

# Yo-yo dieting vs. obesity? Dieters may be healthier, live longer, study finds

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Yo-yo dieters may be healthier and live longer than those who stay obese, a new Ohio University study finds.

Mice that switched between a high-fat and low-fat [diet](#) every four weeks during their approximate two-year lifespan lived about 25 percent longer and had better [blood glucose levels](#) than obese animals that ate a high-fat diet. The yo-yo [dieters](#) also lived about as long as a control group of mice steadily fed a low-fat diet.

Some experts argue that constantly shedding and regaining pounds can be harmful to health. The new research, presented today at the annual meeting of the Endocrine Society in Boston, suggests, however, that yo-yo dieting is preferable to remaining obese and not dieting at all.

"If the conventional wisdom is true, it would discourage a lot of overweight people from losing weight," said study lead author Edward List, a scientist at Ohio University's Edison Biotechnology Institute.

"The new research shows that the simple act of gaining and losing weight does not seem detrimental to lifespan."

About 34 percent of American adults are considered to be obese; an additional 34 percent are classified as overweight, according to the [Centers for Disease Control and Prevention](#). Although millions of Americans diet each year, research has shown that few people maintain long-term weight loss.

In the first study on yo-yo dieting of its kind, List and colleagues followed 30 mice on one of three dietary regimens over the course of a little over two years, the typical lifespan of this particular strain of laboratory mouse. The animals on the high-fat diet ate more, weighed more and had higher levels of body fat and fasting [blood glucose](#). They also become glucose intolerant, or pre-diabetic, said List, whose research is supported by the National Institutes of Health, AMVETS and Ohio University.

The health profile of the mice on the yo-yo diet declined during their high-fat food phases, but their weight and blood glucose levels returned to normal levels during their [low-fat diet](#) stages. Lifespan – the "gold standard" for lifelong health status – was 2.04 years for the yo-yo dieting mice, compared to 1.5 years for the obese mice. The [control group](#) lived, on average, for 2.09 years.

Although replicating the research in humans is ideal, List said, it would be challenging to pursue a long-term controlled diet study. Various factors, including illness, can impact weight cycling. Mice can serve as a good model for obesity research, he noted, as they allow researchers to follow the effects of diet choices on lifespan over a relatively short time period.

"The study adds to our understanding of the benefit of [losing weight](#)," he said. "I would hope that this encourages people to not give up."

List plans to expand the study to a larger population of mice. He'll also further examine preliminary findings that suggest that the yo-yo dieting animals experienced a reduction in cytokine levels. High levels of cytokine are linked to increased inflammation, which is associated with diseases such as diabetes, heart disease and cancer.

Provided by Ohio University

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