

Fluoridation of Drinking Water

For more information call the Health ACTION Line at 613-345-5685 or 1-800-660-5853 or visit us on the web at: www.healthunit.org



Why is water fluoridated?

The fluoridation of drinking water is an important part of the overall strategy to improve the dental health of the population. Fluoride helps to strengthen the structure of the tooth and to repair damage to the enamel from acids in the mouth. Having healthy teeth is critical for healthy nutrition and self-esteem as well as reducing pain and tooth loss that can come from cavities.

The major advantage of water fluoridation is that it benefits all members of the community. While some children and adults use fluoridated tooth paste on a regular basis and visit a dentist every year for cleaning and other preventive care, others do not have access to these services for financial or other reasons. Without fluoridated water, these children and adults would be at an added disadvantage.

What is fluoride?

Fluoride is a mineral that occurs naturally in soil, air and water.

Who regulates the addition of fluoride in the water?

Ontario has strict guidelines outlined in the *Safe Water Act, 2002, Reg 170-03* and the *Ontario Public Health Standards, Protocol for the Monitoring of Community Water Fluoride Levels* for municipalities who add fluoride to their water systems. It includes daily monitoring and reporting of results to public health officials according to the guidelines. Any water treatment plant in operation in Ontario must obtain a license from the provincial government to operate the water treatment process. The water treatment process may diminish the natural fluoride in the water source so fluoride is added to bring the fluoride in the water back to the optimal level.

Is fluoride safe?

Research studies support a safe level of fluoride in the water at 0.7mg/l.

It is very hard to get sick from fluoride in the drinking water. An adult man would need to consume 15,000 litres of water that is fluoridated at optimal level continuously in one sitting to get an acute toxic dose of fluoride.

Dental fluorosis may occur among young children if they consume too much fluoride while their teeth are forming under their gums. Dental fluorosis is a change in the appearance of the tooth's enamel. These changes can vary from barely noticeable white spots in mild forms to staining and pitting in the more severe forms. If a child drinks water with the recommended level of fluoride (0.7mg/l) and does not swallow fluoridated toothpaste or rinses, then the risk of developing dental fluorosis is very low. This is the reason why it is recommended that young children not use adult toothpaste or fluoride rinses, unless recommended by a dental professional.

To ensure the public's safety, Canada has strict standards that must be met in order to fluoridate water. The forms of fluoride used to fluoridate municipal water are fluosilicates – hydrofluorosilicic acid (HFSA) or sodium silicofluoride. These compounds dissolve completely in the water and so the public is never exposed directly to the hydrofluorosilicic acid. The fluoride additives are byproducts of the production of phosphate fertilizer. Industrial grade fluorides can have minute traces of heavy metals within it but they are all at levels well below all current environmental protection standards. All water has some level of trace metals in it that vary depending on the rock adjacent to the water source.

Why do some places not fluoridate their drinking water?

Each municipality in Ontario decides whether or not to fluoridate their water. It is important to consider the population benefits and the research behind water fluoridation when deciding whether or not to do it.

Some people have questioned why many cities in Canada fluoridate their water when some western European countries have elected to remove fluoride from their drinking water. Countries like Germany, Belgium, Sweden and Turkey tend to have higher than optimal levels of fluoride naturally occurring in their drinking water. In other countries, milk and table salt are fluoridated. Others don't have a centralized water supply system which would make it difficult to provide fluoride to large numbers of people using fluoridated water. Some countries also have better access to universal dental care.

Who supports water fluoridation?

The Leeds, Grenville and Lanark District Health Unit and the following organizations support the fluoridation of community water.

- The Chief Medical Officer of Health for Ontario
- The Ontario Association of Local Public Health Agencies
- The Canadian Dental Association
- The Canadian Medical Association
- Health Canada
- Public Health Agency of Canada
- The Canadian Public Health Association
- The American Dental Association
- The U.S. Public Health Service
- The World Health Organization



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