

Coconut Oil and Coconut Water: Are Coconuts the New Superfood?

Jamie I. Baum, PhD
Assistant Professor -
Nutrition

Rosemary Rodibaugh,
PhD
Professor - Nutrition

Products containing coconut continue to increase in popularity. Products such as coconut oil and coconut water are flooding the market. It is difficult to walk into a grocery store without seeing a coconut-containing product on display. There are hundreds of blogs and diets that sing the praises of health benefits they claim are linked to coconut products, including weight loss, cancer prevention and improved brain function in Alzheimer's disease. Does this mean that coconuts are the next superfood?

Coconut Oil

Coconut oil is an edible oil extracted from the "meat" of matured coconuts. It has several applications in the food industry. It is used in processed foods because it is relatively inexpensive and can provide crisp texture to foods. Coconut oil has a high smoke point, the temperature where it starts to break down, which makes it shelf stable and ideal for foods that need a longer shelf-life. Hydrogenated and partially hydrogenated coconut oil are found in cereals, baked goods, biscuits, salty snacks, soaps, cosmetics and moisturizers.

According to some health food promoters and celebrity doctors, coconut oil is the latest miracle food, claiming it can cure everything from heart disease to obesity and cancer. However, the effects of coconut oil on health have not been well studied. These health claims tend to be based more on personal testimonials than on scientific evidence. In fact, there are very few studies in people showing benefits of coconut oil – most of these studies are epidemiology studies

(e.g., population studies) that show a link between high coconut-consuming countries and longevity [1-2].

Coconut oil is considered a saturated fat and contains 9 calories per gram. There are two basic types of fats – *saturated* and *unsaturated*. Unsaturated fats are healthy fats and include plant-based fats (such as vegetable oils and fats found in nuts, avocados and seeds) and fish oils. These fats should be the primary fats in your diet because they either do not affect cholesterol levels or they raise HDL (good) cholesterol without raising LDL (bad) cholesterol.

Saturated fats found in animal fats and tropical oils, including coconut oil, should be consumed only in small amounts because they raise both HDL (good) and LDL (bad) cholesterol. The U.S. 2010 Dietary Guidelines recommend that saturated fat should be limited to 7 to 10 percent of total calories because it can increase risk for heart disease. The fat in pure virgin coconut oil is about 92 percent saturated, the highest amount of saturated fat of any edible fat, which means it doesn't take much of it for you to reach your daily saturated fat limit [2].

However, some of the saturated fatty acids found in coconut oil, lauric acid and myristic acid, have been linked with some positive health benefits [3-6]. For example, lauric acid has been shown in many studies to increase HDL cholesterol and decrease LDL cholesterol, but when taken as an isolated fatty acid, not as part of coconut oil [6]. Coconut oil is unique because it also contains a high level of medium chain triglycerides (MCT), which are metabolized differently

*Arkansas Is
Our Campus*

Visit our web site at:
<http://www.uaex.edu>

than long chain fatty acids such as lauric and myristic acids. MCTs are transported directly from the intestinal tract to the liver, where they are burned off as fuel, which may raise the metabolic rate slightly [4-5]. With MCT going through this metabolic pathway, less fatty acids are available to be circulated throughout the body and deposited in fat tissues. Since the effect of MCT oil on weight loss is modest, it is not likely that coconut oil, which is only about half MCTs, will have much effect on weight loss. Only one study has been conducted on the effect of coconut oil on weight loss, a master's thesis in Brazil, and there was no significant effect [3].

Because the saturated fat in coconut oil is from lauric acid, coconut oil may be better for you than butter and other animal fats. Although coconut oil doesn't contain cholesterol, some studies show that it raises both LDL and HDL cholesterol [6]. If you choose to use coconut oil, choose "virgin" or unrefined coconut oil and use it in moderation. Many health care organizations such as the U.S. Food and Drug Administration, the Academy of Nutrition and Dietetics and the American Heart Association advise against the consumption of high amounts of coconut oil due to its high levels of saturated fat. One tablespoon of coconut oil contains 117 calories, 14 grams of fat, 12 grams of saturated fat and is generally more costly than healthier fats. If you are looking for real health benefits, liquid vegetable oils like soybean, canola, corn or olive oil are better choices.

Coconut Water

Coconut water is the clear fluid from young, still-green coconuts. Coconut water is believed by many consumers to have a variety of health benefits. However, to date, there is no scientific literature available to support these claims. One popular claim related to coconut water is that it is more hydrating than water. A recent study compared bottle water, coconut water, coconut water from concentrate and a carbohydrate-electrolyte sports drink [7]. The study found no difference between beverages on hydrating abilities and support of exercise following beverage consumption [7]. Coconut water does contain a high amount of potassium (~480 mg per 8-ounce serving),

which is why it is often used for rehydration by athletes. Coconut water has about 45 calories per 8-ounce serving and those calories can add up quickly if you are not mindful of the amount you drink.

The Bottom Line

If you enjoy the taste of coconut oil and coconut water, include small amounts of it in your diet, but don't expect big rewards. There is no strong scientific evidence that proves eating coconut oil or drinking coconut water has any great health benefits.

References

1. Cunningham, E. Is there science to support claims for coconut oil? *Journal of the American Dietetic Association*. 111(5); 786, 2011.
2. Schardt, D. Coconut Oil: Lose weight? Cure Alzheimer's? Clog your arteries? *Nutrition Action Healthletter*. June: 10-11, 2012.
3. St-Onge, M.P., A. Bosarge, L.L. Goree and B. Darnell. Medium chain triglyceride oil consumption as part of a weight loss diet does not lead to an adverse metabolic profile when compared to olive oil. *Journal of the American College of Nutrition*. 27(5); 547-552, 2008.
4. St-Onge, M.P., B. Mayrhoon, M. O'Keefe, H.R. Kissileff, A.R. Choudhury and B. Laferrere. Impact of medium and long chain triglycerides consumption on appetite and food intake in overweight men. *European Journal of Clinical Nutrition*. 68(10); 1134-1140, 2014.
5. Voon, P.T., T.K.W. Ng, V.K.M. Lee and K. Nesaretnam. Diets high in palmitic acid (16:0), lauric and myristic acids (12:0 + 14:0) or oleic acid (18:1) do not alter postprandial or fasting plasma homocysteine and inflammatory markers in healthy Malaysian adults. *American Journal of Clinical Nutrition*. 94(6); 1451-1457, 2011.
6. Muller, H., A.S. Lindman, A.L. Brantsaeter and J.I. Pedersen. The serum LDL/HDL cholesterol ratio is influenced more favorably by exchanging saturated with unsaturated fat than by reducing saturated fat in the diet of women. *Journal of Nutrition*. 133; 78-83, 2003.
7. Kalman, D.S., S. Feldman, D.R. Krieger and R.J. Bloomer. Comparison of coconut water and a carbohydrate-electrolyte sport drink on measures of hydration and physical performance in exercise-trained men. *Journal of the International Society of Sports Medicine*. 9; 1, 2012.

Printed by University of Arkansas Cooperative Extension Service Printing Services.

DR. JAMIE I. BAUM is assistant professor - nutrition with the Department of Food Science, University of Arkansas Division of Agriculture in Fayetteville. **DR. ROSEMARY RODIBAUGH** is professor - nutrition with the University of Arkansas Division of Agriculture in Little Rock.

FSFCS90-PD-10-2015N

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director, Cooperative Extension Service, University of Arkansas. The Arkansas Cooperative Extension Service offers its programs to all eligible persons regardless of race, color, sex, gender identity, sexual orientation, national origin, religion, age, disability, marital or veteran status, genetic information, or any other legally protected status, and is an Affirmative Action/Equal Opportunity Employer.