

Iron

Iron is a mineral that has many different roles in the body. Iron is particularly important for making haemoglobin: a protein contained in red blood cells that transports oxygen around the body. Iron also plays an essential role in maintaining a healthy immune system (your body's natural defence system).

This Food Fact Sheet lists the recommended amounts of iron for different groups of people and the foods and drinks that are rich in iron. It also gives you some ideas on how you might achieve your recommended intake.

What are the symptoms of iron deficiency?

People with mild iron deficiency often feel tired, lacking in energy and tend to be more susceptible to infections. With more severe iron deficiency (called iron deficiency anaemia) symptoms such as heart palpitations, brittle nails, thinning hair, itchy skin (pruritus) and mouth sores or ulcers can develop.

Which foods are good sources of iron?

Many different foods contain iron in different amounts. Some food sources are more iron-rich than others. For example, animal-based sources such as red meat (beef, lamb and pork) are particularly rich sources of iron and are most easily absorbed, and to a lesser extent fish and poultry. (see Table 2)

Plant-based sources of iron include pulses and legumes (such as beans, peas, and lentils), dark green leafy vegetables (such as spinach, cabbage, and broccoli), tofu, nuts and seeds.



The iron in animal-based sources is often referred to as 'haem iron' whilst the iron in plant-based sources is often referred to as 'non-haem iron'. 'Haem iron' can increase the absorption of 'non-haem iron'. Therefore, to improve iron status it can be beneficial to eat, for example, red meat (beef, lamb or pork) alongside green leafy vegetables. Many breakfast cereals are also fortified with iron.

Table 1: How much iron do I need?

Group	Age (years)	Iron (mg) per day
Infants	0-3 months	1.7
	4-6 months	4.3
	7-12 months	7.8
Children	1-3 years	6.9
	4-6 years	6.1
	7-10 years	8.7
Adolescents	11-18 years	14.8(girls)
		11.3 (boys)
Adults	19-50 years	8.7 (males)
	19-50 years	14.8 (females)
	50+ years	8.7

Iron and vegetarianism

Although not as easily absorbed as animal-based sources, plant-based foods such as beans, grains and vegetables also contain iron. Some plant-based foods contain more iron than others and food preparation can enhance iron absorption. For example, cooking, soaking nuts and seeds and using sprouted seeds and grains. Try and opt for the more iron-rich plant-based foods.

(see Table 2 for suggestions).

What about vitamin C?

Although vitamin C has been shown to increase the absorption of iron, it is currently unclear as to whether this improves iron status. Nevertheless, fruits and vegetables rich in vitamin C should be eaten regularly in the diet.

Tips to ensure an iron-rich diet

- **Add green leafy vegetables to main meals.**
- **Add dried fruit to desserts and have fruit and (or) nuts as snacks between meals.**
- **Try iron fortified products.**

Menu ideas*

Breakfast

Fortified breakfast cereal or wholemeal toast.
Piece of fruit.

Lunch

Wholemeal sandwich with tuna, sliced beef or pork and salad.

or

Sardines or baked beans on wholemeal toast.

or

Salad sprinkled with seeds with a portion of meat, fish or pulses and potatoes

Dinner

Serving of meat, fish, poultry or pulses with vegetables and potatoes

or

Bean curry or chilli served with potatoes and side salad

or

Baked potato (with skin) with baked beans and vegetables

Snacks

Fruit (fresh or dried), handful of nuts

*These menu ideas are just a guide. For tailored dietary advice, seek assistance from a dietitian.

Table 2: Iron in different foods

Type of Food	Iron per 100g
Animal-based sources	
Beef (Rump steak)	3.6mg
Beef mince (stewed)	2.7mg
Pork chop (grilled)	0.7mg
Lamb leg (roasted)	1.8mg
Chicken (roasted, light meat)	0.7mg
Liver pate	5.9mg
Sausages (pork)	1.1mg
Back Bacon (grilled)	0.6mg
Eggs (fried)	2.2mg
Fish-based Sources	
Cod/Haddock (baked)	0.1mg
Salmon (steamed)	0.4mg
Mackerel (grilled)	0.8mg
Prawns (boiled)	1.1mg
Tuna (canned in brine)	1.0mg
Plant-based sources	
Baked beans (in tomato sauce)	1.4mg
Butter beans (canned)	1.5mg
Chickpeas (boiled)	2mg
Kidney beans (canned)	2mg
Tofu (steamed)	1.2mg
Fruit, nuts and seeds	
Figs (partially dried)	3.9mg
Apricots (partially dried)	3.4mg
Dates (dried)	1.3mg
Almonds	3mg
Brazil nuts	2.5mg
Peanut butter (smooth)	2.1mg
Hazelnuts	3.2mg
Sesame seeds	10.4mg
Sunflower seeds	6.4mg
Vegetables	
Broccoli (boiled)	1mg
Spinach (boiled)	1.6mg

Summary:

Iron is an important mineral we need to have in our daily diet. Opt for a variety of iron-rich foods to ensure an adequate intake of iron.

Further information:

Food Fact Sheets on other topics including Vitamin D are available at www.bda.uk.com/foodfacts



This Food Factsheet is a public service of The British Dietetic Association (BDA) intended for information only. It is not a substitute for proper medical diagnosis or dietary advice given by a dietitian. If you need to see a dietitian, visit your GP for a referral or: www.freelancedietitians.org for a private dietitian. To check your dietitian is registered check www.hcpc-uk.org

This Food Fact Sheet and others are available to download free of charge at www.bda.uk.com/foodfacts

Written by Dr Sammie Gill, Dietitian. Reviewed by Carrie Ruxton, Ruth Breese and Sandra Hood, Dietitians.

The information sources used to develop this fact sheet are available at www.bda.uk.com/foodfacts

© BDA September 2017. Review date September 2020.

