



## **FLUORIDE**

Fluoride is a naturally occurring mineral found in rivers, lakes, wells, and the oceans. In fact, according to the Centers for Disease Control (CDC), fluoride is found in virtually all waters at varying levels. Fluoride helps prevent cavities in children and adults by making the outer surface of your teeth (enamel) more resistant to the acid attacks that cause tooth decay.

### **How fluoride protects teeth**

When you eat foods, beverages, and dietary supplements with fluoride, it strengthens tooth enamel (the hard surface of the tooth), making it easier to resist tooth decay. That intake of fluoride provides what is called a "systemic" benefit. Fluoride can begin to benefit teeth even before they erupt.

After teeth erupt, when you brush your teeth with fluoride toothpaste or use other fluoride dental products, the fluoride coats the surface of your teeth. This provides what is called a "topical" benefit. Fluoride helps rebuild weakened tooth enamel and reverses early signs of tooth decay.

The fluoride you absorb from foods and beverages also provides a topical benefit because it becomes part of your saliva, constantly bathing the teeth with tiny amounts of fluoride that help rebuild weakened tooth enamel.<sup>1</sup> Some foods and drinks have higher levels of fluoride than others. Ask your doctor or nutritionist about sources of fluoride in your diet.

### **Drink water with fluoride**

While fluoride is naturally found in most water sources, it is not always at levels necessary to help prevent tooth decay. That is why fluoride has been added to public water supplies for the past 70 years. Today, almost 75 percent of the U.S. population is served by fluoridated community water systems. National survey data show that prevention of tooth decay can be maintained at the recommended level of 0.7 milligrams of fluoride per liter of drinking water. This recommended level updates and replaces the previously recommended range of 0.7 to 1.2 milligrams per liter.

Before water fluoridation, children had about three times as many cavities. Because of its important role in reducing tooth decay, the U.S. Centers for Disease Control and Prevention proclaimed community water fluoridation as one of the 20<sup>th</sup> century's 10 great public health achievements. Studies prove water fluoridation continues to help prevent tooth decay by at least 25 percent in children and adults, even with fluoride available from other sources, such as toothpaste.

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Revised: 07/2020

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Just as not having enough fluoride is not ideal, neither is having too much. It is important to know the amount of fluoride in your drinking water so you can supplement with or remove additional sources as necessary. Contact your local public health department for information on how to find out how much fluoride your drinking water contains.

In Delaware, Title 16 Del. C. §124 requires municipal water supplies to provide fluoridated drinking water. Consequently, 86 percent of Delaware's population served by a community water system receive fluoridated drinking water, which is higher than the national average.

### **What if my water doesn't have enough fluoride in it to protect my family's teeth?**

You should know the fluoride concentration in your primary source of drinking water, especially if you have young children. This information should help with decisions about using other fluoride products, particularly fluoride tablets or drops that your physician or dentist may prescribe for your young child. Fluoride tablets or drops should not be used at all if your drinking water has the recommended fluoride concentration of 0.7 mg/L or higher.

If you live in a state that participates in CDC's My Water's Fluoride, you can find out your water system's fluoridation status online. If you are on a public water system, you can call the water utility company and request a copy of the utility's most recent Consumer Confidence Report.

If your water does not contain the optimal levels of fluoride for cavity fighting benefits, there are ways to supplement your fluoride intake.

### **Use toothpaste and mouth rinse with fluoride**

Toothpaste with fluoride is credited for a significant drop in cavities since 1960. To be certain that a toothpaste contains fluoride, purchase toothpaste products with the American Dental Association (ADA) Seal of Acceptance. If you are unsure if a product has the Seal, you can search for it [here](#) on the ADA website.

For the optimal cavity-fighting benefits of fluoride toothpaste, brush twice a day (morning and night) or as directed by your dentist and physician. Children younger than 3 years should begin brushing their teeth as soon as they start to appear in the mouth, and use fluoride toothpaste in an amount no more than a smear or the size of a grain of rice. Children ages 3 to 6 years old should use no more than a pea-sized amount of fluoride toothpaste. Supervise your child's brushing to make sure they use the right amount of fluoride toothpaste and to spit it out when they are done.

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Mouthwash with fluoride can help make your teeth more resistant to decay, but children 6 years or younger should not use it unless it is recommended by a dentist. Children younger than 6 years old are more likely to swallow it than spit it out because their swallowing reflexes are not fully developed.

### **Visit Your Dentist for a Professional Application**

If you have a good chance of getting cavities, your dentist can apply fluoride directly to your teeth during your dental visit with a gel, foam, or rinse. Both adults and children can receive fluoride treatments from the dentist, at intervals recommended by their dentist specifically for their individual needs.

### **Take a Fluoride Supplement**

Available by prescription only, fluoride supplements come in tablet, drop, or lozenge forms. The ADA recommends supplements only for children ages 6 months to 16 years living in areas without adequate amounts of fluoride in their primary source of drinking water or who are at high risk of developing cavities. Talk to your dentist, pediatrician, or family physician about your child's specific fluoride needs.

For more information, contact the Division of Public Health, Bureau of Oral Health and Dental Services, at 302-622-4540 and [www.dhss.delaware.gov/dhss/dph/hsm/ohphome.html](http://www.dhss.delaware.gov/dhss/dph/hsm/ohphome.html).

### **Resources**

1. American Dental Association. 2020. *Fluoride*. In Mouth Healthy. Retrieved July 17, 2020 from <https://www.mouthhealthy.org/en/az-topics/f/fluoride>