

Omega-3

Omega-3 fats are a hot topic and you have probably heard that eating foods rich in omega-3 could help to keep you healthy. This Fact Sheet looks at which foods contain omega-3 fats, how much is needed and the possible benefits for health.

What is omega-3?

Omega-3 is a family of fats that are important for health. Omega-3 fats come in different forms:

- ALA (alpha-linolenic acid) cannot be made in the body so must be eaten in our diet. It has important functions and is needed to make other omega-3 fats. ALA is found mainly in vegetable oils, rapeseed and linseed (flaxseed), nuts (walnuts, pecans and hazelnuts) and green leafy vegetables.
- EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) are long-chain fats that can be made from ALA in our bodies. They have the most direct health benefits.

Where do omega-3 fats come from?

Making EPA and DHA from ALA happens slowly and only small amounts are formed. The best way of ensuring we are taking enough EPA and DHA is to eat foods rich in these fats. Fish, and especially oily fish, are good sources of EPA and DHA. Oily fish has the highest levels so we should try and include this in our usual diet. White fish contains some omega-3 but at much lower levels than oily fish.

Benefits of eating oily fish

People from the Mediterranean, Japan and Greenland with a diet rich in omega-3 have been shown to have a lower risk of heart disease than Western countries such as the US and UK. Because of this and other health benefits it is recommended that we eat more foods containing omega-3. As well as omega-3, fish and shellfish are also good sources of many vitamins, and minerals such as iodine, calcium and selenium.

Key benefits include:

- Provides other important nutrients including vitamins A and D and protein
- May protect the heart and blood vessels from disease
- Supports healthy development of your baby during pregnancy and breastfeeding
- May be protective in maintaining good memory and prevention and treatment of depression

Which fish/seafood are good sources of omega 3?

mackerel	trout	crab (fresh)
kippers	sprats	whitebait
pilchards	salmon	swordfish
tuna (fresh or frozen)	herring	sardines

Canned fish does count but some brands of tuna may have the omega-3 removed during processing, so always try to check the label. Remember, white fish also contain omega-3 so try to include these too. Examples include cod, haddock, plaice, pollack, coley, dover sole, dab, flounder, red mullet and gurnard. Most of us should have more fish in our diet. The healthiest way to cook fish is to steam bake or grill rather than fry.

Sustainability

The main source of omega-3 is from marine fish oils but fish stocks are declining for some species such as wild salmon and trout, so aim to choose fish from sustainable sources where possible. You can do this by looking for Marine Stewardship Council (MSC) certified products, or consulting The Good Fish Guide from the Marine Conservation Society. Research is looking at developing plant based sources of omega-3 primarily from micro- algae.

How much should I eat?

Everyone should try to eat two portions of fish per week, one of which should be oily fish. In the UK there is no specific recommendation of a dose for omega-3 for the general population.

Guideline portion amounts

Age	One portion size
18 months to three years	¼ - ¾ small fillet or 1-3 tablespoons
four to six years	½ - 1 small fillet or 2 - 4 tablespoons
seven to eleven years	1 - 1 ½ small fillets or 3 - 5 tablespoons
12 years to adult	140g (5 oz) fresh fish or 1 small can oily.

What about safety?

There has been publicity about chemicals that may be harmful in some types of fish.

- Shark, swordfish and marlin may contain concentrated sources of mercury that may be harmful to the developing baby's nervous system and so should be avoided by women who are pregnant or planning a baby, and by all children under 16 years.
- All other adults, including breastfeeding women, should eat no more than one portion of these particular fish a week.
- Women past childbearing age or not intending to have children, men and boys can eat up to four portions of all other oily fish a week.
- Women who are pregnant or breastfeeding, or likely to become pregnant, and girls who may become pregnant in the future, can safely have up to two portions of oily fish a week.

What if I don't like/eat fish?

People who do not eat fish can get omega-3 from the following foods: nuts and seeds e.g. walnuts and pumpkin seeds; vegetable oils e.g. rapeseed and linseed; soya and soya products e.g. beans, milk and tofu; and green leafy vegetables.

Omega-3 enriched foods

Some foods have omega-3 added to them and can be useful sources, especially for vegetarians and

others who avoid fish. However these tend to be small amounts but do include eggs and some brands of milk, yoghurt, bread and spreads. These foods may help to increase omega-3 intake.

Supplements

It is best to try and get omega-3 from foods but the following advice may be helpful if you find this difficult and wish to take a supplement:

- Look for omega-3 oil rather than fish liver oil
- Check the vitamin A content - The Scientific Advisory Committee on Nutrition (SACN) advises that if you take supplements containing vitamin A, you should not have more than a total of 1.5mg (1500ug) a day from food and supplements combined
- Do not take supplements containing vitamin A if you are pregnant or planning a baby
- Check labels for DHA and EPA content - stick to the daily amount provided by eating one to two portions of fish per week (about 450mg EPA and DHA per daily adult dose)
- Choose an age-appropriate supplement – children will need less than adults
- Seek advice from a dietitian if in doubt

There are currently no UK recommendations for omega-3 supplements as there is not enough evidence that they benefit healthy adults and children.

Summary

Health benefits of eating oily fish far outweigh the risks from pollutants. Most of us should try to eat more fish from sustainable sources, bearing in mind the advice aimed at women of childbearing age and children under 16. Supplement use is not recommended in healthy adults and children, but evidence is increasing that omega 3 fats have a role in prevention and treatment of many diseases such as heart disease.

Further information: Food Fact Sheets on other topics including Heart-Health, Cholesterol and Healthy Eating are available at www.bda.uk.com
The Marine Conservation Society
www.fishonline.org

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