



Know Your Cooking Oils



Queensland
Government



Ethnic Communities
Council of Queensland

Acknowledgement

This resource has been developed by Dietitian/Nutrition Students from the Queensland University of Technology and Staff from the Ethnic Communities Council of Queensland (ECCQ) Chronic Disease Program, with support from Queensland Government, Department of Health.

The Chronic Disease Program team at ECCQ would like to acknowledge the time and efforts of all our reviewers for their valuable input in the development of this resource.



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Introduction

This booklet explains different type of fats and the recommended fat contents of oil. It also provides information on common cooking oils in the market and its recommended use to help you have a healthy diet to prevent or better manage your chronic disease.

Ethnic Communities Council of Queensland is a charity and non-governmental organisation representing the needs and interests of people from Culturally and Linguistically Diverse Communities in Queensland. ECCQ Chronic Disease Program provides vital culturally appropriate and translated information, education and support through face to face or telephone to the community about chronic disease prevention and self-management.

If you need more information, contact us at **07 3844 9166** or **www.eccq.com.au**

Type of Fats

Dietary fats are essential to give your body energy and to support cell growth. They also help protect your organs and keep your body warm. Fats help your body absorb some nutrients and produce important hormones. Your body definitely needs fat.

There are four major dietary fats in the foods we eat:

1 Monounsaturated fats

3 Saturated fats

2 Polyunsaturated fats

4 Trans fats

Monounsaturated fat

- Monounsaturated fat is a type of fats that is usually liquid at room temperature.
- **Sources**
 - Canola, olive and peanut oils
 - Some nuts, such as cashews and almonds
- ↓ **Lower blood cholesterol levels when they replace saturated fats in the diet**
- ↓ **Lower the risk of coronary heart disease**



¹ Nutrient Reference Values for Australia and New Zealand. www.nrv.gov.au/chronic-disease/summary

² Nutrient Reference Values for Australia and New Zealand. www.nrv.gov.au/nutrients/fats-total-fat-fatty-acids

³ The Dietitian Association of Australia. www.daa.asn.au/for-the-public/smart-eating-for-you/nutrition-a-z/fat

Polyunsaturated fat

- Polyunsaturated fat is a type of fats that is usually liquid at room temperature.
 - Two main types of polyunsaturated fats are omega-3 fats and omega-6 fats. Omega-3 and omega-6 fats are essential in the diet as they can't be made in the body.
 - **Sources**
 - Omega-3 fats are found in fish especially oily fish such as salmon, sardines and anchovies.
 - Omega-6 fats are found in some oils such as safflower and soybean oil, along with some nuts, including brazil nuts.
- ↓ **Lower blood cholesterol levels when they replace saturated fats in the diet**
 - ↓ **Lower the risk of coronary heart disease**



Saturated fats

- Saturated fat is a type of **fat** that is **solid at room temperature**. They are often called “bad fats”.
- Human body does not require this fat in diet as the body can synthesise it.
- **Sources**
 - Milk, cream, butter and cheese
 - Meats from most of the land animals
 - Palm oil and coconut oils
 - Products such as pâté , pies, biscuits, cakes and pastries
- The dietary recommendation suggests that **saturated fat (and trans fat) should not comprise more than 10% of daily energy intake**.¹ This means if you consume 8000 kj per day, you should consume less than 22 g of saturated fat.

↑ **Increase blood cholesterol levels**

↑ **Increase the risk of coronary heart disease**²



Trans fats

- Trans fats are produced during the manufacturing processes from superheating oils and fats during food production. Therefore, processed foods can contain trans fats.

- **Sources**

- Deep fried foods and some takeaway foods
- Commercial cakes, biscuits, pies and pastries

↑ **Increase blood cholesterol levels**

↑ **Increase the risk of coronary heart disease**

- Trans fats in margarines?
 - Luckily, Australian food manufacturers are able to **remove** most of the trans fats from margarines. Margarines from Australia can be a healthy source of fat in our diet as they contain unsaturated fat.³



Smoke point

The **smoke point** is the temperature at which fat or oil starts to smoke. It is important not to exceed the smoke point as the smoke produced after overheating would **damage the mouth's and the nasal passages' mucous membranes**. Serious overheating to around **316 °C** [flash point] would cause a **small fire on the food or oil**, the **food or oil could burn into flame or burns** for 5 seconds or more if the temperature reaches **371 °C** [fire point].⁴



Recommended fat contents of oil

The suggested **healthy choice** for oil contains **no more than 21.7 g of saturated fat** and no more than **1.1 g of trans fat** per 100 ml of oil. However, **trans fat is not required** on the food label in Australia unless manufacturers make a **nutrition claim** about saturated fat, trans fat, monounsaturated fat, polyunsaturated fat, omega-3 fatty acid, omega-6 fatty acid or cholesterol.⁵



Cooking Temperature

	Temperature
Boiling point of water	100 °C
Medium heat cooking	107 – 177 °C
High heat cooking	177 – 232 °C Optimal: 191 °C Smaller piece of food: 191-199 °C Larger piece of food: 177-185 °C

⁴ Brown, A. C. (2014). Chapter 22 of Understanding food principle and preparation (5th edition). Australia: Cengage Learning.

⁵ National Health Foundation of Australia. (n.a.). The healthier oil program. Retrieved from www.heartfoundation.org.au/programs/healthier-oils-program

How cooking oil is made

The oil comes from various parts of plants, in most cases from what are commonly called seeds (including sunflower, palm kernel, safflower, cotton, sesame, rice, and grapeseed oils) or nuts (including peanut, soybean, almond, and walnut oils). Rice bran oil is the oil extracted from the hard outer brown layer of rice called chaff (rice husk). A few cases involve squeezing the oil from the flesh of the fruit of the plant. For example, coconut oil comes from the coconut's white meat, palm oil from the pulp of the palm fruit, olive oil from the flesh of fresh olives and corn oil is derived from the germ (embryo) of the kernel.

The common process of making cooking oils starts with cleaning the seeds, grinding them, and pressing and extracting the oil from them. Then the oil is refined, filtered and/or distilled and it is ready for packaging. (Information used in this part has been modified from original information obtained at www.madehow.com/Volume-1/Cooking-Oil.html).

The process





Pressing

Packaging

A chart for common cooking oils

Oil	Monounsaturated fat (g/100ml)	Polyunsaturated fat (g/100ml)	Saturated fat (g/100ml)	Smoke point
Canola oil	62 g	30 g	8 g	204 °C
Grape seed oil	18 g	70 g	12 g	204 °C
Sunflower oil	24 g	64 g	12 g	232 °C
Pure olive oil	~ 76 g	~ 10 g	~ 14 g	No relevant data found
Extra virgin olive oil	~ 76 g	~ 10 g	~ 14 g	208 °C
Virgin olive oil	~ 76 g	~ 10 g	~ 14 g	216 °C
Light olive oil	~ 76 g	~ 10 g	~ 14 g	No relevant data found
Extra light olive oil	~ 76 g	~ 10 g	~ 14 g	242 °C
Corn oil	33 g	53 g	14 g	227 °C

● Recommended

● Recommended for specific usage

● Not recommended

Practical usage	Comment
Suitable for hot and cold cooking	A healthy and cheap oil with a mild flavour that performs well for low-, medium- and high-heat temperature cooking. Due to its very high unsaturated content and very low saturated content, it is highly recommended by the Heart Foundation and the Dietitian Association of Australia.
Usually used in salads	It is a yellow-green, aromatic that has a light taste, therefore it is suitable for salads, marinades and some cooking.
Suitable for hot and cold cooking	A pale, bland-tasting and cheap oil that works well for low-, medium- and high-heat temperature cooking.
No relevant data found	Pure olive oil is a blend of virgin and refined olive oil with less intense flavour than extra virgin and virgin olive oil.
Not suitable for high-heat cooking	It is the highest-quality but rather expensive olive oil. It is unrefined, meaning that no chemicals or heat is used to extract oil from the olives. This is why it has the strongest olive aroma and flavour among all types of olive oils.
Not suitable for high-heat cooking	No relevant data found
No relevant data found	Olive oil, whether light or extra or light, is refined oil, meaning the olive oil is lighter in flavour and/or colour. They all have similar energy and fat content.
No relevant data found	
Suitable for hot and cold cooking	Its mild flavour makes it a good oil to use for baking for moisture and texture.

Oil	Monounsaturated fat (g/100ml)	Polyunsaturated fat (g/100ml)	Saturated fat (g/100ml)	Smoke point
Soybean oil	23 g	62 g	15 g	256 °C
Sesame oil	39.2 g	41.2g	15.2 g	210 °C
Peanut oil	48 g	34 g	18 g	232 °C
Vegetable oil (blend)	Varies	Varies	Varies	Varies
Rice bran oil	43 g	35 g	22 g	253°C – 261°C
Palm oil	~39 g	~10 g	~51 g	No relevant data found
Palm olein	~39 g	~10 g	~51 g	230°C
Coconut oil	7 g	2 g	91 g	171 °C – 179 °C
Ghee (Indian clarified butter)	22.7 g	1.7 g	65 g	252 °C

● Recommended
 ● Recommended for specific usage
 ● Not recommended

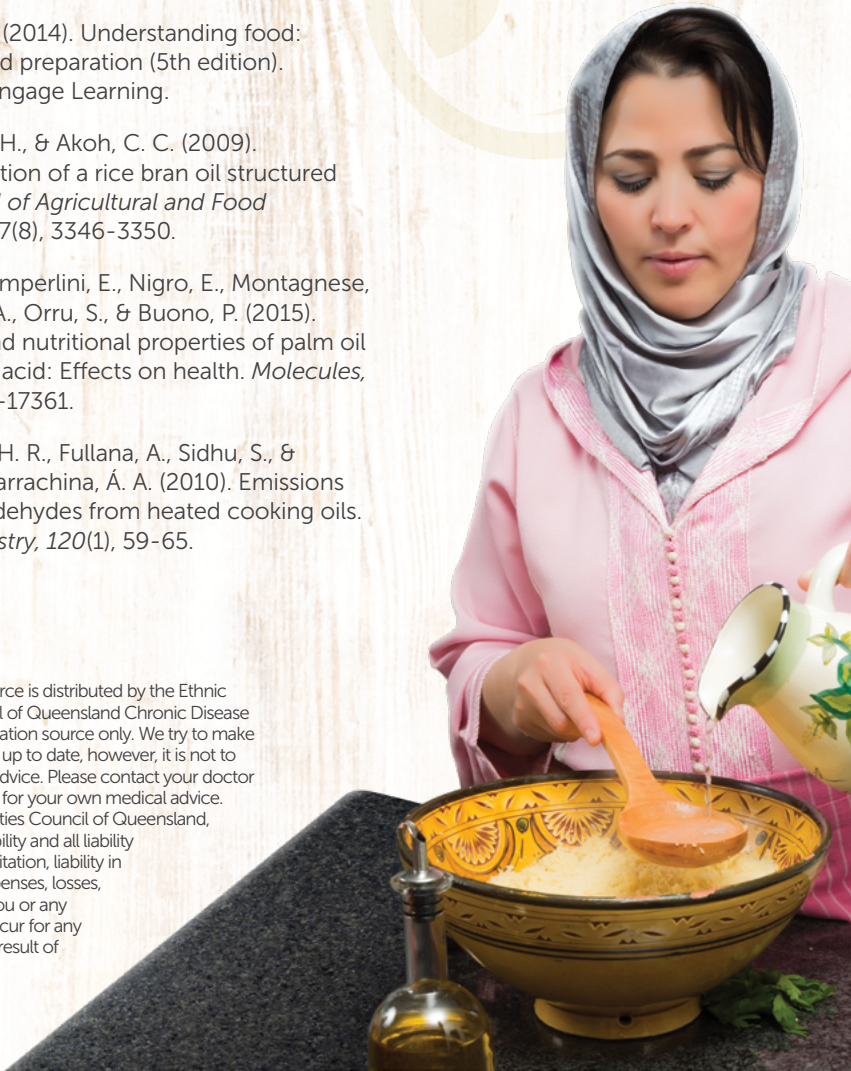
Practical usage	Comment
Suitable for hot and cold cooking	It is an all-purpose oil as it only has very little flavour and is high in polyunsaturated fat content.
Not recommended to use in deep-frying	Light sesame oil: frying. Dark sesame oil: stir-frying, baking, making sauce and spreads.
Suitable for hot and cold cooking	It has a bland flavour and is a good cooking oil as it does not interfere with the taste of other flavourful foods in your dish.
Depends on the fat content	Vegetable oils can be healthy or unhealthy depending on the saturated fat content. They may contain palm oil, cottonseed oil or coconut oil, which are high in saturated fat. Important: Checking the nutritional label is very important when buying vegetable oil. Vegetable oil that contains less than 21.7 g/100 mL saturated fat and 1.1g /100 mL trans fat is recommended.
Not recommended for cooking or consumption	It is not considered as a healthy oil because of its relatively high saturated fat content.
Not recommended for cooking or consumption	Palm or palm olein oil is not recommended because of its very high saturated fat content.
Not recommended for cooking or consumption	In Australia, food manufactures can label palm oil as vegetable oil, so consumers would not find out whether a product has palm oil. You may need to check the saturated fat content on the nutritional label before purchasing the oil.
Not recommended for cooking or consumption	It is very high in saturated fat content.
Not recommended for cooking or consumption	Ghee, a popular fat in Indian cuisine, has high level of fatty acid and has a higher smoke point than regular butter.

* <FoodWork8> is used to analyse some of the oils' fat content.

For more information

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