# Fluoridated water: A cavity prevention success story

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Communities have been adding fluoride to tap water for more than 70 years and the results have been impressive.

Fluoride replaces minerals that are lost from teeth each day. By helping a person keep a low level of cavity-fighting fluoride in the mouth all day long, fluoridated water provides round-the-clock dental health support.

The Centers for Disease Control and Prevention (CDC) estimates that fluoridated water reduces tooth decay by about 25 percent, and children living in communities with fluoridated water have 2.25 fewer decayed teeth than children living in communities without fluoridated water.



### Widespread support

Numerous health organizations, including the American Dental Association and World Health Organization, recognize fluoride's benefits. The CDC is so impressed with the success of water fluoridation that it calls it one of the ten Great Public Health Interventions of the 20th Century.

While many organizations support the addition of fluoride to tap water, some people have voiced concerns about the safety of this practice. There are questions about the need to have more fluoride in water than occurs naturally.

The CDC points out that while most communities naturally have some fluoride in drinking water, it is not usually enough to prevent cavities. Adding the right amount of fluoride can bring it to a level where it makes a positive impact on the dental health of a community.

This effect was shown in the early 1960s when, after more than a decade of adding fluoride to its water, the city of Antigo, Wisconsin, decided to discontinue the practice. Five years later, a study found that second grade children in the community had 200 percent more tooth decay than those of the same ages in 1960.

The city reinstituted the practice of adding fluoride to its water, and continues to do so. Like many communities around the United States, it has found fluoridated water to be a simple and cost-effective means of fighting cavities.

## Fast Facts:

- Fluoride in drinking water prevents at least 25 percent of tooth decay.
- Every dollar invested in water fluoridation saves $38 in dental treatment costs.
- 51 million school hours and 164 million work hours are lost each year because of dental-related illnesses.
- The health benefits of water fluoridation are recognized by more than 100 health organizations.

*Source: American Dental Association*

## Fluorosis

There is one documented downside to fluoridated water, and that is a link to dental fluorosis. If a child ingests too much fluoride while teeth are developing, white spots may appear on the tooth surface.

To prevent fluorosis, no more than a pea-sized amount of toothpaste should be used on a child's toothbrush. Children should brush no more than twice a day with a fluoride toothpaste, and should be encouraged to spit out toothpaste rather than swallow it.

## A history of protection

Scientists first began to closely examine the link between fluoride and cavity prevention in the 1930s. At a time when many children and adults were affected by tooth decay, scientists found that children who drank water with naturally high levels of fluoride had less decay.

In 1945, Grand Rapids, Michigan, became the first city to add fluoride to its water. Within a few years, it was clear that children in Grand Rapids had fewer cavities than children in surrounding communities without fluoridated water.

Today, about 75 percent of people in the United States have access to a fluoridated public water supply. If you use well water or bottled water, check with your dentist to see if fluoride supplements are recommended.

By stopping cavities from forming, using fluoridated water saves on dental treatment costs and hours that would be lost to dental-related illnesses.