All About Cooking Oils

Handy Tips **Oils to avoid for better health**

✔While all oils are pure fat, not all fats are created equal. I won't get into details here, but saturated and trans-fatty acids seem to be the culprits if you have health concerns. Margarine or Trans Fat Partially hydrogenated vegetable oils contain TRANS fatty acids. Read your food labels, if it says, "partially hydrogenated," try to avoid them. They are present in all commercially made doughnuts, crackers, cookies, pastries, deep-fat fried foods (including those from all major "fast-food" chains), potato and corn chips, imitation cheeses, and confectionery fats found in frosting and candies. All of them have unsaturated fats which can be damaged at high temperature and converted to a trans fat. Look for fats labeled super-unsaturated (like flax seed) or monounsaturated (like olive and canola oil). Polyunsaturated oils are also healthy choices.

What's In This Section

What Is The Smoke Point

Smoke point is the temperature to which an oil can be heated before it smokes and discolors—indications of decomposition. If you are cooking with oil and it begins to smoke, you have reached its smoke point. At the smoke point, the oil begins to emit unpleasant odors and impart unsavory flavors to your meal. Watch out for the smoke point signs as it means you are getting close to the flash point, which is when the oil can erupt into flames. Knowing the smoke point warn you about the flash point and fire points. At the flash point, there are tiny wisps of flame; at the fire point a fire is blazing. The best oils for cooking and frying are those that have a high smoking point – that is, they can be heated to high temperatures before burning.

A number of factors will decrease the smoke point of any fat:

- Combination of vegetable oils in products
- Presence of foreign properties (batter)
- Temperature to which oil is heated
- Presence of salt
- Number of times oil is used
- Length of time oil is heated
- Storage of oil (exposure to oxygen, light, temperature)

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"Flash" And "Fire" Points

Other heat points for fats include "flash" and "fire" points at 600 and 700 degrees, respectively. Do not put out an oil fire with water, the water will splatter the burning oil and spread it more quickly. Smother the fire with a tight-fitting lid. If the fire has spread outside the pan, suffocate it with baking soda or a fire extinguisher formulated for oil fires.

Cooking oil that has reached boiling point (bubbling) is very dangerous. If the oil starts to boil, remove it from the heat source immediately. Simply turning off the heat source may not be enough to reduce the heat immediately for electric appliances, or cook tops because they retain heat even after they are turned off. An oil reaches its flash point at about 600°F. when tiny wisps of fire begin to leap from its surface. If the oil is heated to its fire point 700° F. for most oils, its surface will start vaporising and spontaneously ignite, surging up and out almost instantly.

Handy Tips

✔The most accurate method of testing the temperature of oil for deep-frying is a deep-fat thermometer. Make sure the bulb of your thermometer is completely immersed in the oil, but not touching the bottom of the pan. Otherwise, the reading could be affected. If you don't have one, use the age-old method of dropping a square of bread into the hot oil; if it rises to the surface crackling and frying, the oil's hot enough. If it browns uniformly in:

- 60 seconds, the temperature is 350 to 365°F
- 40 seconds, the temperature is about 365 to 382°F
- 20 seconds, the temperature is about 382 to 390°F

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Oils for Frying

The oil or fat you use for deep-frying should have a high smoke point — the temperature to which it can be heated without smoking. Butter and margarine have low smoke points, so they aren't good for frying but work for light sauteing. The best oils for deep-frying and high temperatures are refined safflower and sunflower oils, peanut, safflower and soy oils. Refined almond, avocado and cottonseed oil are also great if you can find and afford them, and canola oil is usually not a problem either.

Remove food particles from used deep-frying oil by straining it through a coffee filter, or a sieve or funnel lined with a double layer of cheesecloth. Cover, tightly seal and refrigerate strained oil; it can then be used one more time.

The temperature of the fat is all-important if the fat isn't hot enough, food will absorb fat and be greasy, oils that can't take the heat will get too hot, and burn. The normal temperature range for frying is 325°F to 375°F, however, it'd quite likely that higher temperatures of

375°F to 400°F also are used. Most foods cook rapidly in the 325°F to 375°F range and develop a golden color, crisp texture and good flavor. High-temperature frying leads to thinner crusts and less oil absorption. Foods fried in this normal temperature range absorb 8 to 25 percent oil. Frying time is longer at lower temperatures. Frying at lower temperatures results in lighter color, less flavor development and increased oil absorption.

Refined Cooking Oils

Refined Oils are extracted from clean oilseed / oil cakes by solvent extraction for further refining to produce clear oil, free from rancidity and foreign matter. These oils are used as medium cooking oils (225°F - 350°F), high cooking oils (350°F - 450°F), and deep-frying oils (greater than 450°F).

If the oil you buy is bland and pale, you can be certain that it has been fully refined, bleached, and deodorized. In essence, refined oils have negligible flavor and aroma which can be useful in delicately flavored dishes. Use for baking and sautéing, stir-fry and wok-fry, and oven cooking; to sear, brown, deep fry, fry and for tempura.

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Name	Description/Uses for Refined Oils	Type of Fat 2	Smoke Point 1
Almond	Nut oils are best used in cold dishes; heat destroys their delicate flavor.		495°F
Avocado	This rather unusual light, slightly nutty tasting oil is considered primarily to be a novelty. To add a different twist to salad dressings, try using avocado oil in place of the oil you would normally use. This oil is often made from damaged and cosmetically inferior avocados. It is low in saturated fatty acids and high in polyunsaturates.		520°F
Butter, whole or clarified	This the preferred fat for baking as it adds the most flavour. It's not idea for frying since it will burn at a lower temperature than most oils, but can be used for sauteing. Try adding butter to oil for the flavor benefit of butter and the higher temperature range of oil.		350°F
Canola (A US marketing name for rapeseed oil)	A light, golden-colored oil, similar to safflower oil. Low in saturated fat. Extracted from the seeds of a plant in the turnip family (the same plant as the vegetable broccoli rabe). Used in salads and cooking, mostly in the Mediterranean region and India; also used in margarine and blended vegetable oils. It has a mild flavor and aroma. It is most commonly available in a refined form. Its mild flavor and relatively high smoke point make refined canola oil a good all-purpose oil. Of all the oils, it has the least	mono	400°F

	amount of saturated fat and is one of the least expensive.		
Corn oil	Made from the germ of the corn kernel. Corn oil is almost tasteless and is excellent for cooking because it can withstand high temperatures without smoking. It is high in polyunsaturated fat and is used to make margarine, salad dressings and mayonnaise.	poly	450° F
Grape Seed	This light, medium-yellow, aromatic oil is a by-product of wine making. It is used in salads and some cooking and in the manufacture of margarine.		400°F
Lard	Baking,		361-401°F
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Olive	A monosaturated oil extracted from tree-ripened olives. Olive oils range from light amber to green in color and bland to extremely strong in flavor. Olive oil is graded according to its degree of acidity and the process used to extract the oil.	mono	Unrefined 320°F; Extra Virgin 406°F; Virgin** 420°F; Extra Light* 468°F
Peanut	Made from pressed, steam-cooked peanuts. Peanut oil has a bland flavor and is good for cooking because it doesn't absorb or transfer flavors.. Its smoking point is slightly lower than corn or safflower oil	mono	450°F
Safflower, High Oleic	A clear, almost flavorless oil made from the seeds of safflowers. Safflower oil is a favorite for salads because it doesn't solidify when chilled. Sunflower oil is pale yellow and has a bland flavor. It is a good all-purpose oil low in saturated fat and high in polyunsaturated fat.	mono	450°F
Safflower, Regular	A clear, almost flavorless oil made from the seeds of safflowers. Safflower oil is a favorite for salads because it doesn't solidify when chilled. Sunflower oil is pale yellow and has a bland flavor. It is a good all-purpose oil.	poly	450°F
Sesame	Made from pressed sesame seeds. Sesame oil comes in two varieties: light (made with untoasted sesames) and dark (made with toasted sesames). Light sesame oil has a nutty flavor and is especially good for frying. Dark sesame oil (Asian) has a stronger flavor and should only be used in small quantities for flavoring foods -- not cooking. Both varieties are high in polyunsaturated fat.	poly	410°F
Shortening,	Baking, frying,		356-

vegetable			370°F
			top
Soybean	Highly refined soy oil is reasonably priced, very mild and versatile, accounting for over 80% of all oil used in commercial food production in the U.S. Almost any product that lists vegetable oil as an ingredient probably contains refined soy oil. This is a good all-purpose oil that is also used in cakes and pastries		450°F
Sunflower, High Oleic	Made from sunflower seeds. Sunflower oil is pale yellow and has a bland flavor. It is a good all-purpose oil	mono	450°F
Sunflower, Regular	A light, odorless and nearly flavorless oil pressed from sunflower seeds. Pale yellow and versatile.	poly	450°F
Vegetable Oil	Made by blending several different refined oils. Designed to have a mild flavor and a high smoke point.		

Unrefined Cooking Oils

Unrefined cooking oils*:* These oils are typically called salad oils and are used for salad dressings, marinades, and sauces or light cooking oils (light sautes and low heat baking). As a general rule, they should not be cooked at high temperatures. Use for light sautéing, low-heat baking, pressure cooking, sauces and salads. However, safflower oil is the one unrefined oil that can become hot enough to reach the temperature necessary for deep-frying. Unrefined oil contains a full range of bioactive components that not only have healthful benefits and provide full-bodied flavor, but also make the oil more prone to oxidation. Using unrefined oils at temperatures above 320°F accelerates the oxidation of these oils.

Unrefined oils are processed by cold-pressed and expeller-pressed methods. Unrefined oils carry with them the true bouquet of olives, corn, sesame seeds, peanuts, soybeans, safflower, or whatever plant was the oil's original home. The strong flavors of unrefined oils can dominate whatever dish or baked good is made with them. Of course, strong flavor is not always a drawback; in some cases unrefined oils are used as flavoring agents. And, typically, where there is strong natural flavor and aroma, there is a higher amount of nutritional value. Best for medium heat temperature range: **212°F – 320°F.**

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Name	Description/Uses Unrefined Oils	Type of Fat	Smoke Point 3
Corn		poly	
Coconut Oil	A heavy, nearly colorless oil extracted from fresh coconuts. Used primarily in blended oils and shortenings. Used primarily in prepared, processed,		

	packaged foods.		
Grape Seed	This light, medium-yellow, aromatic oil is a by-product of wine making. It is used in salads and some cooking and in the manufacture of margarine.		
Nut (walnut, hazelnut)	This fragrant full-flavored oil is pressed from hazelnuts and takes on the flavor of roasted nuts. The nuts are often toasted for a browner color and better flavor. The nuts are never blanched. Used in salad dressings, sauces, baked goods, and for sautéing.	poly	
Olive 4	sauteing, stir-frying. A monosaturated oil extracted from tree-ripened olives. Olive oils range from light amber to green in color and bland to extremely strong in flavor. Olive oil is graded according to its degree of acidity and the process used to extract the oil. Oil labeled "virgin" is cold pressed, a process using no heat or chemicals and contains low levels of acidity. Oil labeled "pure" uses heat and chemicals to process olive residue from subsequent pressings. Oil varies in weight and may be pale-yellow to deep-green depending on fruit used and processing. Cold-pressed olive oil, is superior in flavor to refined. Oil from the first pressing, called "virgin" olive oil is the most flavorful. Also classified according to acidity: extra virgin, superfine, fine, virgin, and pure, in ascending degree of acidity. "Pure" olive oil, and that labeled just "olive oil" may be a combination of cold-pressed and refined oil; suitable for cooking.	mon	
Peanut	Made from pressed, steam-cooked peanuts. Peanut oil has a bland flavor and is good for cooking because it doesn't absorb or transfer flavors.. Its smoking point is slightly lower than corn or safflower oil.	mono	320°F or less for all
Pumpkin Seed			
			top
Safflower, High Oleic	Sunflower oil is an excellent all-purpose oil; however, some people find its flavor too strong for baked goods and salads. It stores well and may be used instead of sesame or corn oil. This oil has a high resistance to rancidity.	mono	
Safflower, Regular		poly	
Sesame	There are two types of sesame oil. The oil that is made from roasted sesame seeds has a strong distinctive	poly	

	from roasted sesame seeds has a strong, distinctive flavor. It is called dark sesame or toasted sesame oil and has a intensely rich, smoky, sesame aroma; nutty taste; dark, brown color; thick consistency; and cloudy appearance. It is used a great deal in Chinese and Indian cooking. Just a few drops of this oil can add an outrageously delicious flavor that enhances many foods. Dark sesame oil is ideal for stir-fries, baking, sauces, and spreads.		
Soybean	Soybeans contain oil that is inefficient to extract in a natural manner; therefore, unrefined expeller-pressed soy oil is rather expensive. Unrefined soy oil has a strong, distinctive flavor and aroma -- some like it, some don't. It has a dark yellow color with a faint green tint. Unrefined soy oil is more susceptible to oxidation and rancidity than sesame, olive, or corn oil.	poly	
Sunflower, High Oleic	Made from sunflower seeds. Sunflower oil is pale yellow and has a bland flavor. It is a good all-purpose oil	poly	
Sunflower, Regular			
Vegetable (soybean)	An inexpensive and all-purpose blend of oils made from plant sources such as vegetables, nuts and seeds. Most vegetable oils are made from soybeans.	pol	

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