

---

## Dietary fat

---

### Summary

- Dietary fat contains more than double the kilojoules (energy) per gram than carbohydrate and protein.
  - 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.
  - Following a Mediterranean diet, which is a diet high in healthy fats (such as extra virgin olive oil), fruits, vegetables, nuts, seeds, and whole grain breads and cereals, may reduce your risk of chronic disease development and increase your life expectancy.
- 

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 helps with making hormones.

There are four types of dietary fat – each one can have a different effect on our **blood cholesterol levels**. For this reason, it is recommended to replace food and drinks high in saturated and trans fats 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.

Fats can bring out flavour in foods, so consuming meals with small amounts of fat can make foods more enjoyable and can satisfy our hunger for longer. Throughout the day you should consume a wide variety of foods including foods with small amounts of dietary fat, particularly polyunsaturated and monounsaturated fats, to meet your daily requirements.

### 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 which means they are more likely to increase body fat. Therefore, it is recommended to choose 'low-fat' food options if the choice is available.

Carrying too much body fat is a risk factor for many diseases, including cardiovascular disease, **type 2 diabetes** and many cancers.

### Dietary fats and our 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 'good' cholesterol because it carries cholesterol from the blood back to the liver, where it is broken down – reducing the risk of cardiovascular disease.

---

## Types of dietary fats

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

- saturated
- monounsaturated
- polyunsaturated
- trans.

Each type of fat behaves differently inside the body.

### Saturated fats

Saturated fats (sometimes called 'bad fats') contribute to the risk of cardiovascular diseases (such as heart disease and stroke), because they raise our blood LDL cholesterol levels.

These fats are commonly found in many **discretionary foods and drinks** (those to only have sometimes) – such as energy-dense takeaway ('fast') meals and some commercial products (such as biscuits and pastries).

Saturated fats are also found in some every day, 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, yoghurt and cheese
- leaner cuts of meat or trim the fat off meat prior to cooking.

### Monounsaturated and polyunsaturated fats

Monounsaturated and polyunsaturated fats (sometimes called 'good fats') tend to **lower your blood LDL cholesterol** when they replace saturated fats in the diet.

Polyunsaturated fats have a slightly greater ability to reduce LDL cholesterol 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.

### Limit trans fats

Trans fats tend to behave like saturated fats in the body, as they raise blood LDL cholesterol levels and increase the risk of cardiovascular diseases (such as heart disease and stroke).

Unlike saturated fats, they tend to also lower HDL (good) 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 can also be found in some processed foods** (such as, pies, pastries, cakes, biscuits and buns) and in deep-fried takeaway meals.

It is these trans fats produced during food manufacturing that we 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.

## Sources of dietary fat

Although foods can contain a mixture of different types of fat, they generally contain one main group of fat.

**Saturated fat** 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 fat** sources include:

- avocado, 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 fat** sources include:

- fish and seafood
- polyunsaturated margarine
- vegetable oils (such as safflower, sunflower, corn or soy oils)
- nuts (such as walnuts and Brazil nuts) and seeds.

### **Plant sterols can lower cholesterol**

Plant sterols are components in all plants that are very similar in structure to human cholesterol. 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 margarine 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.

### **Fatty acids are essential in our diet**

Fatty acids are a component of dietary fats that are necessary for vital functions in our bodies. There are two essential polyunsaturated fatty acids – omega-3 and omega-6. Essential means our bodies cannot create these fatty acids, so we must consume them in our diet.

**Omega-3 fatty acids** are found in both plant and marine foods, although it is the omega-3 fatty acids 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, canola-based margarine and seeds.

Marine sources include – fish, especially oily fish (such as Atlantic salmon, mackerel, Southern blue fin tuna, trevally and sardines).

**Omega-6 fatty acids** are mainly found in nuts, seeds and plant oils (such as olive, corn, soy and safflower).

## **Benefits of omega-3 fatty acids**

Research is ongoing, but the benefits of omega-3 fatty acids in the diet appear to be that they:

- Lower the amount of fat in our blood 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.

## **Types of olive oil**

Olive oil is produced by the pressing or crushing of olive fruit. It comes in different grades, depending on the amount of processing involved. There are unrefined (virgin) grades and refined grades. The less the oil is refined by heat and chemical treatments, the higher the quality of the oil.

Virgin varieties of olive oil are believed to offer the greatest health benefits as they retain most of the healthy compounds from the olive fruit. Varieties include:

### **Extra virgin oil**

- Highest grade of oil from the first press of olives.
- No chemicals and limited heat are used.
- Most healthy compounds remain intact.

### **Virgin oil**

- Second best grade of oil from the second press of olives.
- No chemicals and limited heat are used.
- Most healthy compounds remain intact.

### **Olive oil**

- Lower quality oil that has been extracted from subsequent pressing of olives.
- Some chemicals, heat and filters are used to refine the oil.
- Small quantities of virgin olive oil are added to restore colour and flavour.

### **Light and extra light oil**

- Most healthy compounds have been removed or destroyed.
- Little natural flavour, colour and healthy compounds remain.

## **Olive oil and 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.

Olive oil contains many compounds that are beneficial to human health, including omega-6 fatty acids, plant sterols and phenolic compounds, which seem to possess strong antioxidant properties. Because of these compounds,

olive oil consumption may have a protective role against development of breast, colon, lung, ovarian and skin cancers.

Several 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 all rich in antioxidants and plant sterols.

Choosing extra virgin olive oil as your main source of dietary fat, as well as **eating a healthy and balanced diet** high in fruits, vegetables, nuts, seeds, and whole grain breads and cereals, may reduce your risk of chronic disease development and increase your life expectancy.

### **Current recommendations on fats in your diet**

**The Australian Dietary Guidelines** recommend:

- Limiting your 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.
- Replacing high-fat foods that contain mostly saturated fats (such as butter, cream, cooking margarine, coconut and palm oil), with foods that contain healthy polyunsaturated and monounsaturated alternatives (such as oils, spreads, nut butters and pastes, and avocado).

Remember, low-fat diets are not suitable for children under the age of two years.

If unsure of your dietary needs, please see your doctor or a dietitian.

### **Where to get help**

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

**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](http://www.betterhealth.vic.gov.au)

**Copyright © 1999/2021** State of Victoria. Reproduced from the Better Health Channel ([www.betterhealth.vic.gov.au](http://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.