

If You Have This Condition, Skipping Breakfast Could be Especially Bad for Your Health

People with type 2 diabetes who skip breakfast and fast until noon may have blood sugar spikes throughout the day, a small study suggests.

When 22 patients with type 2 diabetes missed their morning meal, they had higher-than-usual surges in blood sugar after lunch and dinner, the study found.

Skipping breakfast was also linked to less efficient processing of glucose by the body, or a reduced ability to convert blood sugar into energy.

The researchers had expected that skipping breakfast wouldn't be healthy. But they were surprised at the extent to which glucose metabolism suffered, simply because participants hadn't eaten breakfast, said lead author Daniela Jakubowicz of Tel Aviv University.

"This means reducing the amount of starch and sugars in lunch and dinner will have no effect on reducing elevated glucose levels if patients also skip breakfast," she said by email.

Globally, about one in 10 adults have diabetes, according to the World Health Organization. Like the patients in this study, most have type 2 diabetes, which is associated with obesity and aging and occurs when the body can't make or process enough of the hormone insulin.

Previous research has linked skipping breakfast to an increased risk for weight gain and diabetes, Jakubowicz and

colleagues note in the journal *Diabetes Care*.

The current study involved 12 men and 10 women who were about 57 years old on average, and overweight.

On test days, patients were asked to fast overnight, then come to the clinic for blood tests and either two or three meals, depending on which part of the experiment they were completing.

Participants consumed the same balanced meal with the same number of calories for lunch and dinner.

Two to four weeks later, they repeated the process, but switching to either eat or skip breakfast – whatever they hadn't done in the first phase.

On test days when patients skipped breakfast, their blood sugar was 40 percent higher after lunch and 25 percent higher after dinner than on the days when they had three meals.

Skipping breakfast may have made it difficult for the pancreas to produce the right amount of insulin to properly control blood sugar, Jakubowicz said. Normally, beta cells in the pancreas release insulin in response to elevated levels of sugar in the blood.

Missing the morning meal may cause the beta cells to “forget their vital role,” she said, delaying the release of insulin and allowing blood sugar levels to remain high for longer periods of time after lunch and dinner.

Because the study only included people with diabetes, it's not clear whether healthy people would experience similar blood sugar spikes after skipping breakfast, the researchers acknowledge. It's also unclear how long the blood sugar spikes might last.

It's also possible that the last meal the night before might influence blood sugar the following day regardless of whether

or not they ate breakfast, said Tanya Zilberter, a researcher in metabolic diseases with the Institut de Neurosciences des Systèmes in Marseille, France.

A late dinner might lead to high blood sugar the next day, Zilberter, who wasn't involved in the study, said by email.

"It might be that the duration of the overnight fast matters more than the timing of the first meal of the day," Zilberter said.

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