

Chewing gum can reduce calorie intake, increase energy expenditure

October 27 2009

A nutrition professor at the University of Rhode Island studying the effects of chewing sugar-free gum on weight management has found that it can help to reduce calorie intake and increase energy expenditure.

Kathleen Melanson, URI associate professor of nutrition and food sciences, compared gum chewing to non-gum chewing in healthy adult volunteers who came to her lab for two standardized tests in random order. When study subjects chewed gum for a total of one hour in the morning (three 20-minute gum-chewing sessions), they consumed 67 fewer calories at lunch and did not compensate by eating more later in the day. Male participants also reported feeling significantly less hungry after chewing gum.

Melanson also found that when her subjects chewed gum before and after eating, they expended about 5 percent more energy than when they did not chew gum. In addition, her subjects reported feeling more energetic after [chewing gum](#).

"Based on these results, gum chewing integrates energy expenditure and [energy intake](#), and that's what [energy balance](#) is about," Melanson said. According to the URI researcher, nerves in the muscles of the jaw are stimulated by the motion of chewing and send signals to the appetite section of the brain that is linked to satiety, which may explain why the act of chewing might help to reduce hunger.

Melanson said that she expected that chewing would increase the amount

of energy her subjects expended. "However, what makes the [energy expenditure](#) data particularly interesting is that this study simulated real-life gum chewing, with the subjects chewing at their own relaxed, natural pace and for realistic time periods," she said.

In her study, 35 male and female subjects made two visits to the URI [Energy Metabolism](#) Lab after having fasted over night. During one visit, they chewed gum for 20 minutes before consuming a breakfast shake and twice more during the three hours before lunch. During both visits, participants remained as still as possible as measurements were conducted of their resting metabolism rates and blood glucose levels at regular intervals before and after breakfast and lunch. They also conducted periodic self-assessments of their feelings of hunger, energy and other factors during both visits.

"This was a short term study, so the next step is to do a longer study and to use subjects who need to lose weight," said Melanson. "But based on these initial results, one could hypothesize that gum chewing may be a useful adjunct to a weight management program."

Source: University of Rhode Island ([news](#) : [web](#))

Citation: Chewing gum can reduce calorie intake, increase energy expenditure (2009, October 27) retrieved 3 May 2024 from <https://medicalxpress.com/news/2009-10-gum-calorie-intake-energy-expenditure.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.
