

Save the Bread for Last

It's been said that, "Man cannot live by bread alone." While that is certainly true, many of us still enjoy bread as part of our regular meals and snacks. However, saving the bread for the end of a meal may help people with diabetes have better blood sugar control, according to a new study.



Dr. Alpana Shukla and Dr. Louis Aronne of the Comprehensive Weight Control Center at Weill Cornell Medicine in New York City found that individuals with type 2 diabetes who consumed vegetables and protein early in their meals before eating bread and drinking orange juice had much **smaller increases in blood sugar after their meals** when compared to meals in which they ate the carbs first. According to Shukla, the drop is "comparable to the kind of effect you see with some of the drugs we use to treat diabetes. Eating carbohydrates last may be a simple strategy for regulating post-meal glucose levels".

For those with type 2 diabetes, keeping blood sugars regulated is vital, primarily because it aids in protection from severe complications such as heart disease, loss of vision, and nerve damage. Dr. Shukla added that those with diabetes are advised to limit carbs and eat complex carbohydrates in place of simple sugars.

A smaller followup study produced similar results when it comes to timing carbohydrates. The subjects were 16 men and women with type 2 diabetes who ate the same meal on three different occasions, a week apart but with the elements of the meal in a different order each time. The results indicated that **consuming protein before carbs produced smaller increases in blood sugar than eating carbs before protein.**

In this study, subjects drank orange juice and ate bread first, then took a 10-minute break before finishing up with salad and chicken. In the next instance, participants ate the meal in reverse order.

For the final meal, the subjects ate the chicken, vegetables, and bread in a sandwich along with orange juice. Everyone ate the same amount of calories and carbohydrates each meal.

When subjects ate carbs last, their **post-prandial blood glucose levels were almost half as high** as they were when the participants ate carbs first, and 40% lower than they were when people ate the meal as a sandwich. The "carbs last" meal was also linked with **decreased insulin secretion as well as higher levels of glucagon-like peptide-1 (GLP-1)**, a hormone in the gut that helps regulate satiety and glucose. After following a carbs-last plan, the insulin levels needed to keep individuals' glucose levels in control were close to 25% less.

Shukla notes that in reality, when people eat carbs at the end of their meals after having protein and vegetables, they may end up eating fewer total calories. Decreased insulin needs and an increase in GLP-1 indicate that ending a meal with carbs may also aid in weight management.

Dr. Shukla and Aronne are researching the carbs-last method in those with pre-diabetes. His team wants to see if this strategy may aid in preventing full-blown diabetes. This should not give those with high blood sugar a pass to eat high-sugar desserts after eating protein and vegetables, as these types of foods are still not great for anyone's health. But for now, maybe it's wise to save that bread for last and to just enjoy a bite.

By Lisa Andrews, MEd, RD, LD