

Chew on This: Gum May be Good for Body, Mind

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If you're looking to curb your appetite and improve your memory, you're probably exercising, eating healthier foods and trying to get some sleep. Those things are all good, but maybe you should try chomping on a stick of sugar-free gum.

At least that's what research funded by the Wrigley Science Institute and being presented at the Experimental Biology 2009 meeting this week may have you think. The data are part of a growing body of research that is giving Americans more reasons to pop some gum in their mouths and chew away.

One line of research suggests that gum should no longer be treated as contraband in schools. This newest study indicates that chewing gum can lead to better academic performance.

Researchers at the Baylor College of Medicine took 108 eighth-grade math students from a Houston, Texas, charter school and divided them into two groups, following them for 14 weeks. One group chewed gum while doing homework and during test-taking situations. The other group did not chew gum at all.

The results were surprising. The gum-chewing students had a three percent increase in their standardized math test scores compared with those who did not chew gum. Also, the students who chewed gum had better final grades compared with the non-chompers.

"Chewing gum is an easy tool students can use for a potential academic edge," says Craig Johnston, Ph.D., the lead researcher and an instructor in nutrition at the Department of Pediatrics at Baylor College of Medicine. He also reports that teachers anecdotally found that students who chewed gum required fewer breaks, paid better attention and stayed quiet longer than those who did not.

Another study adds to a growing body of evidence centering on chewing gum satiety and cravings. Investigators at Louisiana State University took 115 people who regularly chewed gum and fed them lunch. They measured their cravings before and after lunch. They found that those subjects, who chewed gum three times hourly after lunch, ate fewer high-calorie snacks. The chewers also reported decreased feelings of hunger and cravings for sweet foods.

"We decreased overall snack intake by 40 to 60 calories. Having something in the mouth likely calms the appetite," explains Paula Geiselman, Ph.D, lead researcher and physiological psychologist.

So, is chewing gum the next in fad diet trends? Nutritionists and doctors are prescribing a healthy dose of caution.

"The only reason to do these studies is to sell more gum," warns Marion Nestle, Ph.D., a nutritionist at New York University and author of "What to Eat."

But Nestle does admit that it may have some minor benefit, "Gum has no calories. If it helps people eat less, it could be useful."

As for boosting academic performance, Nestle is familiar with results showing that feeding breakfast to hungry kids results in better schoolwork, but she's quick to burst the bubble on the LSU study.

Nestle remains cautious about the funds being pumped into research by the gum industry. "Sponsored studies almost invariably produce results favorable to the economic interests of the sponsor. [They] are always designed in ways that fail to control for alternative explanations for the results."

Aside from the industry-funded findings, there is solid evidence that gum chewing brings big benefits in dental health and acid reflux disease.

The American Dental Association says on its Web site that "chewing sugarless gum for 20 minutes following meals can help prevent tooth decay" and recommends looking for gum with its ADA-approved seal. The saliva produced in the mouth by the physical act of chewing can wash away acids and bacteria, thereby protecting teeth.

Besides beating tooth decay, independent research finds that gum can aid in reducing the symptoms of acid reflux disease. The saliva flow can lead to an antacid effect in the stomach.

There is also early evidence that gum chewing increases blood flow to the brain and the head by up to 25 percent, but no one can explain what impact that blood flow may have on cognition.

As for dieting, one study from the Mayo Clinic finds that the body burns 11 calories an hour through working the jaw. "Overall gum chewing is more beneficial than it is harmful," says Dr. Michael Benninger, chairman of the Head and Neck Institute at the Cleveland Clinic in Ohio.

"This isn't like smoking. The downsides are minimal," Benninger adds. "There are people who probably shouldn't chew gum such as people with Temporomandibular Joint and Muscle Disorders, or TMJ, people with chronic tension headaches or if you grind your teeth at night."

As manufacturers come up with new flavors, packages and brands, gum's popularity continues to grow. Sales topped \$1.2 billion last year alone, and sales of sugar-free gum increased by more than 11 percent in 2008, according to marketing research provider Information Resources Inc. It's definitely big business for what may be the world's oldest confection.

Ancient cultures around the world found their own forms of gum. The Greeks called it mastiche. Mayans chewed on the sap of the sapodilla tree and called it chicle. Native Americans introduced the sap of the spruce tree to early European settlers in New England.

Interestingly, tree sap is long gone from the current treat. Today's gum consists of synthetic ingredients and is made sweet. It can be made sugar-free by adding sorbitol, a substance that can have laxative effects at high doses.

As for the notion that gum can stay in your stomach for years if swallowed, experts said that's a myth. Gum is passed through the body and not digested.

While the Wrigley Science Institute declines to say just how much money it's spending on research, it's open about its objective. "We're providing more reasons why consumers should chew," said Gil Leveille, Ph.D., executive director of the Wrigley Science Institute.

But medical experts agree that gum chewing may be a tool, as people struggle to chip away at the obesity problem.

According to the American Dietetic Association, "If you chew two sticks of gum at 20 calories instead of eating one to two chocolate chip cookies at 140 calories, you can save 120 calories."