main role of haemoglobin is to transport oxygen around the body via the blood stream, to allow cells to produce the energy they need. It also assists in removing carbon dioxide. Iron deficiency is one of the most common deficiencies, affecting women more often than men.

Causes of Iron Deficiency

Some common causes of Iron deficiency include:

- Getting too little iron in your diet as a result of a poor diet or vegetarianism
- Losing too much iron through bleeding from heavy menstrual periods, short menstrual cycles, regular blood donations, ulcers or certain medications such as aspirin
- Some athletes, particularly those engaged in endurance sports, may also be susceptible as iron can be lost through sweating
- Gastrointestinal conditions that impact absorption, such as Coeliac Disease.

Iron Deficiency and Fertility

During pregnancy, a woman's red blood cell mass increases by 18% and her haemoglobin mass increases by 30%. This results in a significant need for increased iron, and many women become deficient. During pregnancy, this deficiency can often result in negative outcomes, for both the mother and the baby. These include low birth weight and infant developmental delay, both motor and mental function. Additionally, there is evidence to suggest children with iron-deficiency anaemia may experience symptoms of attention-deficit hyperactivity disorder (ADHD). As such, you can see how important iron is during pregnancy, however, it is much healthier to optimise iron levels prior to conception than needing to take large doses of iron supplements during pregnancy which can cause constipation and nausea.

Furthermore, iron deficiency is believed to often result in infertility, although studies are still conflicting. Sometimes iron deficiency is a sign of other health issues that may impact fertility (such as undiagnosed Coeliac Disease). There is also evidence that non-haem iron from plant foods may assist with increasing fertility in women with heavy periods.

Types and Sources of Iron

There are two different types of iron: haem and non-haem iron.

Haem Iron

Haem iron generally comes from animal products and is absorbed more easily by the body. Rich sources of haem iron include:

- Red meat
- Chicken and poultry



A chicken and vegetable casserole is a simple haem-iron-rich meal that also freezes well



Pinto beans and other legumes are rich in non-haem iron, and are an easy way to add more iron to your diet

- Tuna and other seafood.

Non-haem Iron

While it is less easily absorbed by the body, non-haem iron can be found in plant products. It is essential to meet vitamin C requirements when consuming more sources of non-haem iron, as this will assist with absorption. Rich sources of non-haem iron include:

- Baked beans and pinto beans
- Tofu
- Bok choy
- and parsley.

Recommendations and Supplements

It is currently recommended that you try to optimise your iron stores prior to conception. It is also important to note that large amounts of supplemental iron can impact zinc absorption, which is also essential for fertility and pregnancy. Try to meet your iron requirements by eating a nutritious diet and if you think that you may require supplements, it is recommended that you discuss this with your Fertility Dietitian prior to use.

Put what you've learnt into practice.....

1. Based on the information above, are you at risk of iron deficiency?
2. Reflect on your current diet. Which foods do you consume that are rich sources of haem iron, and which are rich sources of non-haem iron?
3. What changes could you make to your meals to increase iron intake?

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