



# Fluoride for Children and Adults

**Did you know that fluoride prevents cavities and stimulates bone growth?**

## What is Fluoride?

Fluoride is a mineral that occurs naturally in air, soil, or water; though the levels of fluoride greatly vary depending on location. Fruits and vegetables grown in fluoride-rich soil absorb fluoride as well, so the plants themselves can be considered a source of fluoride.

We absorb fluoride every day through the food we eat and water we drink. This fluoride helps to strengthen our bones and tooth enamel.

## History of Public Water Fluoridation

- In the 1940's, scientists observed that those living in areas with naturally high fluoride levels in the water had lower levels of tooth decay than those who lived in areas with lower fluoride levels.
- In 1945, Grand Rapids, Michigan started adding fluoride to their water system with the intention of reducing tooth decay.
- After five years, other Michigan cities noticed that the children of Grand Rapids had far fewer cavities than the children in surrounding cities, so these cities decided to fluoridate their water as well.
- Within a few years, other states started adding fluoride to their public water systems to help combat dental disease. By 2008, 72.4% of the U.S. population accessing a public water system were receiving fluoridated water, according to the [Centers for Disease Control](http://www.cdc.gov) (CDC).

Public water fluoridation is broadly considered to be one of the greatest public health success stories in the world.

## Not Enough of a Good Thing

Though most of us consume fluoride every day, there are some cases where the risk of dental decay is high, so additional fluoride treatment may be recommended by our dentists to help protect and restore tooth enamel:

- Dry Mouth
- Gum Disease
- History of Frequent Cavities
- Presence of Crowns, Bridges, and/or Braces

Under these circumstances, dentists may recommend supplements or professional/prescription fluoride treatment to protect tooth enamel and remineralize enamel. These professional grade treatments come in the form of a varnish, gel, or foam, which are either "painted" on to the teeth or applied using a mouth guard. The dentist may also provide professional-grade fluoride toothpaste, which contains higher levels of fluoride than the over-the-counter options.



## How Does Fluoride Help Teeth?

When the bacteria in our mouths interact with sugars, they release an acid that breaks down, or demineralizes, our tooth enamel.

Consuming or using products with fluoride helps to rebuild, or remineralize, the weakened tooth enamel, thus protecting our teeth from cavities.

Aside from public water sources, fluoride is often found in toothpaste, mouthwash, some flosses, fluoride supplements, and dental fluoride treatments.

## Too Much of a Good Thing

We have all heard the old phrase “everything in moderation” - fluoride consumption is no exception. Fluoride is safe and effective when used as directed, however extended exposure to high doses can cause some issues.

Those who absorb high levels of fluoride over an extended period of time can develop a condition called fluorosis.

- The majority of dental fluorosis cases are mild and present only on a cosmetic level as white spots or streaks at the bottom of teeth.
- There are some moderate cases, where the white spots/streaks appear over the whole tooth, but again, this discoloration is not harmful to dental health.
- There tend to be very few cases of severe fluorosis, which is characterized by pitting and brown spots on tooth enamel.

Fluorosis is most common for children, when their teeth are forming and is most commonly associated with high levels of natural fluoride in well water.

The level of supplemental fluoride added to each public water system varies by area. Local authorities must consider naturally occurring fluoride levels when determining how much fluoride should be added to the water in order to meet [U.S. Department of Public Health](#) guidelines. These guidelines outline the level of fluoridation needed to prevent cavities while also preventing overexposure to fluoride.

According to the CDC, there are some steps we can take to prevent overexposure to fluoride in our children and ourselves:

- Don't use toothpaste when brushing children's teeth until they are 2 years old (unless recommended by your dentist).
- Once the child is 2 years old, use only a pea-sized amount of toothpaste when brushing.
- Don't brush your child's teeth with fluoride toothpaste more than twice a day.
- Supervise younger children when they are brushing, encouraging them to spit out toothpaste rather than swallowing.
- Follow [CDC guidelines](#) regarding preparing infant formula with fluoridated water.
- Don't take fluoride supplements unless instructed to do so by your dentist or doctor.
- Don't swallow fluoride toothpaste or mouthwash.

If you are concerned about your or your child's level of fluoride intake, make sure to discuss your concerns with your dentist so they can provide a recommendation.



For more oral health information, please visit our website at [www.bcbsfedental.com](http://www.bcbsfedental.com).



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