10 NUTRITIONAL FACTS ABOUT PALM OIL
1 Fits in a healthy diet
Healthy diet and lifestyle

Healthy eating involves focusing on the total diet and the overall food pattern. All foods can fit within a healthy diet when consumed in moderation. Simply put, a healthy diet and lifestyle is based on three elements: variation in foods and meals, a balanced energy intake and enough physical activity to prevent weight gain. A healthy diet includes lots of fruits and vegetables, a balanced carbohydrate, fat and protein intake, and avoiding a high intake of salt, refined carbohydrates, saturated fats and trans fats. A switch to a more plant based diet will also contribute to a more sustainable and healthy planet.

Role among the fats we consume

Palm oil has a role to play among the fats we consume because of its specific composition, and particularly to meet technological requirements of some of the foods we consume. It has contributed to the almost total disappearance of industrial trans fats, specifically in the Western European food market and is an excellent alternative to animal fats.
Edible oil from the fruits of the palm oil tree
Edible oil
Palm fruit oil, generally known as palm oil, is one of the edible oils cited by the Codex Alimentarius Commission of the joint FAO/WHO Food Standards Programme.¹

Palm fruits
The oil is pressed from the orange pulp of palm fruits. Palm fruits are about the size of small plums and grow in bunches on the tropical palm oil tree. Each bunch contains a thousand or more palm fruits that are harvested throughout the year.

Indonesia and Malaysia
Originally found in West Africa, the oil palm tree is now mostly cultivated in Indonesia and Malaysia, the world’s largest palm oil-producing nations. In more recent years oil palms are also cultivated in South America and in particular in Colombia.
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Used in a wide range of foods
Refined palm oil
In Europe, palm oil is used in its refined (or refined, bleached, deodorised) form. Refined palm oil is odourless and pale yellow, making it a valuable ingredient providing texture and taste in a wide range of foods, such as margarine, confectionery, chocolate, ice cream and bakery products.

Palm oil fractions
Fractionating refined palm oil involves separating the oil into fractions with different melting properties: a liquid (olein) and a solid (stearin) fraction. Palm olein is sold as cooking oil or used in food manufacturing such as instant noodles and fried food products. Palm stearin is used to make the hard components (‘hard stock’) of margarines and shortenings*. Palm olein can be further fractionated to produce super olein, hard stearin and palm mid fraction. Super olein is a more liquid fraction and withstands a lower temperature than palm olein before it solidifies. The palm-mid fraction is a key component of cocoa butter alternatives.

* a type of (semi-) solid fat that is used in cooking and baking
Concentrated source of energy for the body
Various functions of fat

Like all fats and oils, palm oil is a concentrated source of energy for our body. One gram of fat provides 9 kcal, while carbohydrates and proteins provide 4 kcal per gram. Fat is the main storage form of excess energy in the body. Fats also cushion organs during movement, insulate the body and help to maintain a normal body temperature. Fats are structural components of cell membranes and hormones. Some types of vitamins (A, D, E and K) rely on fat for absorption and storage.

Recommended fat intake

The World Health Organization recommends that in a healthy diet between 15 and 35% of the daily calories should be obtained from fat. This percentage varies according to the health situation of people as well as to the sort of diet (especially which staple foods are consumed). Of the total fat intake a maximum of 10% saturated fatty acids is recommended.
Balanced composition of saturated and unsaturated fatty acids
**Unique and balanced fat composition**

Palm oil contains an equal proportion of saturated and unsaturated fatty acids. Of these fatty acids, approximately 40% is monounsaturated oleic acid, 10% is polyunsaturated linoleic acid, 44% is saturated palmitic acid and 5% is saturated stearic acid.

**Compared to coconut oil, butter and cocoa butter**

The proportion of saturated fats in palm oil is lower than the saturated fat content of other fats of similar application: coconut oil (93% saturates), butter (70% saturates) and cocoa butter (64% saturates).
Successful alternative to replace trans fatty acids
Less than 2% trans fatty acids
Trans fatty acids have been proven to have detrimental effects on health. These compounds are formed when a liquid oil is made (more) solid.

No partial hydrogenation
Having a unique and balanced composition of saturated and unsaturated fatty acids, palm oil generally does not require partial hydrogenation (‘hardening’) in applications where solid fat is desirable, thus avoiding the formation of trans fatty acids. Palm oil has become a favourite ingredient for these applications.

Reducing trans fats in foods
Using palm oil instead of partially hydrogenated vegetable oils reduces the content of trans fats in foods made with these oils. No other vegetable fat with a semi-solid texture at room temperature and providing the same features exists in sufficient quantity. The EU has issued legislation to set a maximum of 2% trans as a legal limit. ³
Rich in antioxidant vitamin E
Rich in vitamin E
Crude or unrefined palm oil contains 60 to 100 mg vitamin E per 100 gram. An average of 50 to 65% of the vitamin E content remains after refining, which is still higher than in other refined vegetable oils.

Tocotrienols
70% of the vitamin E in palm oil occurs as tocotrienols. In contrast, other vegetable oils such as corn, olive, soybean, and sunflower, are good sources of tocopherols but contain no tocotrienols.

Unique biological properties
Current research suggests unique biological properties of tocotrienols and warrants further investigation.\textsuperscript{4,5}
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Most widely consumed vegetable oil in the world
Rising global consumption
Global production of palm oil rose from 14.6 million tons in 1995 to over 70 million tons in 2020 with over 2/3 destined to food. Palm oil is currently the most consumed vegetable oil in the world. The main palm oil consuming markets are China, India, Indonesia and the European Union. The big advantage of palm oil is, that it uses less land than any other oil crop.

Daily intake in France, Spain and Germany
Palm oil consumption levels were estimated by CREDOC in France in 2013. On average, the French (≥3 years of age) consume 2.8 gram of palm oil per day, which corresponds to approximately 4% of the overall saturated fat intake in adults.6 In 2020 a study was done on the intake of palm oil in both Spain and Germany.7 The mean intake in Spain is estimated to vary between 2.06 and 4.54 g/day and in Germany between 3.06 and 6.22 g/day.
Rich in provitamin A carotenoids (crude, unrefined palm oil)
Carotenoid pigments
Carotenoids are natural pigments responsible for the red-orange colour of crude palm oil. 100 Gram of crude palm oil contains 50 to 70 mg carotenoids. These are mainly beta carotene (56%) and alpha carotene (35%) and are the same compounds that give the orange colour to carrots, pumpkin and sweet potatoes.

Pro vitamin A
Carotenoids act as precursors of vitamin A, which plays an important role in good vision, a healthy immune system and cell growth. The pro vitamin A (retinol) equivalent content of crude palm oil has been estimated at 15 times that of carrots.

Red palm oil
Standard oil refining removes all carotenoids, but about 80% of these valuable components are retained in a product called ‘red palm oil’, resulting from a modified refining procedure. Red palm oil is used for the treatment and prevention of vitamin A deficiency in many countries worldwide.8
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Long history of dietary use
Ancient tropical plant
The oil palm is an ancient tropical plant from the West African tropical rainforest region. The use of palm oil in human nutrition dates back thousands of years. In the late 1800s, archeologists discovered a substance that they concluded was palm oil in a tomb at Abydos dating back to 3000 BCE.

Traditional use
Palm oil is traditionally used as a cooking ingredient in the tropical belt of West Africa, South East Asia and Brazil.
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