

Which Are The Best Oils?

The best oil depends on what you're using it for – cooking or raw. It's inflammatory nature depends on three things: the type of fats it contains and whether they have become altered by either cooking or processing, thus creating 'trans' fats and the presence of other nutrients which may be anti-inflammatory.

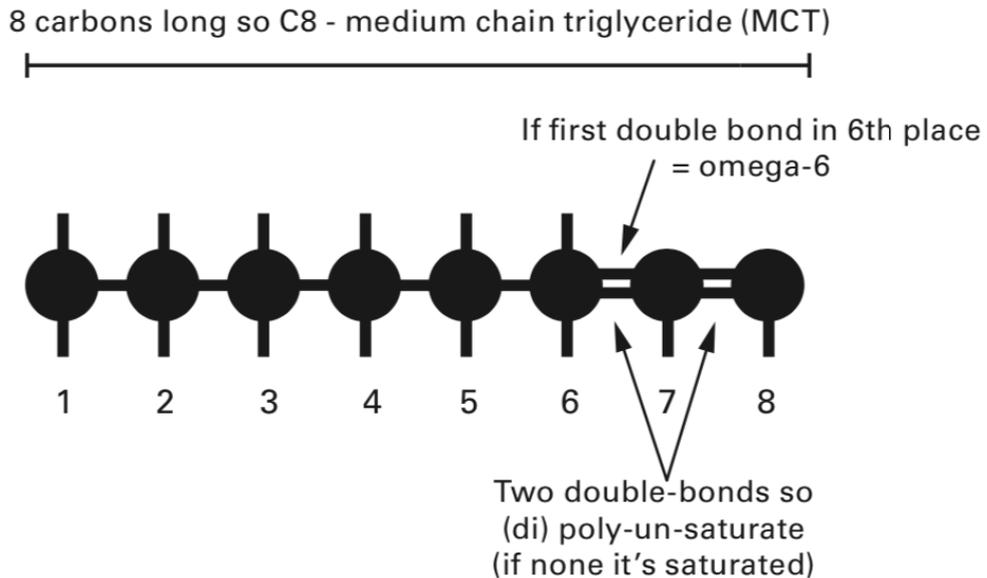
Firstly, the fats in oil are either:

Saturated (as in butter, lard, coconut oil or palm nut oil)

Mono-unsaturated (oleic acid - think olive oil) – one degree of unsaturation

Di-unsaturated (linoleic acid – eg sunflower oil) – two degrees of unsaturation

Tri-unsaturated (linolenic acid – eg chia, flax oil) – three degree of unsaturation
(anything over one degree unsaturation is called 'poly-unsaturated')



Of the tri(or poly) unsaturated, they can be omega-3 (alpha-linolenic acid or ALA) or omega-6 (DGLA as in evening primrose and borage oil).

The more unsaturated the more biologically active, but also the more degrees of unsaturation creates more 'gaps' for the fat to get oxidised or hydrogenated more easily, thus create 'trans' fat, that looks like the real thing but doesn't work biologically. The purpose of 'hydrogenating' an oil is to make it solid. This was the basis of margarine, which technically might be 'omega-6' as in sunflower oil derived marg, but, once hydrogenated, it no longer works so it's fake omega-6.

The most anti-inflammatory by far are undamaged omega-3 fats, followed by undamaged omega-6 fats to a lesser extent. (Some omega-6 fats such as 'arachidonic acid' in dairy and meat are more pro-inflammatory and also people with insulin resistance, such as diabetics, are less able to turn omega-6 into its anti-inflammatory form.)

The most inflammatory are damaged, trans or hydrogenated fats. All fats become inflammatory is damaged by cooking/frying/crispifying. Thus raw meat is not necessarily inflammatory but most cooked meat is because we like the taste and texture of burnt fat. If it were a cold climate animal it would have more omega-3 – eg an Alpine cow or Tibetan yak or Welsh mountain sheep.

A food also becomes inflammatory if a person has an allergy or intolerance to it but that is down to the individual, not the food.

Somewhat falsely, foods with high saturated fats and low omegas are sometimes labelled inflammatory and vice versa. But it's all quite faddy.

For example, coconut butter is 'cool' but it's 90% saturated, 8% mono, 2% polyunsaturated. Palm nut oil is similar but lower in saturated fats and high in mono-unsaturates – 81% saturated, 17% mono, 3% polyunsaturated.

Quite superior is palm fruit oil – it has 50% saturated, 40% monounsaturated and 10% polyunsaturated. Olive oil, by comparison, is 14% saturated, 73% monounsaturated and 13% polyunsaturated.

But not all saturated fat is the same. Most of the saturated fat we eat, and all from animal sources, is 'Long Chain Triglycerides (LCTs)' which get stored in lipoprotein, hence raising LDL cholesterol. Coconut and palm nut oil is predominantly a Medium Chain Triglyceride (MCT). These bypass the storage into LDL phase and go straight to the liver, and cells, to burn for energy. Hence, coconut oil doesn't raise LDL cholesterol, and may even reduce it, raising HDL – the good cholesterol, modestly. So, you'd be less likely to convert coconut oil into belly fat than butter.

Palm fruit oil is much lower in saturated fats, half of which are MCTs.(1) It also contains no trans-fats, and is naturally high carotenoids and vitamin E, which are anti-inflammatory antioxidants, as well as phytosterols, known to lower cholesterol, which are not present in the palm kernel oil. Both palm nut and coconut oils are high in short-chain and medium chain fatty acids, making them easier to metabolise than longer chain fats found in meat. Also the main kind of MCT in coconut oil is lauric acid, and it may be this, specifically, that confers health benefits. Caprylic acid is another, which has anti-candida properties, so there may be some gut health benefits too. Whether or not palm fruit oil does actually lower cholesterol is not clear – the studies just haven't been done. Being a) less high in MCTs but higher in phytosterols I'd suspect the effect is neutral, however the high antioxidant content is a bonus.

We would rate both coconut oil and palm fruit oil as anti-inflammatory for all these reasons and be happy with either in a processed food, hoping that the processing is not frying or very high heat eg slow baking would be OK.

BEST FOR COOKING, FRYING OR BAKING

If you're going to heat an oil you actually want the LEAST unsaturation. For example, only steam fry or bake with butter, ghee, coconut oil or olive oil. Never sunflower oil. That is because the most degrees of unsaturation the more damaged fats

get created, which fit into the locks but don't turn the keys of our biology and that blockage creates inflammation.

The real damage happens when an oil starts to smoke. Thus, an oil with a high smoke point is more versatile. A lot of commercial oils are processed to increase the 'smoke point'.

Butter, olive oil and coconut oil have a similar smoke point of 160-177 degrees. The highest smoke point of the healthier oils is ghee at 252%. Palm oil – fruit or nut – is also good. Avocado oil is also good but not readily available. As long as the smoke point is not reached all these oils are suitable and, from a nutrition point of view it is best to minimise deep frying and steam fry instead.

GHEE IS GOOD

Ghee, which is clarified butter, processed to remove anything but the fat, may also be better for people like me, allergic to dairy protein (casein) or lactose intolerant since there's very, very little in it. I don't seem to react to ghee. But my kind of reaction is not life-threatening. If you have a bad dairy allergy I'd still recommend avoiding ghee. If, on the other hand, you are lactose intolerant, which means you can't digest milk sugar lactose, there's going to be so little that it is very unlikely to cause you any problem at all. I'd always go for organic because fat stores pesticide residues. Do also bear in mind that fat stores fat-based hormones such as oestrogens. So, if you are dairy-free in relation to dealing with eg breast or prostate cancer, don't go loading in ghee. You can get organic ghee from www.naviorganics.uk.

BEST FOR FOOD PROCESSING

If a manufacturer is making something that needs fats for texture, or to hold something together, eg a biscuit, but wants to use the healthiest ingredient I'd go for palm fruit oil first, then coconut oil second, but not palm nut oil. They have to use an oil with enough saturation otherwise the product 'melts'.

DON'T DEEP FRY - STEAM-FRYING IS BETTER

Steam-frying is better than stir-frying, frying or, worst of all, deep-frying. Stir frying is different to frying in that the ingredients are essentially steamed rather than fried. The lower temperature of steaming doesn't destroy nutrients to anything like the same extent that frying does.

It is best to start with a shallow pan, or a deep frying pan, with a thick base and lid that seals well. For the purist, oil-free steam-fry add two tablespoons of liquid - either water, vegetable stock or water down a fraction of the sauce you are going to cook with. Once this is almost boiling add some vegetables, turn the heat up and put on the lid. The vegetables will sweat and start to cook. After a minute add the rest of the ingredients. Turn the heat down after a couple of minutes and steam in this way until cooked.

An alternative steam-fry involves starting off by adding a fraction of olive oil, just to lightly coat the saucepan. Again, it is best to use a saturated fat like butter or coconut oil, or olive oil, which is principally monounsaturated. Warm the oil and add the ingredients. As soon as they are sizzling, after a couple of minutes, add two

tablespoons of water or vegetable stock, or the source you are going to use and cook with the lid on. In this way vegetables can be ‘steam-fried’ using a fraction of the fat used in frying. The shorter you steam them for the more taste the vegetables will have. What you steam with adds flavour. One of our favourites is a third soya sauce, a third lemon juice, a third water. If you had used coconut butter to coat the pan, and added chunks of ginger and garlic, then you’ve got so much flavour you’ll never miss the crispy parts!

THE BEST OLIVE OIL

One superb source of polyphenols is olive oil. A growing body of research is suggesting it can really help to stave off dementia. (2) It is, of course, a cornerstone of a Mediterranean diet which has also been shown to cut risk by a third. (3)

Cold-pressed virgin olive oil is meant to be a guarantee of quality but exposés have shown that up to [70% of the extra-virgin olive oil sold in the world is fake](#), that is ‘cut’ with other cheaper oils. It is hard to tell. Olive oil should solidify in the fridge (but cheaper added oils can do too) and burn if lit in eg a lamp (but cheaper oils can do too). I’d check the oil you buy for cooking with the ‘fridge test’ just because you want to use a close to saturated fat for cooking anyway, and then not go over the ‘smoke point’ when you steam-fry.

Good quality olive oil is rich in polyphenols, and should say so on the label, giving the actual amounts present. These have so many benefits including protecting the heart, brain, skin and reducing blood sugar, inflammation and ageing.

This is largely because olives provide hydroxytyrosol and oleocanths, which are potent anti-inflammatory painkillers. They give good olive oil that peppery ‘bite’ at the back of the throat a little like the strange taste of aspirin. They have been shown to lower blood levels of markers for inflammation (IL-1, IL-6, TNF α) and raise NO (nitric oxide) (4)

But there’s another hero ingredient in good quality olive oil – a polyphenol called hydroxytyrosol. This is an extremely potent antioxidant which, among other things, protects LDL cholesterol from oxidation, thus also lowering it, according to a study in the Journal of Nutrition. (5) It is damaged LDL cholesterol that cannot be cleared so easily from the arteries and leads to heart disease.

So well established is the science on olive oil’s health benefits that the European Food Safety Authority (EFSA) allows any olive oil with at least 5mg of hydroxytyrosol per 20g of olive oil to claim that it protects blood lipids from oxidative stress. Given that the EU allows a health claim to be made if the polyphenol count is high enough, an oil that passes the test is going to shout about it so check the small print. These top quality oils are not for cooking – cold use only eg salad dressings and drizzling on food once cooked, or adding to a soup at the end to make it creamy, or just as a spoonful of medicine.

The highest recorded, according to a study at the University of Athens of over 2500 samples from around the world measured using the NMR method, is a type of olive called Olympia (also known as Ladolia or Palaiokastritsa or ‘Drop of Life’), grown in

a mountainous valley in the Peloponnese in Greece. It contains up to 1900mg/kg of polyphenols, which is eight times higher than the level needed to make health claims and ten times higher than average olive oils. I import this direct from the grower so there's no chance of adulteration. Try some from <http://www.holfordirect.com>. The taste is utterly delicious.

CHIA & WALNUT OIL

One of the other oils we love for cold use, much more than flax which, quite frankly, doesn't taste nice, is chia oil. Chia has the highest omega-3 (linolenic acid) level of any vegetarian food, is golden in colour and has a clean, nutty taste. Walnut oil is good in this regard too, both high in omega-3 and with a distinct taste, but these aren't yet easy to find. Ask in your local health food store. Also, critically, these high omega-3 oils go rancid very quickly so you want to check the sell by date, make sure the packaging is light proof, keep them in the fridge, and use relatively quickly. I'd also go for organic.

BEST FOR THE ENVIRONMENT

While an on organic olive oil is environmentally friendly in that it'll be an old grove, not displacing new forests, there has been a lot of concern about the environmental impact of coconut and palm oil by virtue of chopping down forests for oil production.

The same issue exists in eg the Amazon basin for intensive growing of soya, for example. It is important to be aware that it is not the food's fault – it doesn't make the food bad. If they grew quinoa instead of soya would we blame quinoa? It's all to do with the priority we give to sustainable agriculture and the local environment versus the pressure to create more and cheaper food. Everything can be grown sustainably. That is why it is vital to buy products that only source from guaranteed sustainable plantations that are not therefore destroying the natural habitat of wildlife. In relation to palm fruit oil the leader in this regard is the Roundtable on Sustainable Palm Oil (www.rsपो.org) who absolutely guarantee that their sustainable plantations have no negative impact on the environment or wildlife, such as orangutans. Any company that source from RSPO farms has our approval. Some companies go one step further and source direct from an RSPO farm and all parts of the supply chain are RSPO approved to avoid any possibility of contamination with a lesser quality oil. That's as good as it gets. Don't be afraid to ask. If food companies know customers concerns they'll be prepared to go the extra mile.

References:

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