

Fluoride fights cavities; dentists worry more toothpastes don't have it

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Dental health experts worry that more people are using toothpaste that skips the most important ingredient - the fluoride - and leaves them at a greater risk of cavities. Photo by: KidStock/Getty Images

Dental health experts worry that more people are using toothpaste that does not include fluoride. It is a mineral that helps strengthen teeth. Fluoride is toothpaste's most important ingredient. Toothpaste without fluoride leaves people at a greater risk of cavities.

Dentists Versus The Internet

Most toothpastes already contain fluoride. Health experts recognize fluoride as a cavity blocker. However, the Internet is full of claims, often from "natural" toothpaste marketers and alternative medicine supporters, that fluoride-free toothpaste also prevents cavities.

Dental experts disagree.

Damien Walmsley is a dentistry professor at the University of Birmingham in England. He said it's important to make sure people know that brushing your teeth does not stop tooth decay. Fluoride is what stops cavities.

This was backed up by an August 6 article in the dental journal *Gerodontology*. The article reviewed the scientific studies on cavities. Its main conclusion is that, without fluoride, oral hygiene habits have no effect on cavity rates.

Toothbrush: "A Delivery System" For Fluoride

The idea that just brushing teeth doesn't stop cavities has largely been accepted among individual researchers for decades. The public has not always known this, though. Dentists generally recommend fluoride for cavity fighting, but even some of them continue to believe that the motions of wiping your teeth clean of plaque also reduces cavities. The review findings, published on August 6, surprised at least one dentist.

Richard Niederman is a dentist and professor at New York University (NYU) who saw a copy of the study and said the findings were convincing. "What it says to me is that the toothbrush is just a delivery system," he said.

Few studies of the question have been carried out in recent years because the value of fluoride has been widely accepted for decades. In the review, University of Washington researchers looked for high-quality studies since 1950 and found just three. They were carried out in the U.S. and Great Britain and published from 1977 to 1981. They involved a total of 743 children 10 to 13 years old who flossed and brushed for up to three years.

Some Consumers Doubt The Science

Experts evaluated all the studies combined. The results showed that simply brushing or flossing without fluoride did not stop cavities.

Dentist J. Leslie Winston is the oral care director for Crest-toothpaste maker Procter & Gamble. Winston said the review "serves as an important reminder."

"Despite a large body of scientific evidence, there are growing numbers of consumers who believe that all toothpastes are the same," he said in a statement. The new research proves otherwise.

Experts estimate that fluoride-free toothpaste makes up no more than 5 percent of all toothpaste sold. Sales of fluoride-free toothpaste are expected to grow more than 5 percent each year, though. Tom's of Maine makes a fluoride-free antiplaque and whitening toothpaste. On August 6, it was listed as the second-best selling toothpaste on Amazon.

Fluoride Free? No Promises

Paul Jessen, a brand manager at Tom's of Maine, said "the products that don't contain fluoride that we offer do not promise that benefit" to fight cavities. He said his company's customers generally understand this.

Yet customer comments on Amazon's website sometimes show otherwise. Many reviews insist that the company's fluoride-free toothpaste does fight cavities. "If you brush regularly with or without fluoride, you reduce the risk of cavities," says one customer.

Oral care companies themselves also slip into making such claims. The website of Revitin non-fluoride toothpaste says it "strengthens your teeth against tooth decay."

Gerald Curatola is the dentist who founded Revitin. He called the review "misleading." He said that the latest science suggests that a healthy mix of oral bacteria is key to dental health. "I don't think fluoride makes a difference at all," he said.

Too Much Fluoride?

Jeff Davis is the CEO of Sheffield Pharmaceuticals. Sheffield sells toothpaste with and without fluoride. Davis said it's "pretty established" that fluoride is what helps reduce cavities. He said some people worry about the harmful effect of too much fluoride, though, and so choose fluoride-free toothpaste.

Even without fluoride, dentists say there's some value in brushing. Philippe Hujoel is the dentist and University of Washington professor who led the dental review. He said oral hygiene without fluoride might produce real cavity-fighting effects too small to detect in a study.

And brushing teeth did reduce swollen gums in Hujoel's review. Brushing the teeth may also get rid of stuck food. It can also help patients heal from oral surgery.

How Do Cavities Form?

The review raises questions about how cavities form. Cavities have long been thought to develop in a poorly cleaned mouth when acids left by food start to wear away tooth enamel. This is the outer protection on the tooth. The idea is that clean teeth do not decay. This review, though, argues for an alternate model. Cavities grow in tiny holes in the enamel that can't easily be reached with a toothbrush or floss alone.

Fluoride has clear benefits. However, some studies have challenged the belief that fluoridated drinking water stops dental decay just as well as fluoride toothpaste or rinses. In any event, it makes sense to combine fluoridated water and dental products for more protection, said Niederman, the NYU dentist.

Some dentists also said the most effective way to prevent cavities is to simply eat less sugar.