

Fiber fermentation by-product may help prevent weight gain

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(HealthDay)—Propionate, a fatty acid created when fiber ferments in the colon, appears to prevent weight gain and trim fat around the waist, according to research published online Dec. 10 in *Gut*. However, the chemical compound doesn't seem to help people lose pounds, and the preliminary study is so small that the findings could be misleading.

Still, it did "lower appetite and prevented weight gain in [overweight people](#)," study coauthor Gary Frost, Ph.D., chair of nutrition and dietetics at Imperial College London, told *HealthDay*. "This is the first time that a food ingredient has been shown to decrease [weight gain](#)."

In the study, researchers developed a [chemical compound](#) that includes propionate and gave it in fruit juice to half of 20 volunteers. The others

received inulin, a plant fiber. The volunteers then got to eat as much as they wanted from a buffet. Those who'd consumed the propionate ate 14 percent less on average than others, the researchers said. Then the researchers followed 49 [overweight adults](#), ages 40 to 65, as they received either a propionate supplement or inulin alone and completed a six-month study. Of the 25 who took the supplement, just one gained more than 3 percent of body weight, compared to six of the 24 who took inulin. Those who took the supplement also had reduced intra-abdominal adipose tissue distribution and intrahepatocellular lipid content.

The proprionate was also associated with prevention of the deterioration in insulin sensitivity observed in the inulin-control group. Frost said that propionate might affect signals that suppress appetite, "but we are not sure which ones." It may also affect the metabolism of fat cells, he said. According to Frost, there were no major side effects from taking the supplement.

The study was funded by the U.K. Biotechnology and Biological Sciences Research Council.

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