CWWA FACT SHEET
August 2025

FLUORIDE IN DRINKING WATER

FACT SHEET

What is Fluoride and why is it added to drinking water?

Municipalities across Canada decide whether or not to add fluoride to the drinking water supply delivered to their residents. It is a decision to be made by the municipal council, or by a provincial/territorial health authority. This decision is made with direction from the local health authority and following extensive public engagement. This is not a decision made by the utility and is not part of the required process to meet regulations for safe drinking water. It is added post-treatment, in accordance with strict regulations, to provide community-wide dental benefits. The municipal council may also consider the water treatment plant operational, maintenance and cost implications of adding fluoride.

The purpose of this CWWA Fact Sheet is to help municipal water officials brief their Councils and other stakeholders on the topic of fluoridation of drinking water. While there is much information available on the internet, CWWA believes that the sources we cite in this sheet are credible sources of science-based information and should be considered.

What is Fluoride and Why is it Added to Drinking Water?

Fluoride occurs naturally at low levels in some soils and rocks, and in many water supplies. Fluoride is widely added to public water supplies in Canada as a public health measure to protect against the development of dental caries and tooth decay. Almost half of the Canadian population is serviced by a community drinking water supply that is fluoridated. As such. drinking water is the source of greatest exposure to fluoride for most individuals, but this exposure is kept within regulated limits. Other exposure sources include food, beverages, and dental products.

What are the Guidelines and Regulations for Fluoride?

Health Canada's Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Fluoride (December 2010), states a maximum acceptable concentration (MAC) for fluoride in drinking water of 1.5 mg/L. The technical document also recommends an updated, slightly lowered optimal fluoride concentration of 0.7 mg/L for communities choosing to fluoridate their water supply. It states that while the fluoridation of drinking water supplies is a decision made by municipalities, or the appropriate provincial/territorial authority, Health Canada continues to strongly support water fluoridation as a safe, effective and cost-effective public health measure to help prevent dental cavities.

The safety and efficacy of water fluoridation has been frequently studied and continues to be supported by current science, and the beneficial effects of fluoride in the prevention of dental cavities have been well documented in scientific literature.

These benefits are recognized and endorsed by Health Canada and by national and international professional health organizations including the Canadian Dental Association and the World Health Organization (see additional resources and references section).

In a position statement from 2016, the Chief Public Health Officer and the Chief Dental Officer from the Public Health Agency of Canada both state the importance of community water fluoridation for preventing tooth decay and improving oral health, while being safe, cost effective and equitable.

NOTE: Health Canada is currently reviewing the Guidelines for Canadian Drinking Water Quality for fluoride and this review includes assessing new scientific studies on potential effects associated with exposure to fluoride. To support the review, in 2023 Health Canada engaged six experts to consider scientific evidence and made recommendations on fluoride exposure (in drinking water and other sources), dental fluorosis, and potential effects on neurocognitive development in children. It is anticipated that Health Canada will be releasing the revised fluoride guideline document in 2026.

Water Treatment Operation & Maintenance Implications

The capital expenditures necessary to introduce fluoride to the water supply system, the annual operating costs associated with it, and the health and safety issues for water treatment plant operations staff must be considered. Like many of the chemicals used in water treatment, the fluoridating chemicals used are considered dangerous goods (hazardous materials). The design, construction and operation of equipment to receive, store and introduce the fluoridating chemical into the treated water requires risk assessments and resulting mitigation measures to address worker occupational health and safety as well as to protect the environment in and around the water treatment facilities. A full monitoring and reporting program for fluoride levels in drinking water also needs to be established if a municipality chooses to fluoridate their drinking water, to ensure that the target fluoride level is met consistently. This includes monitoring the level of naturally occurring fluoride in the intake source water in order to adjust the level of fluoride added.

What is CWWA Doing?

- Monitoring updates to guidance and guidelines related to fluoridation of drinking water supplies
- Communicating routinely with Health Canada experts on the topic
- Providing current information and additional sources of information to our membership to enhance understanding of fluoridation, support related decision-making, and provide support in communicating this topic to stakeholders

This paper is based on the research cited in the paper. This information sheet is intended for information purposes only and is not to be considered as professional advice.