

# It's not all your parents' fault: Your own activity levels better predict your weight

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New research in mice presented this week at the American Physiological Society's (APS) New Trends in Sex and Gender Medicine conference suggests that adult activity levels are more of a predictor for weight gain

than parental lifestyle habits.

Previous research has shown that parental lifestyle, including diet and exercise, can negatively affect offspring health. Children of parents who ate a [high-fat diet](#) and were sedentary during pregnancy have a higher risk of developing obesity and metabolic disorders such as type 2 diabetes. However, a new study in mice finds that parental habits—such as energy expenditure during pregnancy—may be only partially responsible for their offspring's adult weight and that [ambient temperature](#) may play a greater role in adult weight than previously understood.

The researchers examined breeding pairs of mice, half of which were housed in a warm environment (86 degrees F) and the other half in a cooler environment (68 degrees F). The mice living at higher temperatures were less active than those in the cooler interior climate. At six weeks old, some of the mouse pups remained in the same housing temperature while others switched to the opposite environment from where they were bred. At 10 weeks old, the adult offspring were fed a high-fat, high-sugar diet for one week.

The research team found that the offspring living at warmer temperatures ate less, expended less energy and gained more weight than those living at cooler temperatures, regardless of which housing environment they were bred in.

"Energy expenditure levels during adulthood may be a more powerful predictor of susceptibility to short-term diet-induced [weight gain](#) than the [energy expenditure](#) levels of the parents," explained Michael Ponte, a graduate student at the University of Kansas Medical Center and first author of the study.

**More information:** Conference: [www.physiology.org/professiona ...](http://www.physiology.org/professiona...)

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