

Ten Oils And How To Use Them

The Good Guys (In No Particular Order)

1. Lard

Lard is pork fat, the highest grade being “leaf lard,” and is solid at room temperature, indicating a relatively high saturated fat content, though probably not as high as the anti-saturated fat crowd would have you believe. Lard checks in at about 41% saturated fatty acids (SFA), 47% monounsaturated (MUFA), and 11% polyunsaturated (PUFA).

2. Tallow

Tallow is rendered beef or mutton fat. Like lard, tallow is solid at room temperature and is slightly more saturated, clocking in at 52% SFA, 44% MUFA, and 4% PUFA.

The saturation of these two fats makes them highly stable in the skillet and also makes them my predominant cooking fats. I usually melt 1-2 tablespoons in the pan before the meat and vegetables go in. As far as I know, lard was the fat of choice for baking long ago (i.e., before Crisco convinced people to switch) and many bakers still swear by it. I am currently finishing off the last of my tallow before switching to a 4-pound bucket of lard that I picked up at the Farmer’s Market.

3. Coconut Oil

Delicious coconut oil. My precious! I am a big fan of coconut, coconut oil, coconut cream, and anything else coconut that you can think of. But the topic for right now is coconut oil. This oil is highly saturated, on the order of 92% SFA (6% MUFA and 2% PUFA), consisting mainly of medium-chain fatty acids. Medium-chain fatty acids pass directly from the GI tract rather than being transported and processed in the lymphatic system. Coconut oil is shelf stable for several years.

Occasionally I use coconut oil for cooking in the same way that I use lard/tallow, but typically I put it on sweet potatoes or fruit. On a warm sweet potato, it melts nicely, while on cold fruit, it forms a delicious hard coconut shell wherever it lands. It can also be used in baking or taken straight from the spoon. Coconut oil has a great mild coconut flavor that mixes well with cinnamon, nutmeg, and other “sweet” spices.

4. Palm Oil

Aside from soybean oil, this is the most widely consumed oil in the world. If you don’t count the United States, it is the most widely consumed oil. It is also a saturated tropical oil, very high in vitamin E. It is also high in vitamin K and magnesium. Palm oil is easily recognizable by its bright red color and consists of about 50% SFA, 40% MUFA, and 10% PUFA.

I have to acknowledge a mistake in my guest post. Palm kernel oil is not a refined product, but is instead extracted from the seed of the same palm fruit. It is even more highly saturated than palm oil at about 80% SFA, 15% MUFA, and only 2.5% PUFA. However, the oil is not easily extracted like palm oil is, requiring a chemical solvent to pull it from the seed. It is also much lower in vitamins than the red palm oil. For these reasons, I advise sticking to palm oil rather than palm kernel oil.

As for using palm oil, I use it in frying and sauteing. As opposed to the oils most people are used to, the deodorized vegetable oils, palm oil has a distinct taste that goes very well with vegetables

and meats (but not with eggs!). The high level of saturation makes it a good oil for applying heat to. If you are a baker, I imagine that you could substitute palm oil into your recipes as well. There is evidence that palm fruit production is detrimental to the environment, with people clearing out rain forests to open up land for plantations. However, that appears to be in certain areas of Asia, whereas West African palm oil is sustainable.

5. Olive Oil

Since anything that isn't a saturated fat is regarded as "healthy fat" in many misguided camps and since olive oil is highly unsaturated, it is touted as the best fat for your health. It's held out as the reason that the Mediterranean Diet is so healthful. So what exactly is it about olive oil that's so great? Well, it's only 14% SFA, with 75% being MUFA 11% PUFA. Aside from that, it's quite flavorful, enhancing every dish that you add it to.

I don't hold olive oil out to be the best food ever created as some people tend to do. It's a good, healthful oil, but it's not going to save you from Eternal Damnation. Because it is very unsaturated, and therefore less stable than a saturated fat, I rarely cook with it and when I do, it's over low heat. I add lots of olive oil to my salads with a bit of balsamic vinegar and basil and add it to most everything that I cook to add some extra fat calories.

6. Butter

Butter, another great fat of animal origin that has been used for ages, but suddenly became unhealthful in the 20th century. Butter is 63% SFA, 26% MUFA, and 4% PUFA. Whatever you do, do not substitute margarine for butter to reduce your saturated fat intake. Butter is real food. Margarine is not.

I don't use butter. With lard, coconut oil, palm oil, and olive oil, I have quite enough fats. But many people seek out real butter from grass-fed cows and love it. Butter from properly-raised cows isn't going to kill you, contrary to what the media reports, and isn't something to be avoided unless dairy isn't on your list of foods. It's great for baking, can be used for sauteing, and is a nice stable fat due to it's low PUFA content.

7. Toasted Sesame Oil

Toasted sesame oil is a very flavorful oil that I use only on occasion. It's low in saturated fat at 14%, and evenly split between MUFA and PUFA at 43% apiece. While it's highly unsaturated, it's also rather stable over heat. It has a high smoke point and a high antioxidant content which help to stave off rancidity and oxidation.

When I use toasted sesame oil, it's usually in something with an Asian flair. South India, Korea, and China all use the flavor of toasted sesame seeds in their cooking. Because it's high in PUFA, which I try to avoid for the most part, I might only pull the sesame oil once every few months. But it does combine well with coconut oil for both flavor and stability, each contributing vitamins and minerals. That reminds me...I'm out of sesame oil.

The Bad Guys

8. Canola Oil

Canola oil is another darling of the media, low in those unhealthful saturated fats and high in the unsaturated fats. **CAN**adian Oil, **L**ow **A**cid is 6% SFA, 62% MUFA, and 32% PUFA. It also contains about 10% omega-3 fatty acids, in the form of Alpha-Linolenic Acid.

While some people use it in place of olive oil in salad dressings and cooking, I don't use canola oil. Here are several reasons I don't include it in my diet:

- Too much PUFA without contributing any sufficient amount of flavor or vitamins (which sesame oil does on both counts)
- The omega-3s are the ALA that the body inefficiently elongates into the much-needed EPA
- Most of the canola grown in Canada and the US (80%) is genetically modified, which I also avoid

And no, I don't avoid canola because it's from the rapeseed, nor do I believe most of the claims about canola oil being poisonous. I just don't find that it adds any value to my diet.

9. Flaxseed Oil

I wrote once before about [why I don't include flaxseeds](#) as part of my diet. While it's high in omega-3s with a 4:1 omega-3:omega-6 ratio, as in canola oil, the omega-3s are of the short-chain plant variety known as ALA. In the flax post, I discussed the various elongation and desaturation processes that ALA must undergo to become EPA and DHA, the long-chain fatty acids that the body requires.

If you do use flaxseed oil, you absolutely cannot subject it to heat. It oxidizes very easily. Even storing it outside of the fridge is likely to result in an unpleasant taste. If you want to boost your omega-3 intake, stick to fish oil.

10. Peanut, Corn, and Other Vegetable Oils

These oils, the so-called "healthy polyunsaturated oils," should not be used. They are wholly unnatural fats, sources of incredible loads of omega-6 fatty acids, which most people already take in too much of. As discussed in the guest post at MDA, these oils are highly prone to rancidity and oxidation. To make them shelf-stable, they are refined and deodorized, that way, even when they're "off", you won't know it because there's nothing in them to stink.

Why Flax Seeds Aren't As Good As They're Claimed To Be

Flax is commonly touted as a good way for everyone to get their omega-3 fatty acids. Add some to your cereal. Grind it on your toast. Add the oil to your salad dressing. Bad news for vegetarians today: I'm dispelling the rumor that flax is a good way to get your omega-3s.

Here is the simple reason that adding flax seeds or oil doesn't work the way you'd like it to: flax contributes an omega-3 known as Alpha-linolenic acid (ALA). The problem with ALA is that it's a short-chain fatty acid, only 18 carbons long, while the body needs the long-chain fatty acids known as Eicosapentaenoic acid (EPA) and Docosahexaenoic acid (DHA). Just remember the acronyms, there's no reason to memorize those names. So the body converts the short-chain ALA to the long-chain EPA and DHA. Unfortunately, this process is very inefficient, on the order of 5-10%. Ironically, the higher your intake of saturated fat, the more efficient this process is. But most people that are taking flax are very health-conscious and avoid saturated fat like the plague (that is a gross generalization, no source for that).

Converting ALA To EPA & DHA

Here's a bit of technical jargon. Warning: more information than you really wanted ahead! Skip the next two paragraphs if you don't care. When you take in ALA, the body has to convert it to EPA and DHA through several rounds of desaturating and elongating. Here is [a basic flowchart](#) of the actions of the desaturation and elongation steps. You can see in the upper-left corner, you have ALA, which is acted upon by delta-6 desaturase to form Stearidonic acid, another 18-carbon omega-3. This fatty acid is elongated by the insertion of an ethyl group to form Eicosatetraenoic acid, 20-carbons long; we're getting closer. A little action from delta-5 desaturase gives us EPA, but we're still 2 carbons short for DHA. Once again, we have to elongate to get Docosapentaenoic acid and then let delta-4 desaturase convert it to DHA.

It all sounds so simple, but that doesn't take into account things that can inhibit that action of the desaturases. For instance, alcohol, diabetes, sugar, and aging all inhibit delta-6 desaturase, meaning that each of those items reduce the efficiency of the first step of converting ALA to EPA. Delta-5 desaturase is inhibited by EPA, meaning that the body works to slow down EPA production when EPA is high. High levels of omega-6 in the diet can also affect the conversions. There are likely other elements of lifestyle that inhibit the action of these desaturases.

Technically, flax is a good source of omega-3; it's just the wrong form of it. So from a purely logical standpoint, it makes sense to focus on getting the EPA and DHA that the body uses directly rather than taking a precursor and hoping for the best. And the best sources of EPA and DHA are animal products, specifically fish and grass-fed meats. The best sources are (in order) cold water fish, grass-fed meat, and eggs (properly raised eggs!). However, I find that to get a nice high intake of omega-3, supplementation is required, specifically supplementation with cod liver oil and fish oil. I use Carlson's Very Finest lemon flavored oil and take a tbs of both cod liver and fish oils per day for a total of 3g of DHA and 3.5g of EPA, give or take. The cod liver oil also contributes 2100-3600 IU of naturally-occurring vitamin A and 1200 IU of vitamin D.

Dealing With Inflammation

But here's another kicker. One of the big benefits of omega-3s is their anti-inflammatory properties. Since we want to keep inflammation low, it makes sense to first avoid foods, activities, and lifestyle factors that cause inflammation and then to supplement our body to help it fight off the remaining inflammation. There appears to be conflicting information on whether supplementing with flax oil increases the amount of inflammation. Some studies say it increases inflammation, some say it does nothing, others say it decreases inflammation.

If you really need justification for increasing your omega-3 intake, omega-3s have been shown to reduce the risk of [stroke](#) and [cardiovascular disease](#), help with [depression](#), possibly stave off [Alzheimer's](#), and keep [Type I Diabetes at bay](#). The list goes on and on; search [PubMed](#) for "fish oil" and any disease/condition you want to learn about. I bet you'll find some way that omega-3s help. Fatty acid deficiencies are associated with declines in cognitive function (see Alzheimer's above), increases in ADD, dry skin, allergies, fatigue, and decreased immunity.

The Omega-6/Omega-3 Ratio Is More Important

Most important though is the omega-6/omega-3 ratio. The typical American's ratio is around 20:1, but it should be more in the range of 2:1 to 1:1. So along with increasing the amount of omega-3 you take in, you need to reduce the amount of omega-6 that you take in. Major sources of omega-6 are the very foods that we've been told to eat lots of: vegetable oils and grains. A high omega-6 intake actually inhibits the body's ability to use omega-3s because they occupy several of the same pathways. Omega-6s are pro-

inflammatory, while omega-3s are anti-inflammatory; optimally, they should balance. And finally, omega-6s [promote tumor growth](#) (like of the [prostate](#)), along with inflammatory and auto-immune disorders, all of which have taken off in the last half of the century.

Eat Foods Your Body Recognizes

I'm going to say the opposite: avoid vegetable oils and grains. They are unnatural substances that have no place in a healthful hunter-gatherer diet. If you're eating a proper diet of meat, vegetables, nuts, seeds, oils, fruits, and tubers, you're probably doing just fine. A little grain won't hurt you, but a lot of grain will. And vegetable oils are quite likely rancid by the time you use them since polyunsaturated fats are so unstable, so ditch the corn and peanut oil and stick to olive, coconut, palm, and grass-fed animal fats. It's your call: flax seeds with a nice dose of hope or meat and seafood?