Keto diet therapy recommendations set for adults with epilepsy, other neurologic diseases

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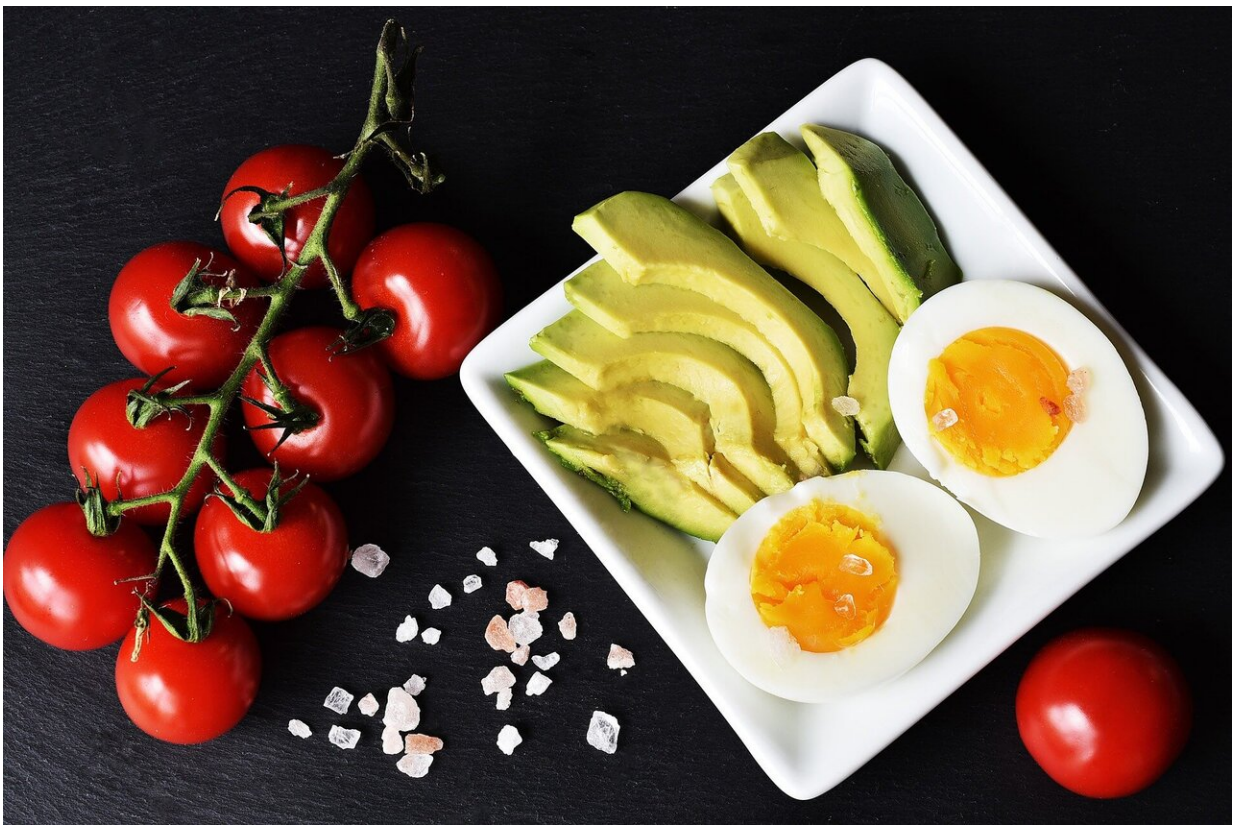

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Within the past two decades, Johns Hopkins Medicine researchers and others have shown that ketogenic diet therapies—high-fat, low-

carbohydrate and adequate protein diets that metabolize fat into chemicals called ketones that protect the brain and foster healthy neuron growth—are safe and effective in treating both children and adults with drug-resistant forms of epilepsy. However, while established guidelines are available for using ketogenic diet therapy to reduce seizures in children, there aren't formal recommendations for adults.

Now, Mackenzie Cervenka, M.D., director of the Adult Epilepsy Diet Center and associate professor of neurology at the Johns Hopkins University School of Medicine, and her international collaborators have published the first set of recommendations based on current clinical practices and scientific evidence for managing ketogenic diet therapies in adult patients.

The new guidelines appear in the Oct. 30, 2020, issue of the journal *Neurology: Clinical Practice*.

"We wanted to guide medical professionals on how to manage adults who are using a ketogenic diet therapy," says Cervenka. "We focused on epilepsy, but we also touch on the diet's use in patients with other neurological disorders."

Emerging evidence supports using ketogenic diet therapies in other adult neurologic disorders and medical conditions, such as migraines, Parkinson's disease, dementia, brain tumors and multiple sclerosis.

"Ketogenic diets are called therapies for a reason," Cervenka says. "They should only be employed with the support of medical professionals who are familiar with them as a clinical tool. The concern is when people follow them unsupervised. Our new recommendations are designed to make it easier for health care providers to give proper guidance."

Ketogenic diets have been found effective in children with specific

seizure types and epilepsy syndromes, which are often life-long conditions and require transition to adult providers for ongoing care.

"This goes back to Hippocrates, who wrote about fasting to suppress seizures," Cervenka says. "There are many studies and articles about the benefits of fasting; however, it's not a sustainable treatment. Ketogenic diet therapies create a metabolic state where you're breaking down fats like fasting, but with adequate nutrition."

To develop their recommendations, the researchers surveyed medical professionals at 20 institutions around the world on their results in treating an estimated 2,189 adults with ketogenic diet therapies for epilepsy and other neurologic diseases. Cervenka and her colleagues found that the therapy should be tailored to fit the needs of the individual patient, taking into consideration his or her: (1) physical and mental characteristics, (2) underlying medical conditions, (3) food preferences, (4) type and amount of support from family and others, (5) level of self-sufficiency, (6) feeding habits and (7) ease of following the diet.

"Most of the differences between the child and adult recommendations have to do with compliance," Cervenka says. "Often, it's more of a challenge for adults than for children."

The researchers advise medical professionals to provide their patients with recipe ideas, individualized training on the ketogenic diet lifestyle from a dietitian or nutritionist, and guidance for meal planning and preparation before initiating the therapy.

Proper preparation and training, says Cervenka, provide the greatest likelihood of success, as patients often report difficulties coping with carbohydrate restriction. She adds that patients on a ketogenic diet therapy should take multivitamin and mineral supplements, along with

drinking plenty of fluids.

More information: Mackenzie C. Cervenka et al. International Recommendations for the Management of Adults Treated with Ketogenic Diet Therapies, *Neurology: Clinical Practice* (2020). DOI: 10.1212/CPJ.0000000000001007