

# The Keto Diet and Cancer Risk, the Keto Flu, and More Answers

The headlines are everywhere. But so are the questions about the diet trend that's caught the attention of those seeking to lose weight - and the curiosity of fitness and health enthusiasts, parents, dietitians, doctors and researchers.



Evidence seems to show that the ketogenic diet, or the keto diet, may help manage health issues including pediatric epilepsy, diabetes, obesity, hyperlipidemia, and cardiovascular risk factors. How far do the health benefits of keto go?

While some research studies point to positive responses to the keto diet, this highly restrictive way of eating isn't right for everyone.

## Okay, start from the beginning: What is the keto diet?

The ketogenic diet is a stricter version of the Atkins diet, which relies heavily on the consumption of fats and protein while limiting carbohydrates. The keto diet is more restrictive because it limits daily carbohydrates to 20 grams (less than the amount in an apple) while recommending no more than 60 grams of protein per day. The rest of the diet is based on fat consumption.

When deprived of carbohydrates for long enough, your body must turn to other sources of fuel for energy. After three to four days on the keto diet, your body's glucose reserves aren't sufficient to support the central nervous system. This causes the body to produce an alternative source of energy from a person's fat stores,

called ketones. When your body enters this metabolic process, it's called ketogenesis. This fat-burning state, often called ketosis, is the goal of the ketogenic diet.

## Does keto fight cancer?

"That goes back to the 1920s, when German scientist Otto Warburg found that cancer cells fuel their growth through metabolizing a large amount of glucose into energy, without using oxygen. 'Normal' cells use oxygen to metabolize the glucose into energy. When your body is in ketosis, your healthy cells use the ketones for energy, but cancer cells may not be able to do so as easily. So, the ketogenic diet attempts to deprive cancer cells of their primary energy source, glucose," says Lesley Klein, a medical nutrition therapist and clinical dietitian manager at Sylvester Comprehensive Cancer Center.

According to Klein, the majority of claims regarding the ketogenic diet and cancer are drawn from lab and animal studies.

"A [2018 study](#) found that the keto diet enhanced the effects of a specific cancer drug," she says. "However, according to the American Institute for Cancer Research (AICR), in some cases, the ketogenic diet by itself had no effect on cancer and actually accelerated the growth of leukemia in mice. Another [study](#) involving patients with ovarian and endometrial cancers did show favorable data after three months. Further clinical studies are needed to determine whether the ketogenic diet may be an effective post-surgical non-medicine therapy for certain types of cancer."

## What is the keto flu?

Many dieters find it hard to actually achieve or maintain ketosis because the first few days to weeks of eating only high fat, moderate protein and low carbohydrate foods can make you feel pretty awful. This common reaction is called the keto flu,

because it makes dieters feel lethargic, moody, constipated and maybe even sick to their stomachs. But, if you stick with the diet long enough, it does pass. Once beyond that stage, keto devotees often report they feel healthy and experience far fewer cravings for sugar and carbohydrates.

## **The ketogenic diet began as a treatment for pediatric epilepsy.**

While some of the physiology behind this is still being researched, doctors agree that the keto diet shows great promise for managing symptoms for young epileptics.

“Some adults choose to continue a similar diet (known as the Modified Atkins diet) into their adulthood to assist with controlling their epilepsy, in addition to epilepsy medications,” says Nicole Rittman, a registered dietitian with the University of Miami Health System.

Though the keto diet can be challenging for adults to maintain, there is strong supportive evidence that the use of ketogenic diets in weight loss therapy is effective. Recommended mostly for adults fighting obesity, the high-fat keto diet can provide more significant weight loss than low-fat diets that allow for more carbs.

“In the beginning days of the keto diet, initial weight loss is likely related in part to a loss in water weight, as opposed to fat mass,” says Rittman. “However, over the next several weeks, ongoing weight loss on this diet may be related to the dietary transition away from processed, refined products (like sodas, sweets, white breads, and pastas) and towards an increase in non-starchy vegetables (like salad greens, peppers, and broccoli) and healthier proteins and fats (like avocados, chicken, turkey, seafood, eggs, nuts, and seeds).

“Those on the keto diet may also consume fewer calories overall during the day,

further contributing to the weight loss trend. The weight loss achieved from maintaining these dietary changes may also help prevent or manage type 2 diabetes and some cardiovascular diseases.”

There’s even evidence that ketogenic diets can improve the emotional mood of overweight dieters who follow the diet’s rules after the initial keto flu period.

## **Is the keto diet right for me?**

Rittman says, “I would not recommend this diet for individuals with type 1 diabetes because of the keto diet’s restricted carbohydrate intake and increased production of ketone bodies.

“Additionally, it may not be appropriate for individuals with chronic kidney disease because of the emphasis on protein intake. I also do not recommend this diet for individuals with increased nutritional needs due to diseases such as cancer, Crohn’s Disease or ulcerative colitis. The keto diet may be too restrictive for these patients, resulting in unintended weight loss,” she says.

Klein agrees. “Currently, no major health organization recommends the ketogenic diet for cancer patients or for cancer prevention. However, the AICR is supporting research in that area. There is a potential for it to be used with cancer patients that have brain tumors.”

## **If you decide to start the keto diet...**

If you’re considering the keto diet with the goal of managing your weight, cardiovascular issues or type 2 diabetes, first examine the type and amount of carbohydrates in your current diet. Getting on the keto diet would force you to avoid added sugars and processed foods, which are healthier practices for everyone. However, the diet would also reduce your intake of the fiber, vitamins and minerals

found in whole grains, fruit, some vegetables, beans and legumes. Replacing these foods with those high in calories and saturated fats (which include red meats, whole-milk dairy products, and some vegetable oils) could increase your cholesterol levels and negatively affect the bacteria in your gut.

If you're on the keto diet, drink adequate amounts of water, Rittman says. You're missing out on the added hydration provided by fruits and veggies. Staying hydrated will help you manage constipation caused by the lack of fiber in this diet and may help provide energy during the keto flu period.

## **Try eating more fish, chicken and turkey breast, eggs, soy, and nuts in place of red meat.**

Rittman also recommends taking a daily multivitamin to supplement for the keto diet's reduction in vitamins, minerals and antioxidants typically supplied by fruits, vegetables and whole grains.

Or, you might try a simpler route. "There is clear evidence that following a diet rich in plant foods, eating moderate amounts of red meat and other animal proteins, limiting alcohol, and incorporating exercise can reduce your risk for cancer and other chronic diseases like obesity, diabetes and heart disease," Klein says.

If you do consider a restrictive diet like the ketogenic diet, Rittman advises speaking with a medical professional or dietitian first to determine if it's appropriate for you. "The best diets for weight management, or overall health, aren't necessarily diets at all. They're lifestyle changes."

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