



## WHAT TO KNOW BEFORE YOU TRY KETO: DOWNSIDES? REPORT #2746

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**BACKGROUND:** The Keto diet is a low-carb, high-fat diet similar to the Atkins diet. It involves reducing carbohydrate intake and replacing it with fat. This reduction in carbs puts your body into a metabolic state called ketosis. When this happens, your body becomes efficient at burning fat for energy. It also turns fat into ketones in the liver, which supply energy for the brain. Ketosis occurs in healthy people during fasting and strenuous exercise. In excess, blood ketones can produce a toxic level of acid in the blood, referred to as ketoacidosis. Ketoacidosis is a known and life-threatening complication of type 1 diabetes and has been described in some cases of healthy people eating a very low-carb diet. This diet has been shown to be effective in treating seizure disorders. Research is being done to see if the keto diet aids in managing other conditions including cancer and diabetes.

(Source: <https://www.healthline.com/nutrition/ketogenic-diet-101#what-it-is> and [https://www.medicinenet.com/ketogenic\\_diet/article.htm](https://www.medicinenet.com/ketogenic_diet/article.htm))

**KETO: PROS AND CONS:** There are some benefits of going on a low-carb diet. After about one week, blood sugar stabilizes and insulin levels dip, which is actually a bonus for those struggling with diabetes. In the process of ketosis, the body produces ketone bodies that enter the spinal cord and brain, where they have several impacts, including dampening hunger. Another benefit is that people lose more weight and keep more off than people on lower-fat diets that allow more carbs. An area of concern is the high level of fat, which could potentially worsen cardiovascular health, and the stress it can place on the liver. The American Heart Association recently warned that coconut oil, which is a staple in the keto diet, is loaded with saturated fat and can raise bad cholesterol. Because the diet can lack fiber, constipation can be an issue. So can a lack of vitamins, minerals, and electrolytes, along with kidney stones. And, because the diet is so restrictive, it can be hard to stick with long-term.

(Source: <https://www.webmd.com/diet/news/20180709/ketos-fans-boost-controversial-diets-profile>)

**NEW RESEARCH SAYS KETO DIET IN SMALL DOSES:** In a Yale study published in Nature Metabolism, researchers found that the positive and negative effects of the keto diet both relate to immune cells called gamma delta T-cells, tissue-protective cells that lower diabetes risk and inflammation. When the body's glucose level is reduced due to the diet's low carbohydrate content, the body acts as if it is in a starvation state and begins burning fats instead of carbohydrates. This process in turn yields chemicals called ketone bodies as an alternative source of fuel. When the body burns ketone bodies, tissue-protective gamma delta T-cells expand throughout the body. But when the body is in this "starving-not-starving" mode, fat storage is also happening simultaneously with fat breakdown, the researchers found. When mice continue to eat the high-fat, low-carb diet beyond one week, they consume more fat than they can burn, and develop diabetes and obesity.

(Source: <https://www.sciencedaily.com/releases/2020/01/200127134741.htm>)

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