

# Intermittent fasting may help preserve intestinal health as we age

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A study conducted in mice has found that intermittent fasting brought benefits beyond weight loss, suggesting the practice could help the body better process glucose and reduce age-related declines in intestinal function. Researchers presented their work at the [American Physiology Summit](#), the annual meeting of the American Physiological Society (APS), in Long Beach, California.

"Our study suggests that [intermittent fasting](#) is a beneficial dietary practice to control weight gain, improve [blood glucose levels](#) and promote positive intestinal effects by reducing inflammation and [oxidative stress](#) while altering intestinal structure," said Spencer Vroegop, the study's first author and a second-year student in the Arizona College of Osteopathic Medicine at Midwestern University.

Intermittent fasting—in which a person eats and then refrains from eating on a set schedule—has gained attention in recent years as a strategy for weight management. The researchers sought to find out how it might affect health in older adults.

To do this, they used mice that were genetically altered to accelerate aging. Some of the mice had food available all the time while others had access to food only during alternating 24-hour cycles. After eight months, the mice that were fed every other day had gained less weight and also had structural changes in the [small intestine](#) associated with improved glucose control and reduced inflammation.

"Our data suggest that the weight loss induced by intermittent fasting is not likely only due to [calorie restriction](#) but also at least partially facilitated by a change in [glucose metabolism](#)," Vroegop said. "This could imply that the [weight loss](#) induced via intermittent fasting is more likely to have longer effects than simple calorie restriction."

The study focused specifically on the jejunum, a portion of the small intestine where most nutrient absorption occurs.

"As mammals age, there are inherent damaging changes to the morphology of the small intestine that impact the ability to absorb nutrients and maintain its structure," Vroegop said. "Our study suggests that an intermittent fasting diet may help prevent these age-related changes by returning the jejunum to a 'younger' version of itself."

While the sample size was relatively small (32 mice in total), the researchers noted that the effects seemed more pronounced in female mice than in males, with females showing greater differences in the health and appearance of the small intestine and in the way sugars are transported. However, the effect on blood sugar levels was stronger in males than females. The team is working on follow-up studies to better understand the drivers behind these sex-specific differences.

Vroegop cautioned that it is difficult to extrapolate from [mice](#) to humans and the study should not be construed as providing medical advice. Because intermittent fasting is a relatively new area of study and there is wide variation in the fasting regimens used in different studies, there is not yet a scientific consensus on the risks and benefits or the optimal fasting strategy.

Provided by American Physiological Society

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