

Dr. David McKeown
Medical Officer of Health

Public Health
277 Victoria Street
5th Floor
Toronto, Ontario M5B 1W2

Tel: 416 338-7820
Fax: 416 392-0713
dmckeown@toronto.ca
www.toronto.ca/health

To: Mayor Rob Ford
Members of Council

From: Dr. David McKeown, Medical Officer of Health

Date: March 30, 2011

Subject: **Information package on Fluoridation**

The Toronto Board of Health is currently scheduled to discuss the issue of water fluoridation at its meeting on Monday, April 4 at 1.00 p.m. We understand that this issue may also be raised in your constituency.

The purpose of this information package is to provide some brief background documents from local, provincial, national and international agencies addressing the safety, benefits and effectiveness of water fluoridation to reduce the occurrence of tooth decay.

Contents:

1. Toronto Public Health fact sheet, 'Fluoride and drinking water'.
2. Memorandum from Chief Medical Officer of Health, Ontario regarding the value of water fluoridation.
3. Press release from the Ontario Medical Association.
4. Canadian Dental Association position on the use of fluorides in caries prevention.
5. Health Canada information sheet on fluoride and human health.
6. Joint statement by World Health Organization, World Dental Federation (FDI), and International Association for Dental Research (IADR).



Dr. David McKeown
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Fact Sheet

November, 2010

Fluoride & Drinking Water

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

At appropriate levels, Fluoride in drinking water has been proven to significantly reduce cavities and dental decay. This finding is strongly supported by an extensive body of Canadian and international research, and has been commonly accepted in the scientific community for almost 70 years.

Scientific guidance on optimal fluoridation levels is routinely reviewed by expert panels convened by Health Canada and conveyed to all provinces and territories.

The most recent Health Canada review, undertaken in 2007, assessed the latest available evidence on the benefits and potential risks. This review concluded that there is no harmful health risk from the fluoridation of community drinking water at current levels and that fluoridation continues to be an effective public health strategy to prevent dental disease.

The City of Toronto's policies and practices in drinking water fluoridation are guided by these expert reviews and recommendations. Toronto Public Health and Toronto Water are committed to ensuring the safety of the Toronto drinking water supply, and protecting the health of Toronto residents.

The dental benefits and safety of fluoridation of drinking water are strongly supported by many health organizations, including the Ontario Medical Association, the Canadian Dental Association, the Ontario Dental Association, the American Dental Association, the Public Health Dentists Association, the Chief Dentist of Canada and the International Association for Dental Research.

Fluoride has been added to the Toronto drinking water supply since 1963. Studies of Toronto children 12 years after the introduction of water fluoridation and again in 2000 show that by 2000, there was a 77.4% mean reduction in decayed, missing and filled baby teeth for five year-old children. There was also a 390% increase in the percentage of children with no tooth decay when compared to rates reported prior to the addition of fluoride in 1963.

This dramatic improvement in dental health is due to a combination of water fluoridation, other sources of fluoride (such as toothpaste), better nutrition and better dental preventive care. Water fluoridation plays an important role in a comprehensive approach to good dental health.

The current target level of fluoride in Toronto drinking water is 0.6 parts per million - a level which is less than the naturally occurring fluoride levels from a number of European and North American water sources, including parts of Ontario.

Fluoride levels in Toronto's drinking water are regulated in Ontario under the Safe Drinking Water Act administered by the Ministry of the Environment.

(1 of 2)

Fact Sheet

Fluoride & Drinking Water

Toronto Public Health will continue to monitor expert reviews and recommendations on water fluoridation from provincial, federal and international health research organizations to ensure Toronto residents continue to have appropriate levels of fluoride in drinking water.

For more information:

World Health Organization, (WHO)

http://www.who.int/oral_health/events/oral%20healthc.pdf.

Health Canada

<http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/fnihb-dqspni/ocdo-bdc/project-eng.php#a6>.

<http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2008-fluoride-fluorure/index-eng.php>

Chief Medical Officer of Health (Ontario) (CMOH)

<http://www.mhp.gov.on.ca/en/healthy-communities/dental/CMOH-on-Fluoridation.pdf>.

Ontario Medical Association

<https://www.oma.org/Mediaroom/PressReleases/Pages/OntariosDoctorsSetTheRecordStraightOnFlourideInDrinkingWater.aspx>.

The U.S. Centers for Disease Control and Prevention (CDC)

<http://www.cdc.gov/fluoridation/benefits.htm>.

Ontario Dental Association

<http://www.youroralhealth.ca/community-water-fluoridation.html>.

Canadian Dental Association

http://www.cda-adc.ca/files/position_statements/Fluorides-English-2010-06-08.pdf.

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**Ministry of Health
and Long-Term Care**

Chief Medical Officer of Health

Public Health Division
11th Floor, Hepburn Block
Queen's Park
Toronto ON M7A 1R3Telephone: (416) 212-3831
Facsimile: (416) 325-8412**Ministère de la Santé
et des Soins de longue durée**

Médecin hygiéniste en chef

Division de la santé publique
Édifice Hepburn, 11e étage
Queen's Park
Toronto ON M7A 1R3Téléphone: (416) 212-3831
Télécopieur: (416) 325-8412

May 31, 2010

MEMORANDUM**TO: Medical Officers of Health, Associate Medical Officers of Health****RE: Value of Water Fluoridation**

The Office of the Chief Medical Officer of Health has been asked to provide its expertise and advice to Medical Officers of Health on the value of water fluoridation.

The practice of water fluoridation is one of the greatest public health achievements of the 20th century. More than 90 national and international professional health organizations including Health Canada, the Canadian Public Health Association, the Canadian Dental Association, the Canadian Medical Association, the U.S. Centers for Disease Control and Prevention, the National Institutes of Health and the World Health Organization have endorsed the use of fluoride at recommended levels to prevent tooth decay.

The use of fluoride in drinking water is a safe, effective, economical means of preventing dental caries. The studies are clear and unequivocal and the benefits of fluoridation are well documented:

- where fluoride has been added to municipal water supplies, there has been a marked decline in the rates of tooth decay;
- water fluoridation reduces dental care expenditures, with an estimated \$38 in avoided costs for dental treatment for every \$1 invested in community water fluoridation; and
- the health benefits extend to all residents in a community regardless of age, education, or socio-economic status; the practice is particularly beneficial to seniors and the hardest to reach poor for whom other preventive measures may not be accessible.

Fluoride additives themselves are required to meet rigorous standards of quality and purity before they can be used. When they are added to water at levels recommended in Ontario and across the country, studies have determined that fluoride is not harmful.

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It is important to note that credible scientific organizations and associations continue to review the evidence and assess the benefits and potential risks of fluoridation. Their reports are publicly available and constitute the basis for the continuing support of water fluoridation. The most recent review has been conducted by Health Canada. In 2007, a Health Canada-appointed panel of experts concluded that there is no detrimental risk to the health of Canadians from fluoridation of community drinking water at the current recommended levels. The panel found that it remains an effective public health intervention to reduce the prevalence of dental caries.

The value of water fluoridation should not be underestimated. Tooth decay is the single most common chronic childhood disease, one that is highly preventable. According to sound research, fluoridated drinking water greatly reduces the number of cavities in children's teeth, which contributes to their healthy development.

Therefore, we find no reason for Ontarians to avoid drinking fluoridated water at the recommended levels in Ontario's drinking water. Through Ontario's Child Health Program, boards of health are required to monitor the level of fluoride in water supplies where fluoride is added, and to notify the community when the level of fluoride falls outside the therapeutic level for an extended period of time.

As you know, the decision to fluoridate local drinking water is made by each municipality in consultation with local residents. It is an effective public measure that reduces inequalities in health. It helps to contain the costs of health care in Ontario. It benefits all residents in a community, and for these reasons we fully expect that this important practice will continue for many years to come so that Ontarians can enjoy lasting health benefits.

It is often difficult to communicate the information about this well-studied intervention amid misinformation and controversy generated by misinterpretation of data and study results. We are attaching a series of Q's and A's and a list of website references on related scientific studies and other areas of research and information that we hope you will find useful.

In my capacity as CMOH for the Province of Ontario and with the support of the Ministry of Health Promotion, my office will continue to monitor this issue and review the information as provided by the scientific reviews.

Sincerely,



Arlene King, MD, MHSc, FRCPC
Chief Medical Officer of Health

Attachment

Supporting Scientific Studies

Health Canada

www.hc-sc.gc.ca/hl-vs/iyh-vsv/environ/fluor-eng.php

"The use of fluoride 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 Food and Drug Administration of the United States and the World Health Organization.

"Fluorides protect tooth enamel against the acids that cause tooth decay. Many studies have shown that fluoridated drinking water greatly reduces the number of cavities in children's teeth. Fluoride is used in many communities across Canada, spanning most provinces and territories. About 40 percent of Canadians receive fluoridated water."

Findings and Recommendations of Health Canada's Fluoride Expert Panel (January, 2007)

www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2008-fluoride-fluorure/index-eng.php/

"The current Maximum Acceptable Concentration (MAC) of 1.5 mg/L of fluoride in drinking water is unlikely to cause adverse health effects, including cancer, bone fracture, immunotoxicity, reproductive/developmental toxicity, genotoxicity, and/or neurotoxicity... Under modern conditions of exposure, Heller *et al.* (1997) concluded that 0.7 mg/L of fluoride in drinking water provides a suitable trade off between the risk of dental fluorosis and the protective effect against dental caries... From a health perspective, there is no reason to be concerned about the actual prevalence of very mild and mild dental fluorosis in Canada. In addition, the actual prevalence of moderate dental fluorosis in Canada is low, and all evidence suggests that since 1996 there has been an overall decreasing trend of dental fluorosis in Canada... Community drinking water fluoridation is still an effective public health method to reduce the prevalence of dental caries in the Canadian population."

Health Canada - Chief Dental Officer's letter on water fluoridation

www.hc-sc.gc.ca/hl-vs/oral-bucco/care-soin/fluor-eng.php

"The big advantage of water fluoridation is that it benefits all residents in a community, regardless of age, socioeconomic status, education, or employment. Health Canada continues to support water fluoridation as a safe, cost effective public health measure, and encourages Canadians to review respected and credible sources of information to reach their own conclusions about water fluoridation."

The Canadian Dental Association

www.cda-adc.ca/en/oral_health/faqs_resources/faqs/fluoride_faqs.asp

List of commonly asked questions about fluoride with answers in lay language.

National Health and Medical Research Council of Australia. 1999:

"Water Fluoridation at optimal levels continues to provide significant benefits in the prevention of dental caries for both deciduous (baby) and permanent (adult) teeth. It remains the most effective means of achieving community-wide exposure to the caries preventive effects of fluoride and should remain unchanged."

National Health and Medical Research Council of Australia. 2007: The Efficacy and Safety of Fluoridation is a report on the review of the latest scientific evidence in relation to fluoride and health.

"The existing body of evidence strongly suggests that water fluoridation is beneficial at reducing dental caries."

www.nhmrc.gov.au/publications/synopses/eh41syn.htm

Oral Health in America: A Report of the Surgeon General. 2000:

"Community Water Fluoridation 'is 'safe and effective in preventing 'dental caries "in 'both children and adults. Water fluoridation benefits all residents serviced by community water supplies regardless of their social or economic status

www.cdc.gov/fluoridation/fact_sheets/sg04.htm

Systematic Review of Water Fluoridation. UK/International study. 2000:

"Fluoridation of drinking water supplies does reduce caries prevalence, both as measured by the portion of children who are caries free and by the mean change in deft/DMFT Score." The deft Score determines the dental caries status for primary teeth decayed.

(d= decayed, e = extracted due to caries, f = filled t = teeth)

www.york.ac.uk/inst/crd/CRD_Reports/crdreport18.pdf

Water Fluoridation. US Department of Health and Human Services Centers for Disease Control and Prevention. 2001

"Fluoride has contributed profoundly to the improved dental health of persons in the United States and other countries. Fluoride is needed regularly throughout life to protect teeth against tooth decay. To ensure additional gains in oral health, water fluoridation should be extended to additional communities."

www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm

European Fluoridation Forum. 2002

"Water fluoridation has been very effective in improving the oral health of the Irish population, especially of children, but also of adults and the elderly""The prevalence of dental decay is approximately 30-50% lower in fluoridated areas of the Republic of Ireland compared with non fluoridated areas in Northern Ireland."

www.dohc.ie/publications/pdf/fluoridation_forum.pdf?direct=1



Ontario's Doctors Set The Record Straight On Fluoride In Drinking Water

Publish Date **21 October 2010**

October 21, 2010, Toronto, ON – Ontario's doctors want to dispel the misconceptions and ease the concerns those who question the safety of fluoride. The Ontario Medical Association (OMA) has approved a policy that supports the addition of fluoride to drinking water, following extensive research on the issue.

"Ontario's doctors want their patients to know that the process of adding fluoride to our drinking water in Ontario has been and is safe," said Dr. MacLeod, President of the OMA. "We know that some parents have concerns but they should be confident that in Ontario, the fluoride concentrations are well regulated and will not cause children harm."

Ontario drinking water systems that fluoridate their water are closely monitored, report continually on fluoride concentrations, and are well within the safety guidelines. There is also a wealth of evidence on the benefits of adding fluoride to drinking water systems, including:

Health Canada's expert panel, as well as international academics from Europe, Australia, and the US, have found that 0.7 parts per million of fluoride in drinking water is effective for preventing cavities; and

A Danish study released earlier this year, examined the risk of cavities in children five and 15 years old. Over a period of 10 years, the risk of cavities was reduced by approximately 20 percent with fluoridation levels at the lowest concentration level (0.125-0.25mg/L).

"We've been adding fluoride to drinking water since the 1940's and it's important that we continually research practice, but the evidence is clear that adding fluoride to drinking water in Ontario is safe," said Dr. MacLeod.

For more information, contact: OMA media relations 416-340-2862 or 1-800-268-7215 ext 2862

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CANADIAN
DENTAL
ASSOCIATION

CDA Position on Use of Fluorides in Caries Prevention

Preamble

The Canadian Dental Association supports the appropriate use of fluorides in dentistry as one of the most successful preventive health measures in the history of health care. Over 50 years of extensive research throughout the world has consistently demonstrated the safety and effectiveness of fluorides in the prevention of dental caries.

Fluorides are found naturally throughout the world. They are present to some extent in all food and water so that all humans ingest some fluoride on a daily basis. In addition, fluorides are used by communities as a public health measure to adjust the concentration of fluoride in drinking water to an optimum level (water fluoridation); by individuals in the form of toothpastes, rinses, lozenges, chewable tablets, drops; and by the dental profession in the professional application of gels, foams and varnishes.

The availability of fluorides from a variety of sources must be taken into account before embarking on a specific course of fluoride delivery to either populations or individual patients. This is particularly important for children under the age of six, where exposure to more fluoride than is required to simply prevent dental caries can cause dental fluorosis. Provided that the total daily intake of fluoride is carefully monitored, fluoride is considered to be a most important health measure in maintaining oral health for all Canadians.

CDA recognizes the need to monitor the scientific literature with respect to levels of exposure to fluoride and general health to ensure the continued safe and effective use of fluorides in dentistry.

Water Fluoridation

CDA supports fluoridation of municipal drinking water (at minimum levels required for efficacy as recommended by the Federal-Provincial-Territorial Committee on Drinking Water) as a safe, effective and economical means of preventing dental caries in all age groups. Fluoride levels in the water supplies should be monitored and adjusted to ensure consistency in concentrations and avoid fluctuations.

Communities considering water fluoridation are encouraged to review their individual circumstances carefully and in detail, giving attention to any available data on the dental health of community members, the size of the group not likely exposed to adequate fluoride from other sources, the minimum level of fluoride required to be beneficial, and any other information which would be helpful in making the required value judgment.

This information was created by the Canadian Dental Association for use by CDA member health professionals. It should not be used as a replacement for professional dental or medical advice. If you have questions about this position statement, please consult your health professional or contact the Canadian Dental Association.

CDA recognizes and supports the need for continued research to determine optimal water fluoridation levels that can continue to provide protection from dental caries while reducing potential to contribute to fluorosis.

Fluoridated Toothpastes and Mouth Rinses

CDA recognizes and supports the use of fluoridated toothpastes and mouth rinses in the prevention of dental caries.

Fluoridated toothpastes should be used twice a day to brush teeth. Early commencement of tooth brushing has been associated with lack of colonization by the bacteria that are primarily responsible for cavities. Because young children tend to swallow toothpaste when they are brushing, which may increase their exposure to fluoride, the following guidelines have been established to moderate their risk of developing dental fluorosis while optimizing the benefits of fluoride.

Children from birth to 3 years of age should have their teeth and gums brushed by an adult. The use of fluoridated toothpaste in this age group is determined by the level of risk. Parents should consult a health professional to determine whether a child up to 3 years of age is at risk of developing tooth decay. If such a risk exists, the child's teeth should be brushed by an adult using a minimal amount (a portion the size of a grain of rice – see figure 1) of fluoridated toothpaste. Use of fluoridated toothpaste in a small amount has been determined to achieve a balance between the benefits of fluoride and the risk of developing fluorosis. If the child is not considered to be at risk, the teeth should be brushed by an adult using a toothbrush moistened only with water.

Early childhood tooth decay can be painful, may cause infection and is difficult and expensive to treat. Therefore, by a child's first birthday, the parents should consult a health professional knowledgeable in the areas of early childhood tooth decay and the benefits of fluoride. This health professional will help to determine the child's risk of developing tooth decay and whether there would be a benefit of brushing with a minimal amount (a portion the size of a grain of rice) of fluoridated toothpaste before the age of 3 years.

A child may be at risk of early childhood tooth decay if one or more of the following conditions exist:

1. The child lives in an area with a non-fluoridated water supply and low (< 0.3 ppm) natural fluoride levels. (Contact the municipal government to determine if drinking water is fluoridated).
2. The child has a visible defect, notch, cavity or white chalky area on a baby tooth in the front of the mouth.
3. The child regularly consumes sugar (even natural sugars) between meals. This includes use of a bottle or sippy cup filled with any liquid other than water and consumption of sweetened medications.
4. The child has special health care needs that limit his or her cooperative abilities, thus making it difficult for the parent to brush the child's teeth.

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5. The child's teeth are brushed less often than once a day.
6. The child was born prematurely with a very low birth weight of less than 1500 grams [3 pounds].
7. The parent or caregiver has tooth decay.
8. The child has visible plaque, such as white or yellow deposits on the teeth.

Children from 3 to 6 years of age should be assisted by an adult in brushing their teeth. Only a small amount (a portion the size of a green pea – see figure 1) of fluoridated toothpaste should be used.

All children should be supervised or assisted until they develop appropriate manual dexterity.

Fluoride mouth rinses are an effective preventive measure for at risk individuals and should be used according to the specific needs of the individual. Fluoride mouth rinsing is not recommended for children under 6 years of age.

Professional Topical Applications of Fluoride Gels, Foams and Varnishes

CDA recognizes and supports the professional topical applications of fluoride gels, foams and varnishes in the prevention of dental caries for individuals at risk.

Fluoride Supplements

Fluoride supplements, in the form of chewable tablets, lozenges or drops, are not recommended for the majority of Canadians. However, health professionals may wish to prescribe fluoride supplements to high risk patients in non-fluoridated communities where individuals are not able to obtain fluoride in any other form (e.g. toothpaste) and after they have completed a thorough analysis of the patient's fluoride intake.

CDA suggests the following guidance in the use of fluoride supplements:

- Before prescribing fluoride supplements, a thorough clinical examination, dental caries risk assessment and informed consent with patients/caregivers are required.
- The Canadian Consensus Conference on the Appropriate Use of Fluoride Supplements for the Prevention of Dental Caries in Children, held in November 1997, suggested that high caries risk individuals or groups may include those who do not brush their teeth (or have them brushed) with a fluoridated dentifrice twice a day or those who are assessed as susceptible to high caries activity because of community or family history, etc.
- The estimations of fluoride exposure from all sources should include the use of fluoridated dentifrice and all home and child care water sources. Health professionals should be aware of the water fluoride content in their area. This information is available from public health agencies.

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The possible impact of fluoride reducing factors within the home, such as the use of unfluoridated bottled water or some reverse osmosis devices, should be taken into account.

- Lozenges or chewable tablets are the preferred forms of fluoride supplementation. Drops may be required for individual patients with special needs.
- The use of fluoride supplements before the eruption of the first permanent tooth is generally not recommended. When, on an individual basis, the benefit of supplemental fluoride outweighs the risk of dental fluorosis, practitioners may elect to use these supplements at appropriate dosages in young children. In doing so, **the total daily fluoride intake from all sources should not exceed 0.05-0.07 mg F / kg body weight** in order to minimize the risk of dental fluorosis.
- Following the eruption of the first permanent tooth and the associated decrease in the risk of dental fluorosis at this stage of development, fluoride supplementation in the form of lozenges or chewable tablets may be used to deliver an intra-oral fluoride.

Fluoride Exposure from Multiple Sources

CDA recognizes the availability of fluoride from a variety of sources and the increasing prevalence of dental fluorosis within communities. For this reason, CDA recommends:

- Patients and the parents of young children are encouraged to give attention to their circumstances and to be aware of their own potential exposure to fluoride (in drinking water from their own wells, for example).
- Provincial health departments should help to inform both patients and health professionals concerning the fluoridation status of naturally fluoridated drinking water in communities and areas.
- Parents should supervise the tooth brushing of young children and educate them to use only a pea-sized amount of fluoridated toothpaste on their toothbrush and to minimize swallowing.
- Health professionals and patients should review a patient's potential exposure to fluoride whenever treatment includes an option for additional exposure.

CDA Board of Directors

Approved: March 2003

Reaffirmed: February 2005

Revised: April 2010

This information was created by the Canadian Dental Association for use by CDA member health professionals. It should not be used as a replacement for professional dental or medical advice. If you have questions about this position statement, please consult your health professional or contact the Canadian Dental Association.

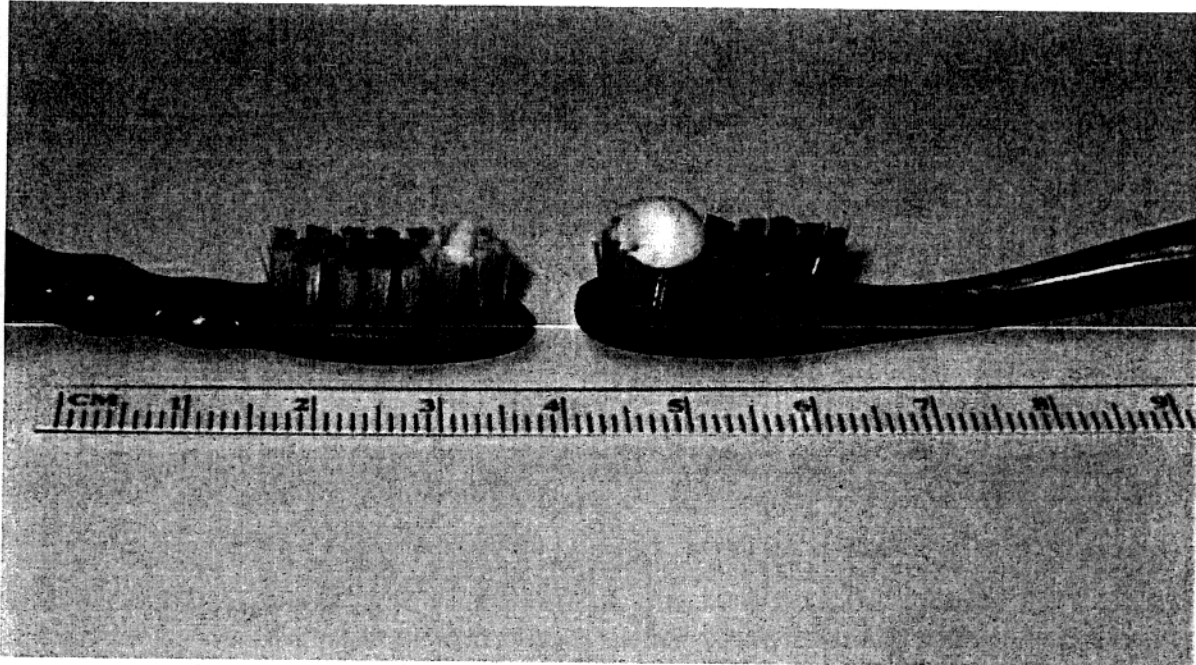


Figure 1. A *rice grain* sized portion of toothpaste on a child's toothbrush is shown on the left. A *pea-sized* portion of toothpaste is shown on the right.

This information was created by the Canadian Dental Association for use by CDA member health professionals. It should not be used as a replacement for professional dental or medical advice. If you have questions about this position statement, please consult your health professional or contact the Canadian Dental Association.



IT'S YOUR HEALTH

Flouride and Human Health

The Issue

Most Canadians are exposed to fluorides 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. Fluorides 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 Fluorides

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.

Fluorides protect tooth enamel against the acids that cause tooth decay. Many studies have shown that fluoridated 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 fluoridated 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.



IT'S YOUR HEALTH

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*



Global Consultation on Oral Health Through Fluoride
17-19 November 2006, Geneva (Switzerland)/Ferney-Voltaire (France)



CALL TO ACTION TO PROMOTE DENTAL HEALTH BY USING FLUORIDE

Eighty experts from thirty countries gathered for a *Global Consultation on Oral Health through Fluoride*, jointly convened by the World Health Organization (WHO), the FDI World Dental Federation and the International Association for Dental Research (IADR) on 17-19 November 2006 in Geneva and Ferney Voltaire, expressed their deep concern about growing disparities in dental health and the lack of progress in tackling the worldwide burden of tooth decay (dental caries), particularly in disadvantaged populations.

The burden of tooth decay affects children, adults and the elderly, disrupts life and causes considerable pain, suffering and economic hardship. Much of the disease still remains untreated, particularly in low and middle-income populations. Prevention by using fluoride is the only realistic way of reducing this burden in populations.

Taking account of the scientific evidence, as well as several WHO World Health Assembly Resolutions¹ and other technical reports², the experts reaffirmed the efficiency, cost-effectiveness, and safety of the daily use of optimal fluoride. They confirmed that universal access to fluoride for dental health is a part of the basic human right to health.

Recognising the magnitude of the problem, and in order to achieve this the experts convened by the WHO, FDI and IADR urge governments and other influential bodies to take the following actions:

- Develop effective legislation, necessary directives³ and programmes ensuring access to fluoride for dental health in all countries;
- Include fluoride in health communications, health promotion strategies and programmes;
- Include fluoride for dental health when promoting health through healthy diets; Encourage governments to reduce or remove taxation and tariffs on fluoride products for dental health; and
- Encourage suppliers to improve availability of effective affordable fluoride toothpaste for disadvantaged populations.

These actions will improve quality of life and enhance the achievement of the Millennium Development Goals by reducing the high dental disease burden of populations, especially children in disadvantaged populations.

The three convening organisations of this consultation offer advice and technical support on any aspect of these recommendations.

¹ Resolutions of the World Health Assembly related to fluoride (WHA 22.30/ WHA 28.64/WHA42.39/ WHA53.17/)

² WHO Technical reports related to fluoride use for dental health: WHO Technical Reports n 846 (1994) / 916 (2003); FDI Policy Statement *Fluoride and Dental Caries* (G2000); The York review--a systematic review of public water fluoridation (British Dental Journal, Volume 192, No. 9, 2002); Topical fluoride (toothpastes, mouthrinses, gels or varnishes) for preventing dental caries in children and adolescents, Cochrane Database of Systematic Reviews 2006 Issue 4

³ WHO Essential Medicines List, 14th edition, March 2005