

MUNICIPAL WATER FLUORIDATION

Position of the Simcoe Muskoka District Health Unit

April 2009

OVERVIEW

The Board of Health for the Simcoe Muskoka District Health Unit concludes that optimally fluoridated drinking water should be available to all residents on municipally supplied drinking water systems.

Water fluoridation is the adjustment of the fluoride concentration in fluoride deficient water supplies to a level recommended for optimal oral health. Fluoride has been used in drinking water to prevent dental decay for more than 60 years. More than 400 million people in more than 60 countries receive the benefits of water fluoridation.^{1,2} In Canada, 42.6 per cent of the population has access to fluoridated public water supplies.³ In Ontario, 70.3 per cent of its population is covered by community water fluoridation.³

HEALTH EFFECTS

The health focus report *Oral Health in Simcoe and Muskoka* released by the Simcoe Muskoka District Health Unit in January 2009 clearly demonstrates the seriousness of dental decay in local children. The oral health of 5, 7, 9 and 13-year-olds in Simcoe and Muskoka ranked in the bottom 15 to 30 per cent of the 36 health units surveyed in Ontario. It also highlights the significant challenges faced by young adults, adults and seniors to access preventive dental care and early treatment of dental problems due to the cost of dental care. About 154, 000 people in Simcoe Muskoka do not have dental insurance.⁴

People in areas with less than optimal levels of fluoride in drinking water regularly show poorer dental health than areas where it has been in use. Studies prove that water fluoridation continues to be effective in reducing tooth decay by 20 to 40 per cent.⁵

RESEARCH

Research on community water fluoridation is extensive. Researchers in many different countries have published their findings in recognized peer-reviewed professional journals. The evidence from this research confirms the safety and the effectiveness of artificially enhancing fluoride in drinking water to optimal levels.

Since 1997, there have been 18 major reviews of water fluoridation and the effect of fluorides conducted in Europe,^{6,7} the United Kingdom,^{8,9} Ireland,¹⁰ Australia,¹¹⁻¹³ the United States¹⁴⁻¹⁸ and Canada^{19,20}. In Canada most recently, the Institut national de santé publique du Québec²¹ released its report, "Water fluoridation: An analysis of the health benefits and risks." As well, Health Canada released the "Findings and Recommendations of the Fluoride Expert Panel,"²² as did the Government of Canada with the "Joint Government Response to Environmental Petition Number 221: Petition to Discontinue Water Fluoridation."²³ The major conclusions from all these reviews and reports are:

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- Water fluoridation is still effective against caries (dental cavities) even when other sources of fluoride, e.g. toothpastes, topical fluorides, are used.
 - Water fluoridation benefits all residents served by community water supplies, regardless of their social or economic status.
 - Water fluoridation is safe. Credible scientific research finds no evidence of increased risk of cancer, bone disease, kidney disease, fluoride toxicity, thyroid suppression or birth defects.
 - Credible scientific research finds no evidence that adding fluoride to the drinking water has negative environmental impacts.
 - The only adverse effect linked to community water fluoridation is the possibility of higher rates of dental fluorosis (in its mildest form consists of fine white filamentous striations across the crowns of teeth) – if inadvertent ingestion of other fluoride sources (fluoridated toothpaste, fluoride supplements) is not controlled.

The scientific evidence demonstrates that of all the available fluoride delivery options, community water fluoridation is preferred.

- It is the most equitable method, reaching:
 - rich and poor,
 - recent immigrants,
 - long-time residents, and
 - advantaged and disadvantaged equally.
- It is the most efficient method, in terms of overall costs and population compliance.

EXPERT SUPPORT FOR FLUORIDATION

The weight of evidence has prompted many health organizations to endorse the effectiveness of community water fluoridation in reducing dental decay. Many national and international dental, allied health and other organizations have issued these endorsements. These include:

- the Canadian Association of Public Health Dentistry²⁴
- the Canadian Dental Association²⁵
- the Canadian Paediatric Society²⁶
- the Canadian Medical Association²⁷
- the American Dental Association¹
- the British Dental Association²⁸
- the Australian Dental Association²⁹
- the World Health Organization.³⁰

In 1999, the U.S. Centers for Disease Control listed fluoridation as one of the “ten great public health achievements of the century.”³¹

CANADA – Support for Fluoridation

Government of Canada

The Government of Canada provided its response to a petition to stop community water fluoridation in the document “Joint Government of Canada Response to Environmental Petition No. 221” and states:

“The fluoridation of drinking water supplies is a well-accepted measure to protect public health and is strongly supported by scientific evidence. Fluoride is used internationally to protect dental health. It has been added to public drinking water supplies around the world for more than half a century, as a public health/dental health measure. The use of fluoride in the prevention of dental caries continues to be endorsed by over 90 national and international professional health organizations including Health Canada, the Canadian Dental Association, the Canadian Medical Association, the World Health Organization and the Food and Drug Administration of the United States.” (March 18, 2008)

Other information it provides includes the following:

- There is no science to support an increase in risk for bone cancer or any other cancers associated with water fluoridation.
- There is no science to support an increased risk of fluoride toxicity for those who drink more than average quantities of water or to potentially susceptible sub-populations.
- The weight of the credible scientific evidence does not support a link between exposure to fluoride in the drinking water and thyroid suppression.
- Water that is optimally fluoridated does not pose a problem with respect to moderate dental fluorosis for any age group. Rather, it is the use of fluoride supplements (tablets, drops, lozenges) and the ingestions of fluoridated toothpaste at a critical age that is of concern.
- Fluoridation additives certified for use in drinking water are not classified as hazardous waste in Canada. Fluorosilicate compounds are not present in drinking water as they break down completely to release fluoride ions. Any impurity in the additive is below levels that could pose a risk to human health. Water treated with these certified additives would present no health risk to the consumer from fluoride or any impurity.

“Joint Government of Canada Response to Environmental Petition No. 221: Petition to Discontinue Water Fluoridation.”

<http://www.fptdwg.ca/English/e-fluoridation.html#petition>

Canadian Association of Public Health Dentistry

“The Canadian Association of Public Health Dentistry recognizes the benefits of community water fluoridation, and recommends it as a safe, effective and economical public health measure. It generates most difference in communities with a significant prevalence of dental caries. Continuing research into fluoridation is expected and recommended.” (February 2005)

“Fluoridation of Community Water Systems.”

<http://www.caphd-acsdp.org/P-statements.htm>

Royal College of Dental Surgeons of Ontario (RCDSO)

The Royal College of Dental Surgeons of Ontario supports “the fluoridation of municipal drinking water as an important approach to oral health promotion and disease prevention. RCDSO joins the Canadian Dental Association in affirming its support for fluoridation of municipal water supplies as an economical and effective means of preventing dental caries for all age groups.” (May 2003)

“Policy Statement – Water Fluoridation.”

http://www.rcdso.org/pdf/policy_statements/policy_fluoridation.pdf

Canadian Dental Association (CDA)

The Canadian Dental Association supports “fluoridation of municipal drinking water (at minimum levels required for efficacy as recommended by the Federal-Provincial Subcommittee on Drinking Water) as 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.” (November 2008)

“Position on Use of Fluorides in Caries Prevention.”

http://www.cda-adc.ca/files/position_statements/fluorides.pdf

Canadian Paediatric Society (CPS)

The Canadian Paediatric Society states “there is no doubt that the use of fluoride decreases dental caries. On the other hand, it is clear that the ingestions of too much fluoride can result in varying degrees of fluorosis. Thus, in practice, the administration of fluoride should strike a balance between the two situations.

The position outlined in the present statement follows the principles agreed to at the Canadian Consensus Conference on fluoride held in 1997. Fluoride should continue to be added to municipal water supplies where natural concentrations are less than 0.3 ppm. A suitable trade-off between dental caries and fluorosis occurs around 0.7 ppm.” (May 2002)

“Position statement on the use of fluoride in infants and children.”

<http://www.cps.ca/english/statements/N/n02-01.htm>

CMA, Canadian Medical Association (CMA)

The Canadian Medical Association by resolution states “That the Canadian Medical Association encourage programs to promote **fluoridation** of communal water supplies.”

The CMA reviewed this resolution in February 2004 and determined it to still be relevant.

“Policy Resolution GC77-27 - Fluoridation.”

The Public Health Agency of Canada (PHAC)

“Current science continues to support water fluoridation as a safe, cost effective public health measure.” said Dr. David Butler-Jones, Canada’s Chief Public Health Officer. “I encourage Canadians to review respected and credible sources of information to reach their own conclusions about water fluoridation. Community water fluoridation has been identified by the United States Centers for Disease Control as one of the 10 great public health achievements of the 20th century.” (August 2008)

“Experts Support Water Fluoridation.”

<http://www.fptdwg.ca/assets/PDF/0808-press%20release%20caphd-phac-cdha.pdf>

Canadian Dental Hygienists Association

Ms. Carol-Ann Yakiwchuk, President of the Canadian Dental Hygienists Association stated, “The use of fluoride is an important oral health promotion and disease prevention approach. Water fluoridation should be maintained and extended to additional communities where feasible.” (August 2008)

“Experts Support Water Fluoridation.”

<http://www.fptdwg.ca/assets/PDF/0808-press%20release%20caphd-phac-cdha.pdf>

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