

# Fighting cavities with water fluoridation



**Y**ou probably know that many oral health care products, like toothpastes and mouthrinses, have fluoride in them to help prevent cavities, but did you know that the drinking water in many cities and towns also contains cavity-fighting fluoride?

Some public water systems have fluoride in them naturally. If a water system does not have enough natural fluoride to fight cavities, the community can add fluoride to the public water supply so the water from the tap helps prevent cavities. This is called water fluoridation. As of 2020, nearly 3 of 4 people in the United States on municipal water supplies had fluoridated water.<sup>1</sup>

## HOW DOES WATER FLUORIDATION PREVENT CAVITIES?

Researchers have found that cavity prevention is better when drinking water has a fluoride level of 0.7 mg/L. This is the level cities and towns adjust the fluoride levels to for water fluoridation.

It is important to prevent cavities. Bacteria that live on your teeth turn the sugar in everything you eat or drink to acid. This acid attacks the outer tooth layer, or enamel, creating cavities. Cavities can be painful, cause tooth loss, and allow bacteria to enter the bloodstream and spread infection to your brain and other parts of the body.

Fluoridated water hardens tooth enamel to help prevent cavities. It can even repair enamel in the early stages of cavity formation.

## HOW EFFECTIVE IS WATER FLUORIDATION?

Even when common fluoride-containing oral health care products, such as toothpastes and mouthrinses, are used, fluoridated water reduces caries another 25% among children and adults.<sup>2</sup> In communities that stop their water fluoridation program, cavity rates increase, especially among children.<sup>1</sup>

Fluoridation reduces cavities on the enamel in adults from 20% through 40% and prevents them on the root surfaces of teeth that may be exposed, especially in older adults.<sup>3</sup> The development of cavities in children has been found to be 60% lower for children who drink fluoridated water.<sup>4</sup>

Another important feature of public water fluoridation is the benefit it offers to the entire community. Anyone, regardless of their income or age, for example, can increase their protection from cavities by drinking public tap water that is fluoridated.<sup>3</sup>

In addition, water fluoridation is a cost-effective way to prevent cavities. Researchers have suggested that access to

fluoridated water during a person's lifetime costs less than the cost of 1 restoration used to repair a cavity.<sup>1</sup>

## IS WATER FLUORIDATION SAFE?

Communities have been fluoridating public water systems for almost 80 years. Many health effects have been studied, and researchers have not found health problems associated with water fluoridated at the level of 0.7 mg/L.<sup>3</sup>

Adding fluoride to water is similar to adding minerals or vitamins to other foods and beverages.<sup>1</sup> For example, iodine is added to salt, vitamin D is in milk, and vitamin C levels are boosted in some orange juice brands.

## CONCLUSIONS

Cavities might not seem like a serious problem, but they can be painful and, when left untreated, they can cause tooth loss and infections. Water fluoridation is an easy approach to protecting entire communities from cavities. It is a safe, effective, and affordable way for anyone in a fluoridated community to prevent cavities. To find out if your community water supply has fluoride, go to My Water's Fluoride on the Centers for Disease Control and Prevention's website ([www.cdc.gov](http://www.cdc.gov)). ■

## DISCLOSURE

Ms. Mark did not report any disclosures.

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You can find more information for patients at [ADASTore.org](http://ADASTore.org) or at [MouthHealthy.org](http://MouthHealthy.org).

1. American Dental Association. *Fluoridation Facts*. American Dental Association; 2024.
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