Plant-based diets high in carbs improve type 1 diabetes, according to new case studies

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Plant-based diets rich in whole carbohydrates can improve insulin sensitivity and other health markers in individuals with type 1 diabetes, according to two case studies published by researchers from the

Physicians Committee for Responsible Medicine in the *Journal of Diabetes & Metabolism*.

Both case studies followed individuals with type 1 diabetes who adopted plant-based diets rich in whole carbohydrates—including fruits, vegetables, whole grains, and legumes. The patients' health care teams tracked their blood sugar control, heart disease risk factors, and other health measurements before and after the diet change.

One case study followed a female patient who was diagnosed with type 1 diabetes in 2018. At the time, her A1c was 8.7%. She initially adopted a low-carbohydrate (less than 30 grams of carbohydrate per day), high-fat diet that was high in meat and dairy. Her blood sugar stabilized, but she required more insulin per gram of carbohydrate consumed. Her total cholesterol also increased from 175 to 221 mg/dL. In January 2019, she switched to a plant-based diet, eliminating dairy products, eggs, and meat. The patient was able to decrease her insulin dosage, maintain her A1c level at 5.4%, and drop her cholesterol level to 158 mg/dL.

"This study challenges the misconception that carbs are the enemy when it comes to diabetes," says study author Hana Kahleova, MD, Ph.D., director of clinical research at the Physicians Committee. "The patient in this case study experienced the opposite: Adding more healthful carbohydrates to her diet stabilized her glycemic control, reduced her insulin needs, and boosted her overall health."

The other individual—a 42-year-old man who had been diagnosed with type 1 diabetes at age 25—eliminated animal products from his diet and switched to a whole food, plant-based diet. He increased his consumption of carbohydrates from 150 grams to 400-450 grams per day. After adopting a carbohydrate-rich plant-based diet, he lost weight, required less insulin, and reduced his A1c—a measure of blood sugar levels over a 3-month period—from 6.2% to a range between 5.5-5.8%.

The authors note that a previous small study supported the case studies' results, finding that a high-carbohydrate, high-fiber diet improved glycemic control in 10 people with type 1 diabetes. As a next step, the authors suggest that randomized clinical trials are needed to verify the case studies' findings, assess their generalizability, and quantify the effectiveness of plant-based diets in the management of type 1 diabetes.

Previous studies have found that low-fat, plant-based diets can be beneficial for those with type 2 diabetes. Research has also shown that those eating a plant-based diet have approximately half the risk of developing type 2 diabetes, compared with non-vegetarians.

"Decades of research has proven that a plant-based diet can be beneficial for those with type 2 diabetes. Now, these groundbreaking case studies are offering hope that the same may be true for those with type 1 diabetes," adds Dr. Kahleova.

More information: Hana Kahleova et al. Plant-Based Diets for Type 1 Diabetes. *Journal of Diabetes & Metabolism*. www.longdom.org/open-access/pl … -type-1-diabetes.pdf

Provided by Physicians Committee for Responsible Medicine