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## Intermittent fasting for weight loss in people with type 2 diabetes

### At a Glance

- People with obesity and type 2 diabetes lost more weight using daily periods of fasting than by trying to restrict calories over a six-month period.
- Blood sugar levels lowered in people in both groups, and no serious side effects were observed.

Around 1 in 10 Americans live with type 2 diabetes, a disease in which levels of blood glucose, or blood sugar, are too high. Diabetes can lead to serious health issues such as heart disease, nerve damage, and eye problems.

Excess weight is a major risk factor for the development of type 2 diabetes, and weight loss is often recommended for those with excess weight and type 2 diabetes. Calorie restriction—reducing overall calorie intake—is a mainstay of most weight loss programs. But such regimens are very difficult to stick with over the long term.

Time-restricted eating, also called intermittent fasting, has emerged as an alternative weight loss paradigm. In this approach, the time of day during which food can be eaten is restricted, but the amount or types of food are not. Small studies have suggested that intermittent fasting is safe and promotes weight loss in people with type 2 diabetes. But these studies only tracked participants for a short period of time. They also didn't compare the approach with traditional calorie restriction.

In a new clinical trial, an NIH-funded research team led by Dr. Krista Varady from the University of Illinois Chicago compared fasting and calorie restriction for weight loss and blood-sugar reduction. They recruited 75 people with obesity and type 2 diabetes. Of these, 70 were either Hispanic or non-Hispanic Black—two groups in the U.S. with an especially high prevalence of diabetes. The participants were randomly assigned to one of three diet groups for six months.

The fasting group could eat anything they wanted, but only between the hours of noon and 8 pm. The second group worked with a dietitian to reduce their calories by 25% of the amount needed to maintain their weight. A control group did not change their diet at all. All groups received education on healthy food choices and monitored their blood glucose closely during the study. The results were published on October 27, 2023, in *JAMA Network Open*.

After six months, participants in the fasting group lost an average of 3.6% percent of their body weight compared to those in the control group. In comparison, people in the calorie-restriction group did not lose a significant amount of weight compared to the control group.



Time-restricted eating, also called intermittent fasting, may be an effective weight loss strategy. *Katecat / Adobe Stock*

Both groups had similarly healthy decreases in their average blood glucose levels. Both also had reductions in waist circumference. No serious side effects, including time outside of a safe blood glucose range, were seen in either treatment group. People in the fasting group reported that their diet was easier to adhere to than calorie restriction.

“Our study shows that time-restricted eating might be an effective alternative to traditional dieting for people who can’t do the traditional diet or are burned out on it,” Varady says. “For many people trying to lose weight, counting time is easier than counting calories.”

Some medications used to treat type 2 diabetes need adjustment for time-restricted eating. Therefore, people considering intermittent fasting should speak with a doctor before changing their eating pattern.

—by Sharon Reynolds

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- [To Fast or Not to Fast: Does When You Eat Matter?](https://newsinhealth.nih.gov/2019/12/fast-or-not-fast) (https://newsinhealth.nih.gov/2019/12/fast-or-not-fast)
- [Managing Diabetes: New Technologies Can Make It Easier](https://newsinhealth.nih.gov/2017/12/managing-diabetes) (https://newsinhealth.nih.gov/2017/12/managing-diabetes)
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**References:** [Effect of Time-Restricted Eating on Weight Loss in Adults With Type 2 Diabetes: A Randomized Clinical Trial](#). Pavlou V, Cienfuegos S, Lin S, Ezpeleta M, Ready K, Corapi S, Wu J, Lopez J, Gabel K, Tussing-Humphreys L, Oddo VM, Alexandria SJ, Sanchez J, Unterman T, Chow LS, Vidmar AP, Varady KA. *JAMA Netw Open*. 2023 Oct 2;6(10):e2339337. doi: 10.1001/jamanetworkopen.2023.39337. PMID: 37889487.

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