Coconut Oil: Menace or Miracle?

There are few foods that have been at once maligned and acclaimed as much as coconut oil. Some view it as a notorious health villain because it’s the most concentrated source of saturated fat in the diet—even higher than butter or lard. Not surprisingly, it rests at the very top of the list of foods that must be strictly avoided in many heart-healthy diet programs. At the other end of the spectrum are those people who view coconut oil as a fountain of youth and the greatest health discovery in decades. These coconut advocates claim that coconut oil can provide therapeutic benefits for cancer, diabetes, digestive disturbances, heart disease, high blood pressure, HIV, kidney disease, osteoporosis, and overweight. So what is the truth? Is coconut oil a menace or a miracle where health is concerned?

The primary criticism of coconut oil is that over 90 percent of its fat is saturated. Saturated fat is known to increase blood cholesterol levels. When coconut oil is blacklisted, it’s almost exclusively because of this extreme saturated-fat content. While many people imagine saturated fat as a single tyrant that clogs arteries, there are actually several different types of saturated fats. These fats contain between 4 and 28 carbons, and depending on the length of their carbon chain, they have very different effects on blood cholesterol levels. The saturated fats that are most plentiful in the diet are lauric acid (12 carbons), myristic acid (14 carbons),
palmitic acid (16 carbons), and stearic acid (18 carbons). Their main sources are outlined in the sidebar on page XX.

Sources of Saturated Fatty Acids with 12 to 18 Carbon Atoms

**Lauric acid:** coconut, coconut oil, palm kernel oil

**Myristic acid:** coconut, dairy products, nutmeg oil, palm kernel oil, palm oil

**Palmitic acid:** animal fats, palm oil

**Stearic acid:** beef, butter, cocoa butter, lard, mutton

Saturated fatty acids, with 12–16 carbons, increase blood cholesterol levels, while stearic acid does not. When stearic acid reaches the liver, it’s converted to oleic acid (an 18-carbon monounsaturated fat), which may help to explain why it doesn’t raise cholesterol. As a result, consumers are often advised not to be concerned about their intake of stearic acid. However, cholesterol is not the only marker for heart disease, and adverse effects of stearic acid have been reported. In one large study, stearic acid increased coronary artery disease risk more than lauric, myristic, or palmitic acid.\(^1\) Apparently, stearic acid may reduce good HDL cholesterol, increase Lp(a), which is another risk factor for heart disease, increase certain blood-clotting factors, and result in lipemia (excess fat in the blood) after eating.\(^2,^3\) In a critical review of dietary fats and coronary artery disease, the authors of the review advised that stearic acid not be
distinguished from other saturated fats when providing dietary advice to reduce coronary artery disease.²

As it happens, coconut oil is about 50 percent lauric acid, 18 percent myristic acid, and 8 percent palmitic acid. This adds up to 76 percent of the fat in coconut oil being the kind that raises cholesterol. Case closed? Well, not exactly. The predominant fat, lauric acid, does raise total cholesterol, but it appears to raise good HDL cholesterol to an even greater extent than bad LDL cholesterol. The effect on the ratio of total to HDL cholesterol is consistently favorable.⁴, ⁵, ⁶ Myristic and palmitic acid do not have this affect. Does the 50 percent lauric acid in coconut oil cancel out the 26 percent myristic and palmitic acids? We don’t really know. We do have evidence that fats rich in lauric acid, such as coconut oil, result in more favorable blood cholesterol levels than hydrogenated vegetable oils laden with trans fats.⁴ Trans-fatty acids not only raise bad LDL cholesterol, but they also decrease good HDL cholesterol. We also know that coronary artery disease risk is reduced most effectively when trans-fatty acids and saturated fatty acids are replaced with unsaturated fatty acids.² The effect of coconut oil, rich in lauric acid, remains somewhat uncertain. However, we cannot ignore the fact that in many parts of the world where coconut and coconut oil are staples in indigenous diets, rates of chronic disease, including coronary artery disease, are low.⁷, ⁸, ⁹ There is one major caveat. The benefits seem to apply only when coconut products are consumed along with a diet that is unprocessed and rich in high-fiber plant foods. When the indigenous diet gives way to a more processed, Western-style diet laden with white flour, sugar, and fatty animal products, disease rates escalate even when coconut continues to be consumed.

It is worth noting that most of the fatty acids in coconut,
particularly lauric acid, are known to have significant antimicrobial properties.\textsuperscript{10, 11, 12, 13} Virgin coconut oil also contains a variety of protective phytochemicals, including phenolic acids, which are largely eliminated through the refining process.\textsuperscript{14, 15}

Another important attribute of coconut fat is its stability. It is so highly saturated that it is not easily oxidized or otherwise damaged.\textsuperscript{16} Plant foods that grow close to the equator have a higher quantity of saturated fatty acids in order to protect themselves from the ravages of oxidation that occurs in warm temperatures. Foods that grow in cold climates generally contain higher amounts of unsaturated fats such as omega-3 fatty acids. Once again, this is necessary for the survival of the plant and its seeds; certain fluids in the plant need to remain liquid, even in very cold temperatures. The saturated fat that comes from whole plant foods, such as coconut, may in fact turn out to be of benefit for vegans. Vegan diets sometimes contain excessive amounts of unsaturated fats, which are more prone to oxidation, while the saturated fats in coconut are very stable fats with a low risk of oxidation. While we want to keep our total intake of saturated fat low, we don’t want to completely eliminate it (an impossible task on any diet).

It turns out that coconut oil is neither a menace nor a miracle food. Coconut should be treated in much the same way as other high-fat plant foods—enjoyed primarily as a whole food. As such, it is loaded with fiber, vitamin E, and healthful phytochemicals. As a bonus, it has powerful antimicrobial properties. On the other hand, coconut oil should be viewed the same way as other concentrated oils: a food that provides a lot of calories with very few nutrients. When your diet is high in concentrated fats, it can be difficult to meet your needs for other nutrients. It’s okay to use some coconut oil when preparing special-occasion treats,
but don’t rely on it as part of your daily fare. Base your diet on whole plant foods, and when you do use coconut oil, make sure it is organic and virgin.

Notes:

7. Lipoeto NI, Mmedsci, Agus Z, Oenzil F, Masrul M,


