



# Time for an Oil Change?

Oils are a very useful and almost essential staple in cooking and baking. Pairing oils with their best use is as much a culinary exercise as it is a matter of health, budget and personal taste. Literally!

All oils have their own individual characteristics. Among them, 3 stand out above the rest. They are flavor, relative healthiness and smoke point (which is somewhat related to both flavor and health).

**FLAVOR:** In cooking, there are times you want flavored oil and times when it just gets in the way. Most oils are neutral in flavor. That is, they have so little flavor, that the ingredients they are used with or cooked in shine through without the flavor of the oil being noticed. Among the most **neutral oils** are: Canola, Vegetable Oils (Soybean, Corn, Soybean, Sunflower and Safflower) and Peanut. Olive Oil is **mostly** neutral and shares that distinction with Avocado and Grape Seed oil. Among the most flavorful oils are Sesame Seed, Walnut, Macadamia, Coconut and Palm oil.

## **HEALTH: There are 2 main issues here. Cholesterol and Free Radicals.**

Many people are confused about oils because some vegetable oils have long been promoted as being "heart healthy." It's true that most of these oils are low in artery-clogging saturated fat, and contain no cholesterol which is good for your heart. Unfortunately, many people also assume that these products are low in total fat and calories, and therefore can be used liberally. Not so. From a weight loss perspective, the fact is that **all oils** are **pure fat**. Just one tablespoon of **any oil** has 13.6 grams of fat and 120 calories. However, for those times when you do need a little oil for cooking, be aware that some oils are more **useful** than others in light and healthy cooking.

From a **CHOLESTEROL** perspective if you choose to separate fats (oils) into "**Good Guy**" and "**Bad Guy**" categories based on their heart-smart values, the Good Guys would be both **Monounsaturated Fats** which lower total cholesterol and LDL cholesterol (the bad cholesterol) and increase the HDL cholesterol (the good cholesterol) and **Polyunsaturated Fats** which also lower total cholesterol and LDL cholesterol, and the Bad Guys would be both **Saturated Fats** which raise total blood cholesterol as well as LDL cholesterol (the bad cholesterol) and **Trans Fats** which raise LDL cholesterol (the bad cholesterol) and lower HDL cholesterol (the good cholesterol). Therefore, based on the Cholesterol factor only, the "ideal" healthy oil should contain higher amounts of mono-unsaturated and polyunsaturated fats and with minimal or no saturated fats and trans fats.

**Ok, here's where it gets a bit complicated** because oils are commonly used both raw (Salad Dressings, Marinates etc) and cooked, (Sautéing, Frying and Baking). And a healthy oil which minimizes your cholesterol levels and risk of heart disease may in fact, turn out to be not so healthy in other ways when it's heated...or overheated.

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**In simple terms**, what we know as “healthy oils” tend to break down into unhealthy chemicals (Free Radicals) when highly heated (or overheated). As a matter of fact, heat, light and oxygen happen to de-stabilize all oils. The healthiest oils (before heating) still are, as we’ve all been told, the Monounsaturated ones. They raise the good HDL cholesterol ratio. But, when heated, Monounsaturated fats tend to break down faster than Saturated ones and become less healthy quicker. Furthermore, Mono and Polyunsaturated fats are generally more processed and refined fats. The downside of that is that they are also susceptible to becoming rancid more quickly...neither are good.

Of course we’ve also been told that the unhealthiest fat is Saturated fat (**The Bad Guys**). And that is true if used in recipes such as dressings and marinates. It’s associated with the bad, artery-clogging LDL cholesterol. On the other hand, oils that contain a high percentage of saturated fatty acids are in fact “more stable” when heated and thus create fewer of something called “Free Radicals” than those that contain a high percentage of polyunsaturated fatty acids a.k.a. (**The Good Guys**).

Ok, so what **are** Free Radicals?... and we’re not talking politics here....

Free Radicals, also known simply as “radicals”, are unstable molecules responsible for aging, tissue damage, and possibly some diseases. Antioxidants, present in many foods, are molecules that prevent these free radicals from harming healthy tissue. (That’s why you’ve been hearing so much talk about anti-oxidants lately)...all making sense now?

Of course these Free Radical molecules aren’t something you really want floating around in your body. So....Cholesterol or Free Radicals...a tough choice, but there are choices. Read on.

**The Bottom Line?** You have to make some health decisions for yourself here. When you’re cooking with oil, and your concern is overall long term health you have to consider the oil’s intended use. Unfortunately, one oil does not fit all.

### **SMOKE POINT:**

Quite simply, an oil’s smoke point is the temperature at which the oil breaks down and begins to smoke in your pan. Eventually it will spontaneously ignite.

### **So, besides the smoke & fire , what’s the big deal?**

The big deal is two fold. One, the oil will have an undesirable, burnt flavor and really ruin your dish but two and most importantly, when oil smokes, it breaks down, loses its nutritional values and creates all sorts of chemical changes that can harm you. Among them are free radicals. (See Health)

Choosing oils with an appropriate smoke point **DOES MATTER**. Oils with a high smoke point, like Peanut Oil and Canola oil, are often used for sautéing and deep fat frying and high temperature stir-frying. Oils with a lower smoke point are best suited for low temperature cooking or in non-heated uses. **The best cooking oil has a high smoke point, does not break down when heated and has an appropriate flavor for your use.**



## Making it Simple

**Good Oils:** As long as you're using fats and oils sparingly in your cooking and preparation and if you are using heat, you choose an oil which can be used without smoking it. It would be fine to use any one of the following "good" oils. All of the following oils are low in saturated fats and trans fats. Some have high concentration of monounsaturated fats such as olive oil. Choose canola oil, peanut oil, soy oil or corn oil if you wish to fry foods as these oils have a higher smoke point. It is best not to fry with olive oil as its smoke point is only about 375F. Flax Seed oil can be used for "culinary" preparations but is not recommended to use in heated applications.

### Non-Heat Applications:

Salad Dressings, Marinates etc.

Selections based on taste, reasonable costs, flavor neutrality and general healthy benefits.

**1st Choice: Canola Oil**

**2nd Choice: Corn Oil**

**3rd Choice: Olive Oil**

**Other great alternatives depending on your flavor preference or recipe needs:**

Peanut Oil, Corn Oil, Sesame Seed Oil, Avocado Oil, Grape Seed Oil, Vegetable Oil (Soybean), Sunflower Oil, Safflower Oil, Cotton Seed Oil, Flax Seed Oil

### Cooking Applications:

Saute, Deep Fry, Stir Fry

Selections based on taste, reasonable costs, flavor neutrality and smoke point for intended use.

**1st Choice Saute (Low Heat): Olive Oil**

**2nd Choice Saute: (High Heat) Canola**

**3rd Choice Saute: (High Heat) Vegetable**

**1st Choice Deep Fry: @375 F Canola**

**2nd Choice Deep Fry: @375 F Vegetable**

**3rd Choice Deep Fry: @375 F Corn Oil**

**1st Choice Stir-Fry @450 F Peanut**

**Bad Oils:** Ok...let's be serious, these "oils" aren't really "Bad" per se, they all have their redeeming qualities for certain culinary uses.. just don't invite them to dinner every night because these oils contain a high percentage of trans fat or saturated fats. They are: **Hydrogenated Vegetable Shortening, Hard Margarine, Butter, Lard, Palm Oil, Palm Kernel Oil.**

### And.....The Wild Card is???....Coconut Oil

Coconut may be by far the healthiest cooking oil of them all even though it is by definition a Saturated Fat. Coconut's Saturated Fatty Acids are constructed differently than others and studies are finding that its health benefits are tremendous. Added to that, it is very heat stable and therefore resistant to breaking down and creating those nasty free radicals. The down side is that it is quite expensive and has a prominent taste. Learn more at:<http://www.coconutoil.com>

### Choose your oil wisely, Use your oil wisely...

- Whenever possible, choose cold or expeller pressed (unrefined oils) as they are not chemically or heat processed.
- Use Extra-Virgin Olive Oil, Canola Oil or Peanut Oil for cooking providing you avoid heating these oils to high temperatures, that is, beyond their smoking point.
- Do not use once used oil for frying again and again as it becomes carcinogenic. Never add fresh oil to the fried oil. The left over oil can be used in other preparations but should not be reused for frying.
- If possible, store ALL oils in an airtight container in a dark place away from light.
- Store Extra Virgin Olive oil in your refrigerator after opening and after each subsequent use.



# Olive Oils

## Extra Virgin Olive Oil

To be certified for the “extra virgin” label, an olive oil should satisfy four criteria: it must be produced by mechanical extraction methods (no chemicals or hot water applied), come only from first cold-pressing, have an oleic acidity level of less than one percent, and must have a perfect taste. Extra virgin olive oil is valued for its perfect balance in terms of flavor, aroma, color, and acidity level. The light, delicate consistency of extra virgin olive oil makes it perfect for dressings. It is also the preferred oil for use in cooking by more discerning users.

## Virgin Olive Oil

Virgin olive oil also comes from the first pressing, and is also produced without refining. In a technical sense, virgin olive oil may have an acidity level of up to 3.3%, however, industry practice in the producing countries is to maintain under 2% acidity. Its flavor intensity can vary and its taste is less mild than extra virgin olive oil.

## Pure Olive Oil

This is now simply called olive oil and is a blend of virgin olive oil and refined olive oil. Its label will bear the designation “pure” or “100% pure”. However, refined olive oil has very little vitamin E content. This is why producers need to add unrefined virgin olive oil to impart some of the flavor, color and aroma into the blend. The proportions of the two components may vary from one producer to another, depending on the flavor the producer desires to create. Pure olive oil actually has the same acidity level as virgin olive oil, and for that reason it has good resistance to high temperatures. Its lower nutrient content than virgin olive oil makes it less expensive. It is less desirable for dressings and is better suited for heavy-duty, high-heat cooking.

## Olive Pomace Oil

Pomace oil is the lowest grade of olive-based oils. Pomace is that part of the olive that remains after all the oil and water in it has been removed by pressuring or centrifuging processes. With the use of certain solvents, there is still some residual oil that can be extracted from the olive pomace. This oil may then be refined, which results in a product bereft of any specific taste or color; it also contains none of olive oil’s vitamins. To make pomace oil acceptable to consumers, the producer blends it with virgin olive oil. As with pure olive oil, the producer may vary the proportions between the pomace oil and virgin olive oil; however, the virgin olive oil content is generally quite low. The blended product is called olive pomace oil. Like pure olive oil, it is suitable for use only in high-heat cooking.

## Olive Oil Colors

Grading of olive oil is done, to a less significant degree, based on color. Most olive-based oils have colors ranging from pale yellows to deep cloudy greens. The latter color may indicate that the oil is from green, barely ripe olives – but not always. It is possible that an excess of olive leaves slipped into the crusher, sometimes inadvertently sometimes not, resulting in pale oils acquiring a deeper aura (which can give it a better price). The authentic green color should indicate a wholesome, intensely fruity taste and freshness.

Yellow oils indicate that the olives were black and ripe when they were picked late in the season, yielding a sweeter, rounder oil. However, a lighter color may also signify oxidation arising from exposure to sunlight. If that happens, the delicate aromas and vitamin E content in such oils generally have suffered, and the oil may taste rancid.

## Common Oils and their Properties

OIL	Fat Type	Smoke Point	Flavor	Relative Cost \$
Avocado	Mono	520 F	Mild	\$\$\$
Butter	Saturated	350 F	Mild	\$\$
Canola	Mono	400 F	Neutral	\$
Coconut (Refined)	Saturated	450 F	Strong	\$\$\$
Corn	Poly	450 F	Neutral	\$
Cotton Seed	Poly	420 F	Neutral	\$\$
Flax Seed	Poly	475 F	Mild	\$\$\$
Grape Seed	Poly	420 F	Neutral	\$\$
Lard	Saturated	370 F	Mild	\$
Olive (Extra Virgin)	Mono	375 F	Mild	\$\$
Palm Oil	Saturated	450 F	Strong	\$\$
Palm Kernel	Saturated	450 F	Mild	\$\$
Peanut	Mono	450 F	Neutral	\$\$
Safflower	Poly	450 F	Neutral	\$
Sesame	Poly	425 F	Strong	\$\$
Sunflower Seed	Poly	450 F	Neutral	\$
Vegetable (Soy Bean)	Poly	450 F	Neutral	\$

## Nonstick Vegetable Oil Cooking Spray

Available unflavored and in butter, olive oil, and garlic flavors, these products are pure fat. The advantage to using them is that the amount that comes out during a one-second spray is so small that it adds an insignificant amount of fat to a recipe. Nonstick cooking sprays are very useful to the low-fat cook, as they promote the browning of foods and prevent foods from sticking to pots and pans.

