

Fat

Main types of fat (omega-3 and omega-6) and their dietary sources

Can my fat intake become too low?

This information is taken from 'Fuel for Performance, Nutrition for Sport', a sports nutrition resource updated and revised by the following Welsh sports dietitians:
Rhian Owen, Chris Cashin, Elaine Hibbert-Jones and Gill Regan.
Every acknowledgement is given to all the sports dietitians who contributed to the original publication of this resource, which was first published in 1998.

Fat

Fat provides a concentrated source of food energy. Everyone, even a very lean athlete has a large reserve of fat which could be made available as fuel for exercise if need be.

Fat in food can be visible (i.e. easy to see and therefore easy to avoid) or invisible (i.e., hidden in foods and more difficult to avoid).

Visible and invisible fat in food

Visible fat	Invisible fat
Butter	Full cream milk
Margarine	Cheese
Reduced fat spreads	Meat products e.g. pies, pasties, sausages, burgers, pâté, salami, tinned meats
Lard, ghee	Chips, crisps, roast potatoes
Suet, dripping	Fried foods
Oils	Pastry and some varieties of cakes and biscuits
Fat on meat	Mayonnaise, salad cream and creamy sauces
Skin on poultry	Nuts, peanut butter
	Confectionery e.g. chocolate, toffee, fudge
	Some ready-made meals
	Some take-away meals

If your fat intake is high, it is important to reduce its intake, to make room for more carbohydrate. This is important because body stores of carbohydrate are limited (unlike body stores of fat) and athletes need to eat plenty of carbohydrate rich foods and drinks to keep their stores of carbohydrate topped up.

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Main types of fat and their dietary sources

There are three main types of fat in food (saturated, polyunsaturated and monounsaturated fats). Foods that are rich in monounsaturated fats are the healthiest. These include olive oil, rapeseed oil, hazelnut oil, peanut (groundnut) oil, olive oil based margarines, avocados and some nuts e.g. hazelnuts, pecan nuts and seeds.

Can my fat intake become too low?

- Yes, fat contains the fat soluble vitamins A, D, E and K; which you need an adequate intake of. Some of these fat soluble vitamins are important antioxidants.
- Fat also provides the two essential fatty acids (omega-3 and omega-6). These essential fatty acids cannot be made by the body and **MUST** be supplied in the diet as they are important for a healthy immune system and for tissue repair.

The sources of essential fatty acids are shown in the table below. People (including athletes) need to consume a greater proportion of omega-3 fats than omega-6 fats as this is thought to provide the best balance of essential fatty acids for optimum health. Omega-3 fats are essential for good brain development and protect us against heart disease and cancer. They have also been found to have anti-inflammatory properties.

Type of fatty acids and their dietary sources

Type of fatty acid	Good dietary sources
Omega-3	*oily fish such as fresh tuna (not tinned), herring, mackerel, salmon (fresh or tinned) and sardines **seed and certain nut oils e.g. flaxseed (linseed) oil, rapeseed (canola) oil, peanut oil **sesame seeds and tahini (sesame seed paste) soya beans and soya bean products omega-3 rich eggs e.g. Columbus [®] peanuts and walnuts foods with added omega 3 e.g. some spreads, milk and yoghurt drinks
Omega-6	**most vegetable oils e.g. safflower, sunflower, corn, evening primrose, starflower and some nut oils. Processed foods are often made using omega-6 rich oils.

*Eat at least two portions of fish a week, one of which should be oily. The Food Standards Agency (www.foodstandards.gov.uk) provides guidance on the safe maximum consumption levels of oily fish.

**Nuts, seeds and their oils are best stored in small quantities in the fridge and eaten cold if used as a source of essential fatty acids as heating them destroys their essential fatty acid content.

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