

# **Reduce Carbohydrate Intake, Focus on Quality to Improve Health Outcomes in Diabetes**

BOSTON — Reducing overall carbohydrate intake and eating more non-starchy vegetables and whole foods can help improve health outcomes for [people with diabetes](#), according to a speaker at the Cardiometabolic Health Congress.

Alison Evert, MS, RDN, CDCES, FADCES, manager of the nutrition and diabetes education programs at the University of Washington Neighborhood Clinics, said there are multiple types of eating patterns recommended for people with diabetes, but approaches that target glucose, and weight management and cardiovascular risk reduction through changes in both [quantity and quality of carbohydrates](#) may have the most therapeutic advantages. She said providers should focus on reducing carbohydrate intake in people with diabetes by cutting out sugar-sweetened beverages and reducing the portion sizes of starchy foods, as well as improve carbohydrate quality by creating an eating pattern featuring more non-starchy vegetables and whole foods, and less added sugars and refined grains.

Non-starchy vegetables are among the foods recommended for people with diabetes looking to improve their CV health.

“We don’t want people with diabetes to die of heart disease and that’s the No. 1 cause of death in this patient population,” Evert said during a presentation. “My shameless recommendation is to refer your patient to a dietetic professional who may have time to help your patients come up with a game plan [for an individualized eating pattern].”

## **The debate over carbohydrate quantity**

Several eating patterns focus on reducing carbohydrates to lower cardiometabolic risk in people with diabetes. One such pattern is the carbohydrate-insulin model, in which people replace carbohydrates with dietary fat by reducing refined grains, emphasizing low-glycemic index carbohydrates, eating whole kernel grain products, increasing consumption of nuts, seeds, avocados, olive oil, and other healthy high-fat foods, and maintaining an adequate protein level. Evert said the carbohydrate-insulin model may work best for people with type 2 diabetes, severe insulin resistance or metabolic syndrome.

Carbohydrate quantity is a focus of some eating patterns, but there is no consensus as to how much carbohydrate intake is ideal for cardiometabolic risk reduction.

Recommendations from the American Diabetes Association and the Academy of Nutrition and Dietetics do not detail a set percentage of carbohydrates that people with diabetes should be eating. Evert added that studies examining National Health and Nutrition Examination Survey data showed the percentage of energy intake people with diabetes receive from carbohydrates, protein, and fat is like people without diabetes. Additionally, in a systematic review and meta-analysis of randomized controlled trials comparing diets with less than 40% of energy intake from carbohydrates to diets with

greater than 40% carbohydrate intake, researchers found the proportion of energy provided through carbohydrate intake was not an important determinant of response to dietary management.

“There is no optimal mix [of macronutrients],” Evert said. “We want to look at the eating pattern for that patient, their individual preferences, and what their goals are for their health.”

In a scientific statement published in 2019, the National Lipid Association stated low carbohydrate diets may help to control appetite, lower triglycerides, and reduce the use of medications for type 2 diabetes management. However, the statement also acknowledged there was no clear evidence for advantages regarding other cardiometabolic risk factors.

### **A focus on the quality of carbohydrate consumption**

Evert discussed recent literature that has focused on improving carbohydrate quality in people with diabetes. Multiple systematic reviews and meta-analyses published from 2014 to 2018 found eating patterns that focused more on high-quality carbohydrates such as whole grains, legumes, and fruit were associated with reductions in CVD incidence, diabetes incidence, CV mortality, and all-cause mortality.

“The American Heart Association had a recent scientific statement in 2021 and, once again, their primary finding was that poor diet quality was strongly associated with elevated risk for CVD morbidity and mortality,” Evert said.

To improve CV health, diets should emphasize fruits and vegetables, whole grains, healthy sources of proteins such as fish, and legumes, low-fat dairy and poultry, and liquid plant oils. Foods to avoid include anything with added sugars, ultra-processed food, processed meat, food with high amounts of salt, alcoholic beverages, and tropical oils. Energy intake should be adjusted to maintain a healthy body weight.

Evert discussed several carbohydrate quality markers that could be used to improve health outcomes. A systematic review and meta-analysis published in *The BMJ* in 2021 showed a dietary approach focused on glycemic index and glycemic load was associated with small but meaningful decreases in HbA1c, fasting glucose, blood lipids, adiposity, blood pressure, and inflammation. A high dietary fiber eating pattern in which participants eat about 35 g of fiber per day could reduce the risk for premature mortality in adults with diabetes by 10% to 48%, according to a systematic review and meta-analysis published in *PLOS Medicine*. Finally, reducing sugar-sweetened beverages could lower one’s risk for diabetes. However, Evert said patients should be informed that there is not enough evidence to determine whether sugar substitutes can reduce body weight or cardiometabolic risk factors in the long term.

“It’s too soon to know what’s happening with all of these artificial sweeteners, so I always say to drink water,” Evert said.

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