

FISH



**Benefits of Eating Fish**

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

All fish contain the beneficial 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.

Furthermore a diet high in vegetables oils e.g. sunflower, sesame, corn and safflower oils can prevent the conversion of shorter chain omega 3's to the beneficial EPA and DHA\*. So if you are vegetarian, only use the oils and fats high in omega 3 such as products based on olive or rapeseed oil or products that are supplemented with omega 3.

If fish really is a no go, an alternative is to supplement your diet with fish oils. These are available in capsule or liquid form. Fish oils (from the flesh of oily fish) are a better source of EPA and DHA than fish "liver" oils. Aim for a daily intake of 500 -1000mg of EPA and DHA daily. Fish liver oils, such as cod liver oil, are very 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 fish oil supplements as these also have a "blood thinning effect".

**BEST PRACTICE ADVICE**

	<b>Adults</b>	<b>Women of child bearing age and young girls</b>
<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 for 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.	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.

<b>WHAT COUNTS AS OILY FISH</b>			
<b>Oily fish</b> <i>(On average 2g of long chain omega 3's per 100g)</i>	<b>White fish</b> <i>(On average 0.3g of long chain omega 3's per 100g)</i>		<b>Shellfish</b> <i>(On average 0.4g of long chain omega 3's per 100g)</i>
Salmon	Cod	Haddock	<b>Crustaceans</b>
Trout	Plaice	Coley	Prawns
Mackerel	Whiting	Lemon and Dover sole	Crabs
Herring	Skate	Halibut	Lobsters
Sardines	Rock salmon/Dogfish	Catfish	
Pilchards	Flounder	Hake	<b>Molluscs</b>
Kipper	Hoki	John Dory	Cockles
Eel	Monkfish	Parrot Fish	Mussels
Whitebait	Pollack	Red & grey mullet	Oysters
Tuna (fresh/frozen)	Red snapper	Sea bass	Scallops
Anchovies	Sea bream	Shark	Clams
Swordfish	Turbot	Tinned Tuna	
Bloater	Marlin		<b>Cephalopods</b>
Carp			Squid
Sprats			Octopus
			Cuttlefish

### Other Benefits of Fish

Fish is not only rich in long chain omega 3's, it's also a really healthy food. Naturally low in saturated fat, 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 calories.

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.

### 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 bass, sea bream, turbot, halibut, dog fish and crab 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.

*\*This is because sunflower, sesame, corn and safflower oils are rich in omega 6 oils. Both omega 3 and omega 6 fatty acids depend on the same enzymes to convert medium chain to long chain fatty acids. A high intake of omega 6 results in this pathway dominating these enzymes and less conversion of omega 3 fatty acids to EPA and DHA.*

*\*\*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.*