

Department of
Nutrition & Dietetics

Iron



What Is Iron?

Iron is needed to make haemoglobin in your red blood cells. Red blood cells are needed to carry oxygen to all parts of your body.

Iron Deficiency Anaemia

Iron deficiency anaemia is a condition where your body has low amounts of iron. This causes insufficient amounts of red blood cells in your body, and the rest of your body may not receive enough oxygen. Signs and symptoms of iron deficiency anaemia include fatigue, weakness, dizziness, shortness of breath, fast heartbeat, pale skin, brittle nails, and cold hands and feet.

Who is at Risk of Iron Deficiency Anaemia?

- Infants and children
- Women in reproductive years
- Pregnant women and women who are breastfeeding
- Vegetarians and vegans
- Individuals experiencing chronic or excessive blood loss e.g. bleeding in the stomach and / or intestines
- Individuals with medical conditions that make it difficult for your body to absorb iron e.g. coeliac disease and inflammatory bowel disease

Recommended Dietary Allowance (RDA) for Iron

Age	RDA (mg)	
	Male	Female
18 - <30 years	8	18
30 - <60 years	8	18
60 years and above	8	8
Pregnant women	NA	27
Lactating women	NA	9 (first 6 months) 18 (after 6 months)

Source: Ministry of Health; Health Promotion Board

Sources of Iron

There are two types of iron in foods.

1. **Haem iron** comes from animal sources, such as meat, poultry and fish.
2. **Non-haem iron** comes from eggs and plant sources, such as fortified breads and cereals, tofu, legumes (beans, lentils and peas), nuts, fruits and vegetables.

Your body absorbs haem iron better than non-haem iron.

Foods Containing Haem Iron	Serving Size	Iron Content (mg)
Liver (beef, chicken, pork); cooked	90g	6.1-16.1
Kidney (pig), cooked	90g	4.8
Oyster, raw	100g	3.5
Beef, lean, cooked	90g (1 palm size)	2.8
Duck, without skin, roasted	90g (1 palm size)	2.6
Lamb, lean, cooked	90g (1 palm size)	2.3
Pork, lean, cooked	90g (1 palm size)	1.3
Chicken, lean, cooked	90g (1 palm size)	0.8
Fish, unspecified, steamed	90g	0.5

Source:

1. Ministry of Health; Health Promotion Board. Energy and Nutrition Composition of Food
2. Food Standards Australia and New Zealand. Australia food composition database

Sources of Iron

Foods Containing Non-haem Iron	Serving Size	Iron Content (mg)
Tofu	300g (1 block)	5.7
Spinach, boiled, drained	100g (¾ cup)	3.6
Dark green leafy vegetables, unspecified, boiled, drained	100g (¾ cup)	2.0
Legumes (beans, lentils and peas), cooked	120g (¾ cup)	2.0-6.2
Egg, boiled	55g (1 whole)	0.9
Nuts, raw	30g (1 handful)	0.5-2.3
Fruits, dried	40g (¼ cup)	0.2-1.6

Source:

1. Ministry of Health; Health Promotion Board. Energy and Nutrition Composition of Food
2. Food Standards Australia and New Zealand. Australia food composition database

Your doctor may prescribe you with iron supplements if you have low amounts of iron in your body and / or unable to obtain enough iron from foods. One common side effect from taking iron supplements is constipation. You can manage constipation by having a diet rich in fruits and vegetables, wholegrains and legumes, drink sufficient water and be physically active.

Ways to Increase Iron Absorption

- ✓ Eat foods rich in vitamin C (e.g. strawberries, oranges, lemons, tomatoes, cabbage and broccoli), while eating foods containing non-haem iron. For example, eating a piece of fruit during breakfast increases the amount of iron your body absorbs from fortified breads and cereals.
- ✓ Eat foods containing haem iron together with foods containing non-haem iron. For example, adding lean meat to your salad increases the amount of iron your body absorbs from beans and spinach in the salad.
- ✓ Avoid drinking coffee / tea with meals as they contain tannins. This decreases the amount of iron your body absorbs.
- ✓ Avoid eating or drinking food / beverages rich in calcium together with your meals as this decreases the amount of iron your body absorbs. Dairy products (e.g. milk, yoghurt, cheese) are rich in calcium.

Summary

- ✓ Iron is needed to make haemoglobin in your red blood cells. Red blood cells are needed to carry oxygen to all parts of your body.
- ✓ Your body absorbs haem iron better than non-haem iron.
- ✓ Eat foods rich in vitamin C or foods containing haem iron, together with foods containing non-haem iron to increase the amount of iron your body can absorb.

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