

Some reduced-carb diets may decrease diabetes risk, but others may raise it

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When it comes to reduced-carb diets, it may be quality, not quantity, that matters most.

New research finds that animal-based, low-carbohydrate eating was associated with a higher Type 2 diabetes risk, whereas plant-based, low-carb eating was associated with a lower diabetes risk. The research, recently presented in Chicago at the American Heart Association's Scientific Sessions conference, is considered preliminary until published in a peer-reviewed journal.

"To prevent the risk of Type 2 diabetes for generally healthy people without prediabetes or diabetes, the quantity of carbs might not matter as much as the quality of the protein, fats and carbs," said lead study author Yeli Wang, a research fellow in the department of nutrition at the Harvard T.H. Chan School of Public Health in Boston. "The key is to pay attention to the quality of the food."

Low-carb diets are popular because research shows they can rapidly reduce weight within six to 12 months. However, it's unclear why they are so efficient at shedding pounds or how they affect long-term health. Diets that restrict carbs increase fat and protein, and one theory is that this leads to a feeling of fullness, which helps reduce hunger. Another theory is that restricting carbs increases the body's metabolism and helps burn calories.

There are at least a dozen popular low-carb diets, including the [ketogenic diet](#)—which severely restricts carbohydrates—and the Paleo [diet](#), which emphasizes fruits, vegetables and lean meats and is modeled on foods that would have been available to humans during the Paleolithic Age. Some studies have suggested that very low-carb diets may improve blood glucose levels in people with prediabetes or Type 2 diabetes. But the number of carbs consumed in these diets varies and the emphasis on eating fats raises concerns about how the diets may affect cholesterol

levels and [heart](#) health.

The new study shows some low-carb diets may be better than others, said Kristina Petersen, an assistant professor in the department of nutrition at Texas Tech University in Lubbock.

"There's no standard definition for a low-carb diet," said Petersen, who was not involved in the research. "At face value, they don't meet dietary recommendations very well. What this study shows is that perhaps they can, we just have to be mindful of what's in that diet."

In the study, researchers investigated the link between low-carb eating and the odds of developing Type 2 diabetes, a major risk factor for heart disease and stroke.

The analysis used dietary and [medical data](#) for 203,541 adults from three large national studies: the Nurses' Health Study, Nurses' Health Study II and the Health Professionals Follow-Up Study. The studies collectively covered a period from 1984 to 2017. Participants filled out questionnaires every four years about the foods they were eating and were followed for up to 30 years. None had diabetes at the outset.

For the new study, whether a person's diet was considered low-carb was not defined by the exact quantity of carbohydrates they ate each day. Instead, researchers created a score based on the percentage of [total energy](#) each person got from their daily intake of proteins, fats and carbohydrates.

Using these scores, participants were divided into five equal groups. The lowest-carb group in the study got about 40% of daily energy from carbohydrates, Wang said. (By contrast, U.S. dietary guidelines recommend that carbohydrates account for 45%-65% of energy intake.)

To evaluate the quality of the diets, the foods people ate were classified into 18 groups: whole grains, fruits, vegetables, nuts, legumes, [vegetable oils](#), tea and coffee, fruit juices, refined grains, potatoes, [sugar-sweetened beverages](#), sweets and desserts, animal fat, dairy, egg, fish or seafood, meat and miscellaneous animal-based foods.

The preliminary data shows that people in the lowest-carb group who got more of their protein and fat from plant-based sources had a 6% lower Type 2 [diabetes risk](#)—and if their eating further minimized sugar and other refined carbohydrates, they had a 15% lower risk.

By contrast, the lowest-carb group eating diets emphasizing animal protein and fat had a 35% higher risk of Type 2 diabetes—and a 39% higher risk if their diets also minimized whole grains.

Wang said one weakness of the study was that most of the people in it were white.

"We wonder whether our results could be generalized to other ethnic groups," she said. "We need to look at that, as well as people who consistently consumed very low-carb diets, such as the keto diet."

The American Heart Association recommends eating a diet that includes a wide variety of fruits and vegetables and healthy sources of protein, such as fish and seafood, legumes and nuts, low-fat or nonfat dairy and lean meats. It encourages choosing minimally processed foods over ultra-processed foods, and limiting sugar, salt and alcohol.

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