

Are you and your daughters lacking iron in your diet?

Food surveys show that most healthy adults get enough of the vitamins and minerals that are essential for good health but there are still gaps, most of which appear to affect women, especially teenage girls. A lack of iron appears to be common in a significant number of females in the UK with 23% of adult women and 46% of teenage girls having been shown to have very low intakes (1).

What is the role of iron?

Iron is a vital component of haemoglobin, which is a protein found in red blood cells that carry oxygen around the body. This mineral is essential for healthy red blood cell production. Iron is also involved in the immune system, energy production, DNA synthesis and muscle function.

Iron deficiency

Diagnosed nutrient deficiencies are not that common in our well nourished population and whilst low intakes may not result in deficiency they may still impact on your health and increase the risk of deficiency if not addressed. Globally, low iron is the most common nutrient insufficiency and has a huge impact on the health of children as it has a key role to play in normal growth and development. In this same groups of women, around 5% of women have iron intakes low enough to be classified as being deficient, which is a condition called anaemia.

Symptoms of iron deficiency

The symptoms of iron deficiency are listed below and if you think you may be at risk then the first course of action is to visit your GP who can run a blood test to assess your status. If your results show a low level of iron, then you will be advised to take iron supplements such as Healthspan Iron Care (£6.95 for 120 tablets) as well as being given advice about the foods you should be including more of in your diet (listed below).

- *Unusual weakness and fatigue*
- *Poor concentration*
- *Pale complexion*

- *Brittle nails*
- *Muscle soreness*
- *Reccurent infections*
- *Always feeling cold*
- *Breathlessness*

Iron requirements for women

Women have a higher requirement for iron, with a daily recommended intake of 14.8mg per day. This is mostly down to the effects of their monthly cycle. Pregnant women have a higher requirement for iron across their pregnancy and more so during the third trimester due to the baby's growth demands.

Factors affecting iron status

Like any other nutrient, low intakes of iron can be the result of many different factors including dieting, illness (resulting in a lack of food intake) or following diets that exclude food groups such as vegan, vegetarian and gluten-free. Other factors can impact on the body's requirement for iron such as regular intensive exercise and can be a particular concern for elite or recreational female athletes.

Effect of medication and supplements

The prolonged use of certain medications, especially non-steroidal anti-inflammatory drugs (NSAIDS) that are used to treat inflammatory conditions such as arthritis, can also lead to iron loss through bleeding in the gut. Whilst supplements such as a basic multivitamin and mineral can be a good way to 'top-up', they should be used sensibly as there are no added benefits to taking more than your body needs. Excessive supplement use, especially individual nutrients and high strength products can impact on the absorption of iron, particularly calcium and zinc, which reduces the uptake of copper that is required for iron absorption.

Good food sources of iron

Maintaining a diet that is made up of nourishing foods as opposed to those that are highly processed is the best approach. Red meat is the first food that people associate with iron and other animal sources include

eggs, liver and mussels. People that follow plant-based diets can glean iron from foods such as beans, pulses, dark green vegetables, oats, quinoa, tofu and nuts (meat eaters should also include plenty of these foods in their diet). Other surprisingly good sources of iron that can be added to many dishes are dried herbs and spices that are highly concentrated in this mineral. Fortified foods such as breakfast cereals and plant-milks are also another useful way to boost the amount of iron in your diet. White flour is also fortified with iron in the UK, which is useful for fussy teenagers that refuse to eat wholegrain foods such as bread and pasta.

Foods high in iron (content given in grams per serving taken from McCance and Widdowson)

- Grilled fillet steak — (2.3mg)
- Fried calf liver (12.2mg)
- Black strap molasses (4.7mg)
- Mussels (6.8mg)
- Kale (1.7mg)
- Dried figs (4.2mg)
- Soya beans (2.3mg)
- Cooked red lentils (2.4mg)
- Oats (4.72mg)
- Cooked Quinoa (1.5mg)
- Tofu (1.1mg)
- Eggs (1.9mg)
- Brazil nuts (2.5mg)
- Canned Chick peas (1.0mg)
- Canned Red kidney beans (1.5mg)
- Curry powder (two tsp = 6g) (58.3mg)
- Dried oregano (two tsp = 2g) (44.0mg)
- Fortified breakfast cereals (bran flakes) (24.3mg)

Increasing your absorption of iron

You can give your body a helping hand to absorb iron by combining your intake of non-meat iron-rich foods with a good source of vitamin C. You can do this by drinking a small glass of fruit juice with your meal or including plenty of vegetables rich in vitamin C such as red peppers, cauliflower and dark green vegetables. You could also finish your meal with a small bowl of fruit, most of which are high in vitamin C.

Some food and drinks can negatively impact on iron absorption. You should avoid drinking tea with your meals and leave a little time after you have eaten before you reach for the kettle as the tanins can lessen uptake. Compounds called phytates found in wholegrain foods (such as bread) and beans (especially soya beans) can also impact on iron absorption, although this is really only a concern for people with particularly low iron stores.

How to include iron in your weekly diet

Given their increased risk of deficiency, women should try and include plenty of iron-rich foods in their diet to help boost their intake. Below are examples of how you can introduce more iron into your diet (iron content given in grams per serving taken from McCance and Widdowson).

Breakfast

Scrambled egg (add turmeric) on wholegrain toast (4.6g)

Porridge oats (with soya milk) with chopped apricots and hazelnuts (4.3g)

Bran flakes (with skimmed milk) with sultanas and chopped apple (6.1g)

Oat and berry smoothie (3g)

Lunch

Chicken and avocado quinoa salad (9g)

Red lentil and tomato soup with wholegrain bread (7.5g)

Mexican tuna mayo (kidney beans, red peppers and chilli powder) wrap (3.5g)

Smoked salmon and cream cheese on rye bread (3.2g)

Dinner

Beef and green vegetable stir-fry with noodles (9g)

Chicken and squash curry with brown rice (7g)

Black bean chilli with sliced avocado and quinoa (5.5g)

Roasted red peppers stuffed with lentils and feta cheese (7.2g)

Snacks

Homemade oat and date bars (2.3g)

Dried fruit and nuts (1.8g)

Yoghurt with nut and oat granola (1.5g)

References

1. <https://www.gov.uk/government/statistics/national-diet-and-nutrition-survey-results-from-years-1-to-4-combined-of-the-rolling-programme-for-2008-and-2009-to-2011-and-2012>