

## Fluoride and Community Water Fluoridation

These Frequently Asked Questions help to address common concerns and questions regarding fluoride and community water fluoridation in Nova Scotia.

### **Why is oral health important?**

Oral health is important to overall health and well-being at every age and stage of life. A healthy mouth allows a person to eat, speak, learn and socialize without discomfort or embarrassment.

Tooth decay is the most common childhood chronic disease in Canada that can be prevented. 57% of Canadian children have cavities, which can lead to unnecessary infection, pain, and tooth loss. This can impact children's growth and development, behaviour, and ability to learn, socialize and play.

### **What is fluoride?**

Fluoride is a mineral that strengthens teeth, making them more resistant to decay. Fluoride is naturally occurring in water, soil, plants and food, and is added to various dental products.

### **How does fluoride prevent tooth decay?**

Fluoride can prevent tooth decay in two ways:

- When fluoride in drinking water is consumed it becomes part of the tooth's structure as it develops. Fluoride strengthens all layers of the tooth, creating stronger teeth for life.
- When teeth come in contact with fluoride in drinking water, the tooth enamel is strengthened on the surface. This type of fluoride protection is also available through dental products such as fluoride toothpaste and mouth rinse as well as fluoride treatments, such as fluoride varnish.

Evidence shows that receiving different types of fluoride is safe and offers the greatest benefits for oral health.

### **What is water fluoridation?**

Almost all water contains some naturally occurring level of fluoride. Community water fluoridation is the process of adjusting that amount of fluoride in our drinking water to a level recommended for preventing cavities.

### **What are the benefits of water fluoridation?**

Studies continue to show the importance of water fluoridation in preventing and reducing tooth decay. This is true even with improvements in access to dental care, personal dental practices and increased availability of fluoride through other sources, such as fluoride toothpaste.

While water fluoridation benefits everyone in a community, it is especially important for children and groups that experience higher rates of tooth decay and poorer oral health.

**Why does Nova Scotia Health Public Health support water fluoridation?**

Water fluoridation is one of the most effective public health measures that can be taken to reduce tooth decay because it reaches everyone in a community regardless of their age, income or access to dental care.

Nova Scotia Health (NSH) Public Health recommends community water fluoridation alongside more than 90 other provincial, national, and international professional organizations, associations and governments because it is supported by evidence to be an important, safe, and effective measure to improve the oral health of Nova Scotians.

**Do all communities in Nova Scotia have access to water fluoridation?**

In 2022, about 50.4% of people in Nova Scotia had access to water with the recommended level of fluoride through a community water system. While all water contains some fluoride naturally, most water supplies in Nova Scotia do not have enough to help prevent tooth decay. Food is also not a major source of fluoride in Canada.

**What amount of fluoride in water is considered optimal for oral health?**

Health Canada recommends that communities fluoridate water to 0.7 milligrams per litre (mg/L) to achieve the benefits of cavity prevention. This level considers the other ways that people commonly receive fluoride, such as through fluoride toothpaste and treatments received at the dentist.

The level set for water fluoridation in Canada of 0.7mg/L is less than half the maximum level of 1.5mg/L that has been established by Health Canada and the World Health Organization.

**What about recent reports on water fluoridation and IQ in children?**

Recent reports have been published that look at fluoride levels above the maximum 1.5 mg/L and developmental outcomes in children, including IQ scores.

The evidence in the reports is not conclusive and does not show high fluoride causes lower IQs in children. In these studies, high fluoride levels are defined as greater than 1.5 mg/L, which is about double the standard for drinking water in Canada and Nova Scotia of 0.7 mg/L.

NSH Public Health continues to monitor ongoing scientific research on fluoride, community water fluoridation and health.

**What is dental fluorosis?**

Repeat exposure to high levels of fluoride (above the maximum level of 1.5 mg/L) has been shown to increase risk for dental fluorosis. Dental fluorosis is a cosmetic issue that affects the tooth enamel, and makes teeth appear to have white flecks or brown pitting.

Dental fluorosis is very uncommon in Canada and not a concern for most children. Some children have mild cases of fluorosis that often go unnoticed and present no long-term health problems.

**How do we know that the fluoride in drinking water in Nova Scotia municipalities remains below 1.5 mg/L?**

Municipalities that adjust the fluoride in drinking water are required to test their water supply daily to make sure recommended levels are maintained at 0.7 mg/L, or half the maximum level set by Health Canada of 1.5 mg/L.

**Why does NSH Public Health offer a school-based fluoride varnish program?**

High levels of early childhood cavities and limited of access to dental care are major concerns in our province.

School-based fluoride programs are offered in many areas across Canada because they are a safe and effective way to deliver additional topical fluoride to children to help prevent tooth decay. NSH Public Health offers a Fluoride Varnish Program in pre-primary to grade 6 students in select communities that would benefit most from an additional layer of protection.

School-based fluoride programs compliment other ways children receive fluoride, such as through their dental provider and water fluoridation. Children benefit from access to multiple sources and applications of fluoride and can safely receive up to six applications of fluoride varnish a year.