OIL TERMINOLOGY

Omega-9 Oils
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What are the different fats?

These are the major fats in foods: saturated fats and trans fats, and monounsaturated fats and polyunsaturated fats.

Appearance-wise, saturated and *trans* fats tend to be more solid at room temperature (think of butter or traditional stick margarine), while monounsaturated and polyunsaturated fats tend to be liquid (think canola, soybean or corn oil) at room temperature.

Here are the main food sources of these fats:

- "Bad" Fats (Saturated and Trans Fats)
- "Better" Fats (Unsaturated Fats — monounsaturated and polyunsaturated)

The ***"bad"*** fats are saturated and trans fats.

Saturated: Saturated fats occur naturally in many foods. The majority we eat come mainly from animal sources, meat and dairy (milk fat) such as fatty beef, lamb, pork, poultry with skin, beef fat (tallow), lard and cream, butter, cheese and other dairy products made from whole or reduced-fat (2 percent) milk. These foods also contain cholesterol. Many baked goods and fried foods also can contain high levels of saturated fats. Some plant foods, such as palm oil, palm kernel oil, peanut oil, cottonseed oil and coconut oil, also contain primarily saturated fats, but do not contain cholesterol.

Saturated fat: Saturated fat is the main dietary cause of high blood cholesterol. Saturated fat is found mostly in foods from animals and some plants. Foods from animals include beef, beef fat, veal, lamb, pork, lard, poultry fat, butter, cream, milk, cheeses and other dairy products made from whole and 2 percent milk. All of these foods also contain dietary cholesterol. Foods from plants that contain saturated fat include coconut, coconut oil, palm oil and palm kernel oil (often called tropical oils), peanut oil, cottonseed oil and cocoa butter. Naturally occurring saturated fat, such as the fat found in animal-based foods, congeals when cool, while naturally occurring unsaturated fat, such as canola oil, remains fluid. Saturated fat is fairly stable during cooking.

Hydrogenated fat: During food processing, fats may undergo a chemical process called hydrogenation. This is common in margarine and shortening. These fats also raise blood cholesterol. The saturated fat content of margarines and spreads is printed on the package or Nutrition Facts label.

Trans Fatty Acids and Hydrogenated Fats: Trans-fatty acids (TFA) are found in small amounts in various animal products such as beef, pork, lamb and the butterfat in butter and milk.

TFA also are formed during the process of hydrogenation, making margarine, shortening, cooking oils and the foods made from them a major source of TFA in the American diet. Partially hydrogenated vegetable oils provide about three-fourths of the TFA in the U.S. diet.

Trans fatty acids also are formed during the process of hydrogenation. "Hydrogenate" means to add hydrogen.

In clinical studies, TFA or hydrogenated fats tended to raise total blood cholesterol levels. Some scientists believe they raise cholesterol levels more than saturated fats. TFA also tend to raise LDL (bad) cholesterol and lower HDL (good) cholesterol when used instead of cis fatty acids or natural oils. These changes may increase the risk of heart disease.

The "better" unsaturated fats (monounsaturated and polyunsaturated) also are found in many foods. Vegetable oils, nuts and seafood are recommended sources of these fats.

Monounsaturated: Monounsaturated fats include canola oil, olive oil, peanut oil, sunflower oil, avocados and many nuts and seeds. The monounsaturated fats are typically from the omega-9 (oleic) family.

Oleic Acid — (Omega-9) oleic acid is a monounsaturated fatty acid found naturally in many plant sources and in animal products. It is an omega-9 fatty acid, and considered one of the healthier sources of fat in the diet. It's commonly used as a replacement for animal fat sources that are high in saturated fat. Oleic acid is 10 times less stable than saturated fats during cooking.

Oleic acid is generally recognized as heart-healthy. For example, olive oil is high in oleic acid. As a replacement for other saturated fats, oils high in oleic acid can lower total cholesterol level and raise levels of high-density lipoproteins (HDLs) while lowering low-density lipoproteins (LDLs), also known as the "bad" cholesterol.

Polyunsaturated: Polyunsaturated fats include a number of vegetable oils (soybean oil, corn oil and safflower oil), oily fish (salmon, tuna, mackerel, herring and trout) and most nuts and seeds. The polyunsaturated fats are either from the omega-3 (linolenic) or omega-6 (linoleic) family.

Linoleic Acid — (Omega-6) linoleic acid is an essential fatty acid that humans must obtain from their diet because their bodies do not produce it. It is an omega-6 fatty acid. Linoleic acid is found in a number of vegetable oils, including sunflower and corn oils. It is commonly used as a replacement for animal fat sources that are high in saturated fat. Linoleic acid is 106 times less stable than saturated fat during cooking.

As a replacement for other saturated fats, oils high in linolenic acid can lower total cholesterol.

Linolenic Acid – (Omega-3) linolenic acid is an essential fatty acid that humans must obtain from their diet because their bodies do not produce it. It is an omega-3 fatty acid. Linolenic acid is found in a number of vegetable oils, including soy, flax and walnut oils. It is commonly used as a replacement for animal fat sources that are high in saturated fat. Linolenic acid is 167 times less stable than saturated fat during cooking.

As a replacement for other saturated fats, oils high in linolenic acid can lower total cholesterol and benefit overall cardiovascular health.

Examples of oils with elevated or decreased levels of unsaturated fats:

High oleic canola oil: elevated levels of oleic acid versus commodity canola oil.

High oleic, low linolenic, canola oil: elevated levels of oleic acid and decreased levels of linolenic acid versus commodity canola oil.

Low linolenic canola oil: decreased levels of linolenic acid versus commodity canola oil.

Low linolenic soybean oil: decreased levels of linolenic acid versus commodity soybean oil.

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