Fluoride and Oral Health

Learn about fluoride and oral health in Canada.

What is fluoride?
Fluoride is a mineral. In Canada, fluoride is found naturally in our water, air, food and soil.

Benefits
Fluoride helps prevent tooth decay, a common yet serious disease in Canada. We have used fluoride to prevent tooth decay since the 1940’s. In fact, fluoride has been scientifically proven to:

- strengthen tooth enamel
- lower the amount of acid in your mouth
- rebuild minerals that make teeth stronger
Sources of fluoride to prevent tooth decay

**Toothpaste**
Brushing your teeth with fluoridated toothpaste helps prevent tooth decay.

**Water**
Drinking water that contains an *optimal level* of fluoride helps prevent tooth decay.

**Varnishes**
Fluoride varnish prevents tooth decay in people who are at risk for the disease. Fluoride varnish should be painted on your teeth by someone who has been trained to do so.

**Mouth rinses**
Fluoride mouth rinses or mouthwashes prevent tooth decay in people who are at risk for the disease. Talk to your oral health professional before using them. *Never* give fluoridated mouth rinses or mouthwashes to children under 6 years of age. These rinses contain very high levels of fluoride, and young children are more likely to swallow them.

**Gels and foams**
Gels and foams are applied to the teeth to prevent tooth decay in people who are at risk for the disease. However, research shows that they do not work as well as fluoride varnish.

**Supplements**
Fluoride supplements are drops or tablets. *Only* take them if an oral health professional advises you to.
**Effects on health**

Fluoride is good for your teeth, but having too much fluoride can cause two potential effects on health:

- dental fluorosis
- skeletal fluorosis

**Dental Fluorosis**

Dental fluorosis is a condition that changes the way your tooth enamel (the outer layer of your teeth) looks - small white spots appear on your adult teeth (permanent teeth). This can happen only if, when you were a young child, you have ingested too much fluoride when your permanent teeth were developing under the gums. You **cannot** get dental fluorosis after your adult teeth have grown in.

Dental fluorosis is classified according to the level of severity, from normal to severe. In its mild form it is only a cosmetic outcome and does not affect your oral health or your overall health.

The [Canadian Health Measures Survey](https://www.canada.ca) found that 16% of children may have very mild or mild dental fluorosis. So few children had moderate or severe dental fluorosis that the number of children affected was too low to report.

**Skeletal Fluorosis**

Skeletal fluorosis involves hardening of the bones and joints. It can happen when there is a very high amount of fluoride in your bones. It is caused by ingesting very high levels of fluoride every day for a long time.

Skeletal fluorosis is extremely rare in Canada because we adjust our water to contain very low levels of fluoride and limit fluoride in our products.

**Can fluoride affect your health in other ways?**

Since the 1940’s, researchers have been testing the safety and benefits of fluoride. Apart from dental fluorosis and skeletal fluorosis, there are no other health effects related to fluoride.

During pregnancy and breastfeeding: Fluoride is not harmful to a fetus or through breastfeeding.
For infant formula: Municipal tap water and commercially bottled water (except carbonated or mineral waters) are safe for preparing powdered or concentrated infant formulas.

It is safe to add fluoridated tap water to:

- powdered infant formula
- concentrated liquid formula

**Before** adding water to infant formula, read the label to see if the formula already contains fluoride. If you live in an area with naturally occurring high levels of fluoride (higher than the guideline of 1.5 mg/L - the maximum acceptable concentration), we suggest you mix the formula with drinking water with a lower fluoride concentration level.

### Proper use of fluoridated toothpaste for children

Our toothpaste guide helps ensure children get the right amount of fluoride for their age and oral health status.

**Use fluoridated toothpaste properly**

Use toothpaste that contains fluoride to brush your child’s teeth twice a day. Remember, toothpaste contains high amounts of fluoride. Because very young children may not have developed the ability to spit, they may swallow toothpaste when brushing. We recommend using the right amount of toothpaste for your child’s age. Please see the recommendations below:

**Infants and toddlers age 0 to 3 (36 months)**

If your child is under 3 years old (0 to 36 months), you should consult a health professional to determine whether your child is at risk of developing tooth decay. If your child is at risk of developing tooth decay, then they should have their teeth brushed by an adult using a **minimal amount** (rice-sized grain) of fluoridated toothpaste.

**Children age 3 to 6**
An adult should always help children under age 6 brush their teeth and use only a small amount (small green pea-sized or 5 mm maximum) of fluoridated toothpaste.

**Children age 6 and older**

Once your child is 6 years old and has developed the ability to spit out the toothpaste, they are ready to start supervised tooth brushing using toothpaste that contains fluoride.

**Fluoride in drinking water**

We support Community Water Fluoridation as an effective way to prevent tooth decay. It is universally accessible and provides benefits to all members of a community, regardless of their:

- age
- gender
- income
- ethnicity
- education
- access to oral health services
- ability to afford oral hygiene supplies

Community Water Fluoridation has been proven to be a safe, effective and equitable way to prevent and reduce tooth decay (including root decay) for people of all ages - from children to seniors.
Optimal level

The optimal level is the concentration of fluoride in drinking water that provides the optimal dental benefits while minimizing the risk of dental fluorosis.

In Canada, the optimal level of fluoride in the water is 0.7 milligrams per litre (mg/L) – which can also be described as 0.7 parts per million (ppm). The optimal level also takes into consideration the fluoride that people are getting from other sources, like fluoridated toothpaste or mouth rinse.

How is fluoride in water adjusted?

To adjust the level of fluoride in community water to the optimal level, municipal drinking water treatment plants use fluoridation agents.

We recommend the use of drinking water treatment agents that are certified by an accredited certification body to meet the appropriate standard for drinking water. Drinking water standards are designed to check the safety of products added to drinking water.

Fluoride and well water

Fluoride occurs naturally in the environment and groundwater may contain fluoride levels that are above the optimal level. If you get your drinking water from a private well, it is your responsibility to make sure that the water is free of microbiological and chemical contaminants and safe to drink. Have your well water tested regularly to confirm its safety.

More information on testing private wells is available from your local drinking water authorities.

For more information please consult the Community Water Fluoridation in Canada report and the Community Water Fluoridation in Canada map.
Supporting organizations

The use of fluoride for the prevention of tooth decay is endorsed by over 90 national and international governmental and professional health organizations, including:

- Health Canada
- the Canadian Dental Association
- American Dental Association
- the FDI
- World Dental Federation
- the Canadian Medical Association
- the Public Health Agency of Canada
- the US Food and Drug Administration
- the World Health Organization (WHO)