



# Fish

Eating fish has consistently been associated with a reduced risk of circulatory disease such as stroke and fatal heart attack.

## Benefits of Eating Fish

All fish contain the beneficial long-chain omega-3 fatty acids, EPA and DHA. These provide protection to the heart by helping to reduce blood pressure, the tendency of blood to clot, regulating the rhythm of your heart beat and reducing triglyceride levels. Oily fish is the best source and you should try to include this in your diet each week. White fish and shellfish contain smaller amounts.

Few other foods contain EPA and DHA so if you don't eat fish, chances are that you're not getting enough. Shorter chain omega 3's can be found in plant based foods - vegetables (especially dark green leafy types), nuts (walnuts, almonds, peanuts) linseeds, soya products (tofu, soyabeans) and rapeseed, soya and walnut oils. Unfortunately our bodies are not very efficient at converting these shorter chains to the longer more beneficial EPA and DHA. Men are least efficient at this conversion.

Fish is not only rich in long chain omega 3's, it's also a really healthy food. It's a good source of protein, minerals (calcium, iodine, zinc and iron) as well vitamins A, B and D. White fish and shellfish are also low in saturated fat and calories. Although oily fish is higher in fat and calories most of the fat is present as heart healthy unsaturated fat.

In the past you may have been advised to avoid shellfish because it was believed that people should avoid certain foods containing dietary cholesterol. It is now known that saturated fat is more influential in raising blood cholesterol than dietary cholesterol itself. Shellfish are very low in saturated fat, low in calories and contain omega-3 fats so they are a heart-healthy option. For the vast majority of people trying to control cholesterol levels, moderate consumption of shellfish as part of a balanced diet should be encouraged. However for those with inherited high cholesterol who struggle to control their cholesterol levels it may be necessary to be more cautious and seek specific advice from a dietitian.

Dietary cholesterol is present in crustaceans (prawns, crabs and lobsters), as well as in squid, octopus and cuttlefish. Molluscs, such as cockles, mussels, oysters, scallops and clams are very low in cholesterol.

## BEST PRACTICE ADVICE

	Adults	Women of child bearing age and young girls
<b>General Advice</b>	At least 2 portions of fish per week, 1 of which should be oily.	At least 2 portions of fish per week, 1 of which should be oily.
<b>Those at high risk of Heart Disease</b>	Three portions of fish per week, 2 of which should be oily.	Three portions of fish per week, 2 of which should be oily.
<b>Caution</b>	No more than 4 portions of oily fish per week. Up to one portion of swordfish, marlin or shark per week.  Limit intake of sea bass, sea bream, turbot, halibut and dog fish (see over for details).	No more than 2 portions of oily fish per week. No more than two tuna steaks per week or 4 cans of tuna. Avoid swordfish, marlin and shark.  Limit intake of sea bass, sea bream, turbot, halibut and dog fish (see over for details).

If you don't eat fish (because you are vegetarian, vegan or just don't like fish) here are some simple tips to help you achieve your omega 3 intake:

- Use oils and fats are rich in omega 3 such as rapeseed, flaxseed, walnut, soya and pumpkin oils.
- Try crushing a tablespoon of flaxseeds each day and using these to sprinkle on cereals, porridge, soups.
- Choose walnuts, pumpkin seeds, soya foods and green leafy vegetables more often.

### Omega 3 supplements

In general it is better to get your omega 3 from foods but if you find this difficult you could try a supplement.

- Choose fish oils (from the flesh of oily fish) as these are higher in omega 3 (EPA and DHA) than fish liver oils.
- A daily intake of 500mg of EPA and DHA combined is roughly the equivalent of one portion of oily fish per week.
- Fish liver oils (such as cod liver oil) are high in vitamin A, so if you are taking these ensure you do not take other supplements which contain vitamin A. Too high an intake of vitamin A can be a problem\*\*.
- If you are taking "blood thinning" medications such as aspirin, warfarin or heparin always consult your doctor before switching to any kind of fish oil supplements as these also have a "blood thinning effect".
- If you are vegetarian or vegan you may prefer marine oils made from algae. Check these don't contain animal gelatine.

### Pollutants

Certain pollutants accumulate in oily fish such as PCB's and methyl mercury. According to the Food Standards Agency recent surveys have shown that other fish such as sea bass, sea bream, turbot, halibut, dog fish (also known as rock salmon, flake, huss, rigg or rock eel) and dark crab meat may have similar levels of dioxins and PCBs as oily fish.

It is for these reasons that best practice advice is to eat a variety of fish and to limit weekly consumption of certain fish to levels that are have been agreed as safe by scientific experts.

Women of child bearing age and children should avoid swordfish, marlin and shark as these contain a pollutant called methyl mercury which can build up in the body over time and may cause harm, especially to an unborn child. For similar reasons it is recommended that oily fish and tuna intake is restricted in young girls and women of child bearing age.

\*\*Research suggests that having more than an average of 1.5mg per day of vitamin A over many years may affect your bones and make them more likely to fracture when you're older. This is particularly relevant to women past the menopause as they are already at risk of osteoporosis.

### What counts as oily fish

<b>Oily fish</b> (On average 2g of long chain omega 3's per 100g)	<b>White fish</b> (On average 0.3g of long chain omega 3's per 100g)	<b>Shellfish</b> (On average 0.4g of long chain omega 3's per 100g)
Salmon	Cod	<b>Crustaceans</b>
Trout	Plaice	Prawns
Mackerel	Whiting	Crabs
Herring	Skate	Lobsters
Sardines	Rock salmon/Dogfish	
Pilchards	Flounder	<b>Molluscs</b>
Kipper	Hoki	Cockles
Eel	Monkfish	Mussels
Whitebait	Pollack	Oysters
Tuna (fresh/frozen)	Red snapper	Scallops
Anchovies	Sea bream	Clams
Swordfish	Turbot	
Bloater	Marlin	<b>Cephalopods</b>
Carp		Squid
Sprats		Octopus
		Cuttlefish