



IT'S YOUR HEALTH



Flouride and Human Health

The Issue

Most Canadians are exposed to flourides on a daily basis, through the trace amounts that are found in almost all foods and through those that are added to some drinking water supplies to prevent tooth decay.



Background

Flouride is a natural element that is found in soil, water (both fresh and salt) and in various foods. Flourides are released into the environment by weathering processes and by volcanic activity. They may also be released by the production of phosphate fertilizers, by aluminum smelting and by chemical manufacturing.

Health Benefits of Flourides

The use of flouride for the prevention of dental cavities is endorsed by over 90 national and international professional health organizations including Health Canada, the Canadian Public Health Association, the Canadian Dental

Association, the Canadian Medical Association, the US Food and Drug Administration and the World Health Organization.

Flourides protect tooth enamel against the acids that cause tooth decay. Many studies have shown that flouridated drinking water significantly reduces the number of cavities in children's teeth.

Flouride is used in many communities across Canada, spanning most provinces and territories. About 45 percent of Canadians receive flouridated water.



Considerations for Children

Flouridated toothpaste should be used twice a day to brush teeth. As young children tend to swallow toothpaste when they are brushing, the following guidelines have been established to balance their risk of developing dental fluorosis with the dental health benefits of flouride.

Children up to 3 years of age should have their teeth and gums brushed by an adult. Parents should consult a health

professional to determine whether their child under 36 months of age is at risk of developing tooth decay. If the 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. It has been determined that use of fluoride toothpaste in a small amount effectively balances between the benefit of fluoride and the risk of developing fluorosis. If the child is not considered at risk, it is recommended their teeth be brushed by an adult using a toothbrush moistened only with water.



Children 3 - 6 years of age should be assisted with brushing their teeth by an adult and use only a small

amount (i.e., green pea-sized portion) of fluoridated toothpaste.

Considerations for Adults

High levels of fluorides consumed for a very long period of time may lead to skeletal fluorosis. These levels are much higher than those to which the average Canadian is exposed daily. Skeletal fluorosis is a progressive but not life-threatening disease in which bones increase in density and become more brittle. In mild cases, the symptoms may include pain and stiff joints. In more severe cases, the symptoms may include difficulty in moving, deformed bones and a greater risk of bone fractures.

Minimizing Your Risk

There are several steps that you can take to maintain your fluoride intake



within the optimal range for attaining the dental benefits.

- Never give fluoridated mouthwash or mouth rinses to children under six years of age, as they may swallow it
- Talk to your dental professional before using fluoridated mouthwash
- Do not use fluoride supplements (drops or tablets) unless specifically recommended by your dental professional.

These guidelines are consistent with recommendations from other health organizations and associations.

Provincial and Municipal Governments Role

Provincial and territorial governments regulate the quality of drinking water in their jurisdiction. The fluoridation of drinking water supplies is a decision that is made by each municipality, in collaboration with the appropriate provincial or territorial authority. This decision may also be taken in consultation with residents. For communities wishing to fluoridate their water supply, the optimal concentration of fluoride in drinking water to promote dental health has been determined to be 0.7 mg/L.

Government of Canada's Role

The Government of Canada created the Office of the Chief Dental Officer (OCDO) in October 2004 to improve the oral health status of Canadians and to increase awareness about the prevention of oral diseases.



Fluoridation is a process of adjusting the concentration of fluoride to a level that provides the optimal dental benefits. This level is called the optimal concentration and is set well below the maximum acceptable concentration. Health Canada has established the guideline for fluoride in drinking water as a maximum acceptable concentration of 1.5 milligrams per litre. Water containing fluoride at, or below, this maximum acceptable concentration does not pose a risk to human health.

Health Canada works in collaboration with the provinces and territories to maintain and improve drinking water quality. Together, both levels of government develop the Guidelines for Canadian Drinking Water Quality. These guidelines are reviewed and revised periodically to take into account new scientific knowledge.



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Need More Info?

- To obtain a copy of the **Canadian drinking water guideline for fluoride** go to:
http://www.hc-sc.gc.ca/ewh-semt/consult/_2009/fluoride-fluorure/index-eng.php
- Or learn more about Health Canada's **drinking water program** at:
<http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/index-eng.php>
- Health Canada's **Water Quality** web section at:
<http://www.hc-sc.gc.ca/ewh-semt/water-eau/index-eng.php>
- For information on **The Office of the Chief Dental Officer** go to:
<http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/fnihb-dgspni/ocdo-bdc/index-eng.php>
- For information from **Canada's Chief Dental Officer on fluoridation** go to:
<http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/fnihb-dgspni/ocdo-bdc/project-eng.php#a6>
- For information on **Oral Health** go to: <http://www.hc-sc.gc.ca/hl-vs/oral-bucco/index-eng.php>
- Visit the **Canadian Dental Association** at: <http://www.cda-adc.ca/>

- Visit the **Canadian Association of Public Health Dentistry** at:
<http://www.caphd-acsdp.org/>
- For additional articles on health and safety issues go to the ***It's Your Health*** web section at:
www.healthcanada.gc.ca/iyh

You can also call toll free at 1-866-225-0709 or TTY at 1-800-267-1245*