

Ask Dr. Coconut™

Dr. Bruce Fife a.k.a. "Dr. Coconut" answers two of the most often asked questions about coconut oil.

When I use coconut oil for baking and frying, sometimes foods stick to the pan. Is coconut oil good for cooking?

This is a very important question. Cooking can significantly affect many fats and oils, causing the formation of toxic compounds. Some fats are more resistant to heat than other fats. Some of the most common cooking oils are the most likely to break down during heating. Which fats are the most vulnerable to heat? Polyunsaturated fats. Let me explain why.

Fats and oils are composed of molecules known as fatty acids. Fatty acids can be classified into three general categories—saturated, monounsaturated, and polyunsaturated.

Simply stated, fatty acids are composed of long chains of carbon atoms linked to each other; each of these carbon atoms are attached to a pair of hydrogen atoms. A fat is considered saturated when it holds all the hydrogen atoms it possibly can. In other words, it is *saturated* with hydrogen atoms. If, however, one pair of hydrogen atoms are missing, it forms a monounsaturated fatty acid. If two or more pairs of hydrogen atoms are missing you have a polyunsaturated fatty acid.

Fatty acids are most stable when they are bonded to all the hydrogen atoms they can hold. When hydrogen atoms are missing, as in the case of monounsaturated and polyunsaturated fatty acids, they become less stable or more chemically reactive. The more hydrogen atoms that are missing, the more chemically unstable the fatty acid becomes. Therefore, saturated fatty acids are stable, monounsaturated fatty acids are less stable, and polyunsaturated fatty acids are the least stable.

When fats are heated, these unstable fatty acids are easily transformed into harmful compounds such as trans fatty acids, free radicals, and 4-hydroxy-trans-2-nonenal (HNE). When you cook with polyunsaturated oils, you create these toxic substances.

HNE is particularly insidious. Over the past 20 years an increasing number of studies have found links between HNE and increased risks for cardiovascular disease, stroke, Parkinson's disease, Alzheimer's disease, Huntington's disease, liver problems, and cancer. Researcher A. Saari Csallany, a professor of food chemistry and nutritional biochemistry at the University of Minnesota, calls it, "a very toxic compound." Based on her studies presented recently at the American Oil Chemists Society annual meeting, she recommends that people avoid *all* foods fried in polyunsaturated vegetable oils.

Polyunsaturated oils include soybean, corn, sunflower, and safflower oils among others. Monounsaturated oils like olive oil and canola oil are less vulnerable than polyunsaturated fats, but they too are degraded under heat. It is best to use monounsaturated oils for salads or low temperature cooking.

Saturated fats are the most heat stable. You can cook them at high temperatures without creating these toxic compounds. Dr. Csallany recommends saturated fats as a healthier choice for use in cooking.

No oil is 100 percent all saturated or polyunsaturated. Fats and oils are composed of a mixture of saturated, monounsaturated, and polyunsaturated fatty acids. Soybean oil, for example, contains all three. It is called a polyunsaturated oil because it is *predominately* made of polyunsaturated fatty acids. Likewise, olive oil contains polyunsaturated fatty acids and saturated fatty acids. It is called a monounsaturated oil because it is composed mostly of monounsaturated fatty acids.

The more polyunsaturated fatty acids an oil contains, the more likely it will create toxic substances when heated. So the best oil to cook with is one that has the least amount of polyunsaturated fatty acids and the highest amount of saturated fatty acids. The oil with the largest amount of saturated fatty acids and the least amount of polyunsaturated fatty acids is coconut oil. Ninety-two percent is saturated and only 1.5 percent is polyunsaturated. You can use coconut oil for cooking without having to worry about it harming your health. It is so stable you can reheat the oil and use it several times without damaging it. Not only does coconut not form harmful toxins when heated, but it also has many health benefits. This makes coconut oil the ideal cooking oil as far as health is concerned. There is no better cooking oil.

Dr. Fife's Non-Stick Cooking Oil

Oils are added to foods to improve taste and texture. Another very important reason for using oil is for its non-stick properties. Oil keeps food from sticking to cookware. Whether you're baking or frying, oil helps prevent food from burning onto the pans and helps make cleanup easier.

The primary drawback with using coconut oil in cooking is that it is not as good a lubricant as most other oils. Foods cooked in coconut oil often have a tendency to stick somewhat. If you've ever fried an egg in coconut oil you know what I mean. You have to scrub the pan afterwards to remove all the egg. The same is true with baking. Baked goods like to cling to the sides of the pan even when coconut oil is used.

This caused me a lot of frustration when I was developing recipes for my cookbooks because I didn't want to use other, less healthy oils to coat my pans. I, however, found a solution to this problem. As I was developing recipes for my book *Cooking with Coconut Flour*, I discovered how to make coconut oil become a completely non-stick cooking oil and improve its nutritional content at the same time.

I am totally amazed at how well it works. With this oil, you have all the health benefits of coconut oil combined with the anti-sticking properties of the best non-stick cooking sprays. In my opinion, it is absolutely the best cooking oil available. It can be used for baking or frying. Foods don't stick at all. They easily slide out of the pan. Even breads seem to slide out of the pans with ease.

Since I've been using this new oil I've never had to scrub another pan. Because foods don't stick, pans are incredibly easy to clean. With a little soap and water you simply wipe them clean in a matter of seconds. I've never used an oil that makes clean up so easy.

This non-stick cooking oil is made from a combination of organic coconut oil and unbleached liquid lecithin. Unbleached lecithin has a dark amber color and when combined with coconut oil produces a rich buttery color. In fact, it looks just like butter. It could appropriately be called *coconut butter*.

Lecithin is a common food ingredient used as an emulsifier. Lecithin, also known as phosphatidylcholine, is gaining much recognition as a valuable dietary supplement. Because of lecithin's potential as a dietary supplement it has been extensively studied. Even in relatively

large amounts it has shown to have no harmful side effects. All commercial sources of lecithin are derived from soy. Soy lecithin, however, does not contain the phytoestrogens or goitrogens associated with soy that have been scrutinized in recent years. It is completely harmless with many healthy benefits.

Lecithin is a source of choline, which is one of the B vitamins important to human health, particularly brain health. It has gained a reputation as a natural means of preserving and improving mental function. Choline is one of the few substances able to penetrate the blood-brain barrier. It goes directly into the brain cells to produce a chemical, acetylcholine, that aids memory. A number of studies have shown a positive effect of phosphocholine on preventing dementia and improving cognitive function. Dietary supplements of phosphatidylcholine (lecithin) are sold specifically for this purpose. Evidence shows that it may be of help with patients with advanced Alzheimer's disease by improving orientation, learning, and memory. For these reasons, it is finding use among Alzheimer's patients and those who are concerned about preserving their mental function as they go older.

Studies have shown that lecithin provides many additional benefits.

- Improves fat digestion.
- Increases absorption of fat-soluble nutrients (e.g., vitamins A, D, E, K, and beta-carotene, etc.).
- May help to slow the deterioration of the myelin (nerve covering), which is depleted in multiple sclerosis (MS) sufferers.
- May help prevent the development of hypertension.
- Aids the liver and helps protect it from toxins, such as alcohol.
- Increases the capacity of bile to dissolve and remove cholesterol and prevent gallstones.

The combination of the numerous health benefits of coconut oil with those of lecithin makes this one of the healthiest cooking oils you could use.

However, unless you were in my home you could not enjoy the benefits of this remarkable oil. But it's far too good to be kept a secret. So I'm going to give you the recipe here. It's very simple. All you need to do is mix $\frac{1}{4}$ cup of melted coconut oil with $\frac{1}{2}$ teaspoon of liquid lecithin. Use what you need and store the rest in the refrigerator. It will last for months. In fact, I made a large batch two years ago that I am still using. ■