

Fluoride in Well Water

Fluorides are chemical compounds, which can be found in air, water, soil and almost all foods. The maximum acceptable concentration of fluoride in drinking water in Health Canada's Guidelines for Canadian Drinking Water Quality opens new window is 1.5 mg/L (milligrams per litre).

What are the known sources of fluoride?

Fluorides are naturally released into the environment by weathering processes and by volcanic activity and may be produced in the manufacture of phosphate fertilizer, by aluminum smelting and by other chemical manufacturing.

Health benefits of fluorides

Many governments and health organizations, including Health Canada, the Canadian Public Health Association, the Canadian Dental Association, the Canadian Medical Association and the World Health Association endorse the fluoridation of drinking water to prevent tooth decay. A fluoride concentration of 0.8 to 1.0 mg/L has been recommended for those communities wishing to fluoridate their water supply.

Fluorides at optimum concentrations protect tooth enamel against the acids that cause tooth decay.

What are the environmental health concerns of fluoride?

In children, higher concentrations of fluoride in drinking water can cause dental fluorosis for children under the age of six during tooth formation. Dental fluorosis causes the staining and pitting of teeth. This is a cosmetic problem and not a health risk.

In adults, high levels of fluorides consumed for a very long time may lead to skeletal fluorosis. Skeletal fluorosis is a progressive but non life threatening disease in which the bones increase in density and become more brittle. In mild cases, the symptoms may include difficulty in moving, deformed bones and a greater risk of bone fractures.