

Letter to the Editor: The Pundit Speaks

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“Benefits of the Keto Diet”

The ketogenic (keto) diet and other low-carb eating plans have gained steam in the battle against obesity. Although these diet strategies are effective at inducing weight loss, there is concern about possible repercussions—especially when such diets are followed for long periods of time. The keto diet is best known for weight loss, but studies show it may help certain diseases. Very low-carbohydrate diets (i.e., ketogenic diets or KDs) limit carbohydrate consumption to fewer than 50 grams per day, which are typically derived from non-starchy vegetables. After a few days on a keto diet, the production of energy switches to burning fat. This switch yields ketone bodies, which takes the place of glucose as an energy source for the central nervous system. People on ketogenic diets experience weight loss because of lower insulin levels, a diuretic effect, and a decreased sense of hunger.” Negative effects include light-headedness, fatigue, dizziness, and constipation; this temporary condition is known as the “keto flu.” Evidence that bridges nutrition and cancer immunosurveillance is limited. KD and 3HB slowed natural tumor progression in the absence of additional therapeutic intervention, but they also accelerated and improved the efficacy of cICB (combination immune checkpoint blockade) against established and aggressive orthotopic melanoma, lung, and renal cell cancers. In clinical trials, the ketogenic diet has proven effective in those with adult epilepsy, adult malignant glioma, and Alzheimer disease. According to the authors of a review published in *Brain Sciences*, “As each of these pathophysiologic factors can be influenced through diet manipulation, it is logical and reasonable that diet could alter the course and outcomes of these and other neurologic disorders that share common pathways. A greater understanding of the mechanisms of the ketogenic diet and ketones has resulted in the discovery of novel drug targets and inroads into the development of new drugs. The authors of the *Nutrients* review cite various studies that point to the benefits of metabolic control proffered by a low-carbohydrate diets (LCDs) in those with type 2 diabetes (T2D) and obesity. Moreover, a further decrease in carbohydrate intake leading to ketosis may be even more beneficial. Because LCD or KD results in ketosis, these meal plans are not suitable for some patients with T2D, including women who are pregnant or lactating, people with or at risk for eating disorders, or people with renal disease.

In the America that I love, although more research needs to be done, following a ketogenic diet may help with a gamut of conditions that are closely associated with energy metabolism. Because the long-term effects of ketosis on the body remain to be elucidated, it is imperative that any patient following a keto diet should be carefully selected, counseled, and closely monitored.

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