
Fats and oils

Summary

- Dietary fat contains more than double the amount of kilojoules (energy) per gram than carbohydrate.
 - Animal products and some processed foods, especially fried fast food, are generally high in saturated fats, which have been linked to increased blood cholesterol levels.
 - Replacing foods high in saturated fats with alternatives higher in monounsaturated and polyunsaturated fats tends to improve blood cholesterol levels.
 - It is important to select lower saturated fat varieties of core foods such as dairy products and meats.
-

Foods and drinks contain nutrients such as carbohydrates, proteins, fats, vitamins and minerals. Some foods or drinks contain a large amount of one nutrient such as soft drink, which contains a large amount of sugar, or fried food, which contains a large amount of fat. The term 'fat' and 'oil' are often used to mean the same thing.

Dietary fat (fat in foods and drinks) is important for many body processes. For example, it helps move some vitamins around the body and also helps with making hormones. There are different groups of dietary fat and each of the groups can have a different effect on your blood cholesterol level. For this reason, it is recommended that you replace foods and drinks high in saturated and trans fat with alternatives that contain more polyunsaturated or monounsaturated fats.

Each gram of fat contains twice the kilojoules (energy) of carbohydrate or protein. Because of this, if you have foods and drinks with too much dietary fat, it can be difficult to maintain a healthy weight.

Meals with a small amount of fat can enhance the taste and also help to keep you satisfied for longer. Throughout the day you should consume a wide range of everyday, healthy foods. By doing this, you will get a small total amount of dietary fat, particularly polyunsaturated and monounsaturated fats to meet your daily requirements.

Groups of fats

Dietary fat can be classified into four groups. These are:

- saturated
- monounsaturated
- polyunsaturated
- trans.

Each type of fat behaves differently inside the body.

Saturated fats

Saturated fats contribute to the risk of cardiovascular diseases (such as heart disease and stroke), because they raise LDL blood cholesterol levels. These fats are commonly found in many discretionary foods and drinks (those to only have sometimes), such as takeaway ('fast') foods, and in commercial products such as biscuits and pastries.

Saturated fats are also found in some everyday, healthy foods such as dairy products and meats. Unlike discretionary foods, these products have other important nutrients such as protein, vitamins and minerals, and can be important foods to include in your diet.

It is recommended to select lower saturated fat options. For example, choose:

- reduced-fat milk, yogurt and cheese

- leaner cuts of meat or trim the fat off meat prior to cooking.

Monounsaturated and polyunsaturated fats

Monounsaturated and polyunsaturated fats both tend to lower LDL blood cholesterol when they replace saturated fats in the diet. Polyunsaturated fats have a slightly greater impact than monounsaturated fats.

Where possible, replace foods and drinks high in saturated fat with either monounsaturated or polyunsaturated alternatives. For example:

- replace butter with olive oil or margarine
- replace potato chips or chocolate with plain nuts as a healthier snack alternative
- replace fried fast food with a sandwich or wrap made with lean meat and salad.

Trans fats

Trans fats tend to behave like saturated fats in the body, as they raise LDL blood cholesterol levels and increase the risk of cardiovascular diseases (such as heart disease and stroke). Unlike saturated fats, they tend to also lower HDL cholesterol, so are likely to be even more damaging.

Trans fats are rare in nature – they are only created in the stomach of cows and sheep. Because of this, trans fats are naturally found in small amounts in milk, cheese, beef and lamb. Trans fats are also created during the manufacture of some baked products such as pies, pastries, cakes, biscuits and buns. It is the trans fats that are produced during food manufacturing that you should be most concerned about, not the small amounts of trans fats naturally found in healthy foods like low-fat dairy products and lean meats.

Dietary fats and blood cholesterol

The two types of blood cholesterol are low density lipoprotein (LDL) cholesterol and high density lipoprotein (HDL) cholesterol.

LDL is considered the 'bad' cholesterol because it contributes to the narrowing of the arteries, which can lead to cardiovascular diseases (such as heart disease and stroke). HDL cholesterol is considered to be the 'good' cholesterol because it actually carries cholesterol from the blood back to the liver, where it is broken down, reducing the risk of cardiovascular disease.

Fat-containing foods

Foods generally contain one main group of fat. For example:

- **Saturated fats** – sources include fatty cuts of meat, full-fat milk, cheese, butter, cream, most commercially baked products such as biscuits and pastries, most deep-fried fast foods, coconut and palm oil.
- **Monounsaturated fats** – sources include avocado, and nuts such as peanuts, hazelnuts, cashews and almonds (including peanut and other nut butters), margarine spreads such as canola or olive oil based choices, oils such as olive, canola and peanut.
- **Polyunsaturated fats** – sources include fish, seafood, polyunsaturated margarines, vegetable oils such as safflower, sunflower, corn or soy oils, nuts such as walnuts and Brazil nuts, and seeds.

Sources of omega-6 and omega-3 fats

Polyunsaturated fats can be divided into two categories, which are:

- **Omega-3 fats** are found in both plant and marine foods, although it is the omega-3 fats from marine sources that have the strongest evidence for health benefits (including reducing the risk of heart disease). Plant food sources include canola and soy oils, and canola-based margarines. Marine sources include fish, especially oily fish such as Atlantic salmon, mackerel, Southern blue fin tuna, trevally and sardines.
- **Omega-6 fats** are found primarily in nuts, seeds and plant oils, such as corn, soy and safflower.

Benefits of omega-3 fats

Research is ongoing, but the benefits of omega-3 fats in the diet seem to include that they:

- lower triglyceride levels and reduce blood pressure, which are important risk factors in cardiovascular disease

- improve blood vessel elasticity
- keep the heart rhythm beating normally
- 'thin' the blood, which makes it less sticky and less likely to clot
- reduce inflammation and support the immune system
- may play a role in preventing and treating depression
- contribute to the normal development of the foetal brain.

Plant sterols

Plant sterols are present in all plants. Intakes of 2–3 g of plant sterols per day have been shown to reduce blood cholesterol levels by an average of 10 per cent. This is because they block the body's ability to absorb cholesterol, which leads to a reduced level of cholesterol in the blood.

However, it is hard to eat this amount of plant sterols from natural sources, so there are now plant sterol-enriched margarines and dairy products on the market. Eating 1–1.5 tablespoons (4-6 teaspoons) of sterol-enriched margarine each day can help to lower blood cholesterol levels.

Energy density of dietary fat

Dietary fat has more than double the number of kilojoules per gram (37 kJ/g) than carbohydrate or protein (17 kJ/g), making it very 'energy dense'. Foods high in fat are usually high in kilojoules. Carrying too much body fat is a risk factor in many diseases, including cardiovascular disease, type 2 diabetes and many cancers.

The Mediterranean diet

Researchers are investigating the possibility that a diet rich in monounsaturated fats, such as olive oil, may be protective against the development of coronary heart disease. People who have a high consumption of monounsaturated fats from olive oil (for example, in Greece and Italy) tend to have low rates of coronary heart disease, regardless of their body weight.

Studies have shown that olive oil consumption may have a protective role on breast, colon, lung, ovarian and skin cancer development. Compounds specific to olive oil, known as phenolics, seem to possess free radical-scavenging properties and so may be able to reduce oxidative damage to DNA.

A number of studies have also shown that olive oil may have additional beneficial effects on blood pressure, obesity, rheumatoid arthritis and immune function.

However, the Mediterranean diet contains much more than olive oil. It's possible that the low rate of coronary heart disease in these countries relates to a high intake of vegetables, legumes, fruits and cereals, which are rich in antioxidants.

Current recommendations on fats in your diet

The Australian Dietary Guidelines recommend that:

- you limit intake of foods high in saturated fat such as many biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried food, potato chips, crisps and other savoury snacks
- you replace high-fat foods that contain predominately saturated fats such as butter, cream, cooking margarine, coconut and palm oil, with foods that contain predominately polyunsaturated and monounsaturated fats such as oils, spreads, nut butters and pastes, and avocado.
- low-fat diets are not suitable for children under the age of two years.

Where to get help

- Your doctor
- Dietitians Association of Australia Tel. 1800 812 942

Things to remember

- Dietary fat contains more than double the amount of kilojoules (energy) per gram than carbohydrate.
- Animal products and some processed foods, especially fried fast food, are generally high in saturated fats,

which have been linked to increased blood cholesterol levels.

- Replacing foods high in saturated fats with alternatives higher in monounsaturated and polyunsaturated fats tends to improve blood cholesterol levels.
- It is important to select lower saturated fat varieties of core foods such as dairy products and meats.

This page has been produced in consultation with and approved by:

Deakin University - School of Exercise and Nutrition Sciences

Content on this website is provided for information purposes only. Information about a therapy, service, product or treatment does not in any way endorse or support such therapy, service, product or treatment and is not intended to replace advice from your doctor or other registered health professional. The information and materials contained on this website are not intended to constitute a comprehensive guide concerning all aspects of the therapy, product or treatment described on the website. All users are urged to always seek advice from a registered health care professional for diagnosis and answers to their medical questions and to ascertain whether the particular therapy, service, product or treatment described on the website is suitable in their circumstances. The State of Victoria and the Department of Health & Human Services shall not bear any liability for reliance by any user on the materials contained on this website.

For the latest updates and more information, visit www.betterhealth.vic.gov.au

Copyright © 1999/2019 State of Victoria. Reproduced from the Better Health Channel (www.betterhealth.vic.gov.au) at no cost with permission of the Victorian Minister for Health. Unauthorised reproduction and other uses comprised in the copyright are prohibited without permission.