

Food Fact Sheet: Iodine

This Food Fact Sheet explains why iodine is needed, food sources of iodine and how much is needed.

What is iodine?

Iodine is a mineral that is important for health. It is a key part of the thyroid hormones that are needed for many body processes including growth, metabolism and for the development of a baby's brain during pregnancy and early life.

Do we get enough iodine in the UK?

Research has shown that, on average, children have sufficient iodine intake. However, there is evidence that teenage girls and young women do not get enough iodine. A number of studies have also shown iodine deficiency in pregnant women.

How much iodine do I need?

Life stage	Iodine required per day (mcg)*
Adults	150
Pregnant women	200
Breastfeeding women	200

*European Food Safety Authority (EFSA) recommendations.

What happens if I do not have enough iodine?

A low intake of iodine over a long period of time will cause your thyroid to work harder to try to keep the right amount of thyroid hormones in your blood. Your thyroid may then increase in size in order to trap iodine – this swelling, or "goitre", may be visible in your neck. However, visible goitre due to low iodine intake is rare in the UK.

If you have an iodine deficiency during pregnancy, there may be effects on the baby's brain development, which could lead to problems such as lower IQ or reading ability in later life.

Before and during pregnancy and breastfeeding

As iodine is required from the very early stages of pregnancy, you should make sure you have been having enough iodine in your diet for several months before getting pregnant. It is possible to build up good stores of iodine in your thyroid which can help it to function well during pregnancy, particularly in the early stages. So, if you are of childbearing age, and especially if you are planning to get pregnant, you should make sure that you are meeting the adult recommendation for iodine intake.

During pregnancy, the amount of iodine you need increases in order to make enough thyroid hormones to transfer to your baby to help its brain develop correctly. Iodine deficiency in pregnancy may have serious consequences for your child so it is very important that you meet that higher iodine requirement if you are pregnant.

You will also need a higher amount of iodine whilst breastfeeding, so that your breast milk contains enough iodine for your baby whose brain is still developing.

Where is iodine found in the diet?

Iodine is found in a range of foods, the richest sources being fish, milk, and dairy products. In general, white fish contains more iodine than oily fish. Milk and dairy products are the main sources of iodine for most people. It is important to be aware that most milk-alternative drinks (e.g. soya/almond/oat) are not fortified with iodine and have a low iodine content. Some milk-alternative drinks are fortified with iodine so it is important to check the product label.

Seaweed is a very concentrated source of iodine, but it can provide excessive amounts (particularly so in the case of brown seaweed such as kelp) and therefore eating seaweed more than once a week is not recommended, especially during pregnancy.

In many countries, iodine is added to table salt to give “iodised salt”. Iodised salt is not widely available in the UK but can be found in some branches of several supermarket chains. As Government recommendations are to reduce salt intake for health reasons, iodised table salt should not be relied on as a means of increasing iodine intake. It is very difficult to estimate the amount of iodine in food. This is because the actual amount of iodine in food varies for a number of reasons, including the iodine content of the soil, farming practice, season, and type of fish. The figures in the table are therefore for guidance only. Remember to follow Government advice on foods to avoid during pregnancy.

Food		Portion	Average iodine/portion (mcg) (actual iodine content will vary)
Milk and dairy products	Cow's milk	200ml	50-100**
	Organic cow's milk	200ml	30-60***
	Yoghurt	150g	50-100*
	Cheese	40g	15
Fish	Haddock	120g	390
	Cod	120g	230
	Plaice	130g	30
	Salmon fillet	100g	14
	Canned tuna	100g	12
Shellfish	Prawns	60g	6
	Scampi	170g	160
Other	Eggs	1 egg (50g)	25
	Meat/Poultry	100g	10
	Nuts	25g	5
	Bread	1 slice (36g)	5
	Fruit and vegetables	1 portion (80g)	3

**Depending on the season, higher value in winter

Can I have too much iodine?

Yes – excessive iodine intake can cause thyroid problems and should be avoided. Kelp and seaweed are food sources that are likely to lead to excessive iodine intake. It is difficult to say how much is too much, as this varies between people. People with thyroid disease and those who are already iodine deficient may be affected by iodine intake that would be considered normal for the general population. However, as a rough guide, intake in adults should not exceed 600 mcg/day.

Who is at risk of iodine deficiency?

Anyone who avoids fish and/or dairy products (e.g. due to allergy or intolerance) could be at risk of iodine deficiency. Vegetarians and particularly vegans are at risk of iodine deficiency as they do not eat most iodine rich foods, and therefore may need to consider a suitable iodine-containing supplement.

What about an iodine supplement?

There are currently no official UK recommendations for adults or pregnant women to take an iodine supplement. It is better to meet iodine recommendations through diet where possible. Most adults following a healthy, balanced diet that contains milk, dairy products and fish, should be able to meet their iodine requirements.

If there is adequate intake before and during pregnancy, an iodine supplement may not be needed. Many, but not all, pregnancy multivitamin and mineral supplements contain iodine. If the supplement does contain iodine, check that it does not provide more than 150 mcg – the remainder of the requirement for pregnancy can be met by the diet. For those who do not consume sufficient iodine-rich foods, a supplement containing iodine may be useful. The following information may be helpful when choosing a supplement:

- Those with thyroid disease should check with their GP before taking additional iodine as should those who have had low iodine intake over many years.
- Iodine in supplements should be in the form of “potassium iodide” or “potassium iodate” and should not exceed the daily adult requirement of 150 mcg.
- Do not use seaweed or kelp supplements as an iodine source; the amount of iodine in such supplements can vary considerably from the value claimed on the label and can provide excessive quantities of iodine.

Summary

Iodine is needed for the production of thyroid hormones. It is important to avoid having too little or too much iodine. Good dietary sources include fish, shellfish and dairy products. During pregnancy, iodine is essential for the correct development of the baby's brain.