

Even in svelte adults, cutting about 300 calories daily protects the heart

July 11 2019



3D Model of the heart by Dr. Matthew Bramlet. Credit: NIH

New data from a two-year Duke Health trial suggests when it comes to cutting your risk for killer ailments such as diabetes and heart disease, there's always room for improvement.

In adults already at a [healthy weight](#) or carrying just a few extra pounds, cutting around 300 calories a day significantly improved already good levels of cholesterol, [blood pressure](#), blood sugar and other markers. The findings of the randomized, controlled trial of 218 adults under age 50 are described in a July 11 article in the journal *The Lancet Diabetes & Endocrinology*.

The trial, part of an ongoing project with the National Institutes of Health called CALERIE (Comprehensive Assessment of Long-term Effects of Reducing Intake of Energy) continues to build on the researchers' hypothesis that it's not just weight loss that leads to these improvements, but some more complex metabolic change triggered by eating [fewer calories](#) than what's expended.

"There's something about [caloric restriction](#), some mechanism we don't yet understand that results in these improvements," said the study's lead author William E. Kraus, M.D., a cardiologist and distinguished professor of medicine at Duke. "We have collected blood, muscle and other samples from these participants and will continue to explore what this metabolic signal or magic molecule might be."

For the first month of the trial, participants ate three meals a day that would cut one-fourth of their daily calories to help train them on the new diet. They could choose from six different meal plans that accommodated cultural preferences or other needs. Participants also attended group and individual counseling sessions for the first six months of the trial, while members of a control group simply continued their usual diet and met with researchers once every six months.

Participants were asked to maintain the 25 percent calorie reduction for two years. Their ability to do that varied, with the average calorie reduction for all participants being about 12 percent. Still, they were able to sustain a 10-percent drop in their weight, 71 percent of which was fat,

the study found. There were numerous improvements in markers that measure risk for metabolic disease. After two years, participants also showed a reduction in a biomarker that indicates [chronic inflammation](#) which has also been linked to [heart disease](#), cancer and [cognitive decline](#).

"This shows that even a modification that is not as severe as what we used in this study could reduce the burden of diabetes and cardiovascular disease that we have in this country," Kraus said. "People can do this fairly easily by simply watching their little indiscretions here and there, or maybe reducing the amount of them, like not snacking after dinner."

For example, 300 calories is six Oreo cookies.

More information: *The Lancet Diabetes & Endocrinology* (2019). DOI: [10.1016/S2213-8587](https://doi.org/10.1016/S2213-8587(19)30151-2) , [www.thelancet.com/journals/lan ... \(19\)30151-2/fulltext](http://www.thelancet.com/journals/lan/article/S2213-8587(19)30151-2/fulltext)

Provided by Duke University Medical Center

Citation: Even in svelte adults, cutting about 300 calories daily protects the heart (2019, July 11) retrieved 26 April 2024 from <https://medicalxpress.com/news/2019-07-svelte-adults-calories-daily-heart.html>

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