



Office of the Chief Dental Officer

Health Canada's Position on Fluoride

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Health Canada's Involvement to date.

- By Invitation;
- Present Science (from Health Canada's expert review panel);
- Present International Information;
- Respect Provincial / Territorial / Municipal Parameters.



Oral Health and Overall General Health

Dental disease is:

➤ the #1 chronic disease in children & adolescents;
(U.S. Surgeon General's Report, May 2000)

<http://www.surgeongeneral.gov/library/oralhealth/>

➤ five (5) times more common than asthma;

➤ one of the main reasons preschool children receive a general anaesthetic;

➤ the second most expensive disease category in Canada;

<http://www.fptdwg.ca/English/e-documents.html>

➤ 47% of Canadians have had dental disease by 6 years of age, 96% have had it in their lifetime.

<http://www.fptdwg.ca/English/e-documents.html>

➤ Oral health is linked to a number of systemic diseases.



In 2006, Health Canada initiated a review of fluoride This process included:

- 3 external experts drafted technical reports on toxicology/intake of fluoride/risks & benefits (2006)
- External peer-review of technical reports by 3 experts (2006)
- Expert Panel Meeting with 6 experts & stakeholders (2007)
- Findings & Recommendations of Expert Panel Meeting (2008)

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



Process continued...

- Guideline Technical consultation document prepared (2009)
- 2 month national public consultation undertaken (2009)

<http://www.hc-sc.gc.ca/ewh-semt/consult/2009/fluoride-fluorure/index-eng.php>

- Approval on the updated technical report received from 2 Federal-Provincial-Territorial Committees (2010)
- Release of Guideline Technical Document (2010)

<http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2011-fluoride-fluorure/index-eng.php>



Findings of Review

Total Daily Intake:

- General decrease in recent years (Use of supplements has decreased and concentrations of fluoride in infant formulas have decreased)

Dental Fluorosis:

- First 3 years of age is period of most significant concern;
- Point of concern should be moderate dental fluorosis (Dean's Index);

Other Health Effects:

- No conclusive evidence related to bone fracture, cancers, intelligence quotient, skeletal fluorosis, immunotoxicity, reproductive and developmental toxicity, genotoxicity and neurotoxicity based on a Maximum Allowable Concentration (MAC) of 1.5 mg/L.



Recommendations from Review

- The MAC of 1.5 mg/L for fluoride in drinking water should be reaffirmed.
- To adopt a level of 0.7 mg/L as the optimal target concentration for fluoride in drinking water, which would prevent excessive intake of fluoride through multiple sources of exposure.
- Findings and recommendations of the Fluoride Expert Panel Meeting, January 2007.

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



On Health Canada's process:

“Health Canada has established a comprehensive process for developing new guidelines and reviewing existing ones that require an update. The process is consultative, transparent, and based on risk and science.”

Commissioner on Environment and Sustainable Development in his report tabled in September 2005

http://www.oag-bvg.gc.ca/internet/English/parl_cesd_200509_04_e_14951.html#ch4hd4a



Fluorosis → 6 - 12 year olds

Normal teeth	Questionable ¹	Very Mild	Mild	Moderate /severe ²
60%	24%	12%	4%	<0.3%

¹ ill defined and could be due to antibiotic usage, infection, severe fever, trauma etc.

<http://www.fptdwg.ca/English/e-documents.html>

Note:

- Initial WHO central calibration
- Recalibration on first day of each new site
- Recalibration at mid point of each site
- Recalibration before end

² Statistics Canada criteria for withholding reporting value:

- Highly unstable numbers (<10)
- Coefficient of variation > 33.3%

For information regarding measures spread in data see the Statistics Canada web site:

<http://www.statcan.gc.ca/edu/power-pouvoir/ch12/5214876-eng.htm>



A Message from the Chief Public Health Officer

Water Fluoridation

Dental disease is the number one chronic disease in North America. It affects a staggering 96% of Canadian adults, is on the rise among young Canadian children in some areas, and poor dental health increases the risk of other diseases.

The Public Health Agency of Canada supports water fluoridation for our oral health. Simply put, it is a safe and cost effective public health measure which has the potential to benefit everyone, regardless of age, socioeconomic status, education, or employment.

David Butler Jones
Chief Public Health Officer of Canada

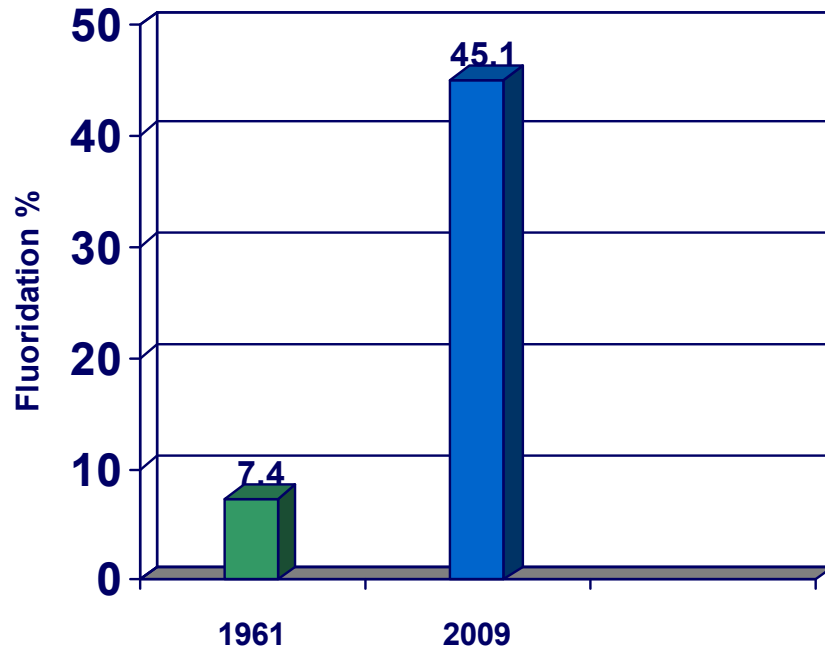
September 2011

<http://www.phac-aspc.gc.ca/cpho-acsp/statements/20110913-eng.php>

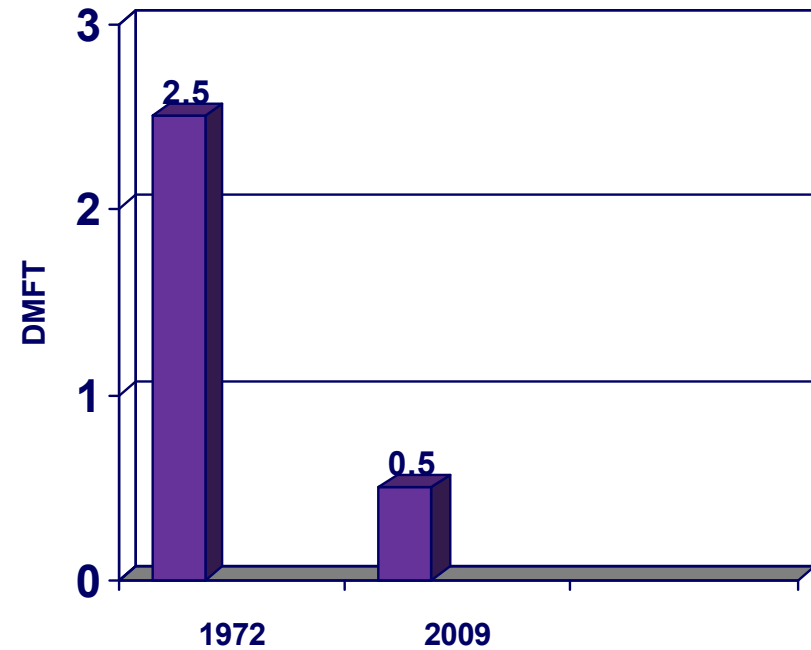


1961-2009 Trends in Water Fluoridation and Dental Decay in Canada.

Fluoridation %



Children's Decay (DMFT) Rates



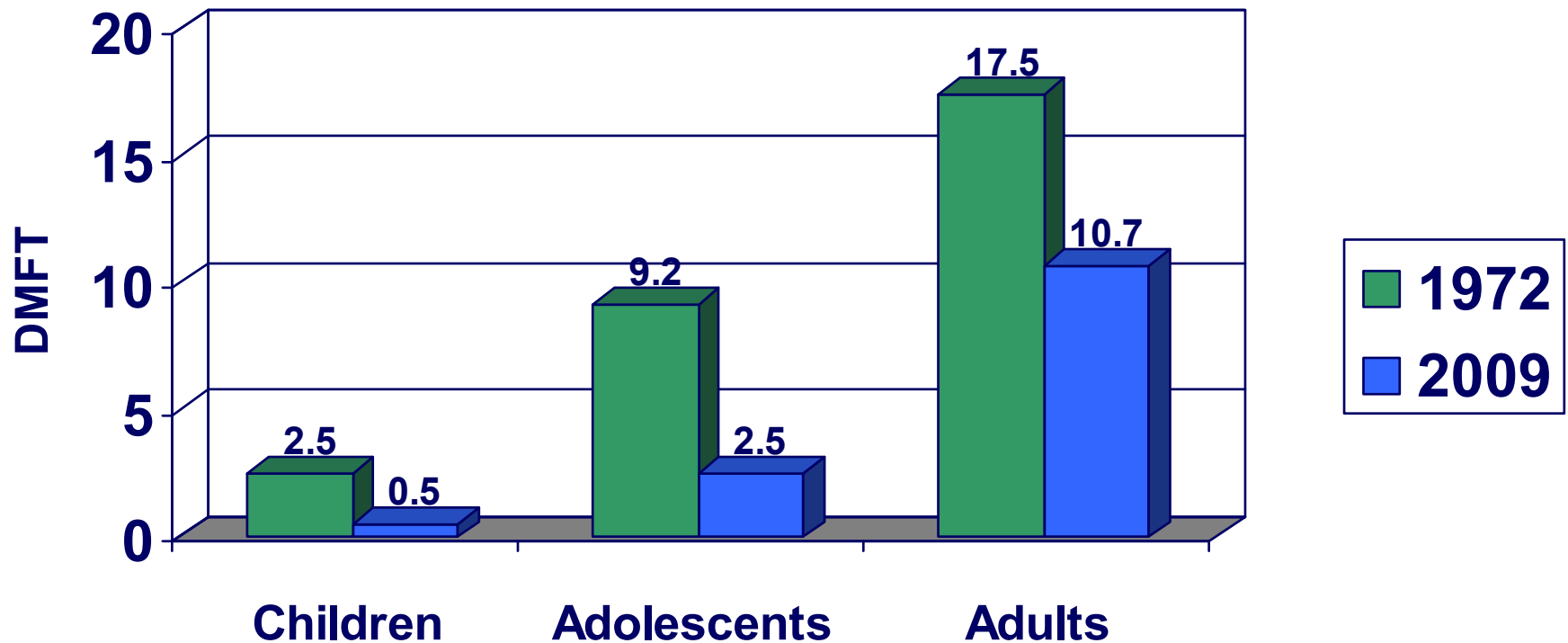
Dr. Carlos Quinonez, Faculty of Dentistry, University of Toronto

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

<http://www.fptdwg.ca/English/e-documents.html>



1972 / 2009 Canadian Decay (DMFT) Comparisons.



* Although we have made great improvements in oral health in Canada, there is still a lot of work to be done.

<http://www.fptdwg.ca/English/e-documents.html>



Who supports Fluoridation?

- World Health Organization (WHO)
- Pan American Health Organization (PAHO)
- American Medical / Dental Associations
- Canadian Dental Association
- Health Canada (HC)
- Canadian Association of Public Health Dentistry
- Canadian Pediatric Society
- Canadian Public Health Association
- Toronto Public Health
- Centers for Disease Control and Prevention (CDC)
- Ontario Association of Public Health Dentistry
- Royal College of Dental Surgeons of Ontario
- Ontario College of Dental Hygienists
- Ontario Dental Association
- Recent US Surgeon General's Report
- Federation Dentaire Internationale (FDI)



Examples of Studies That Support Water Fluoridation

- Oral Health in America: A Report of the Surgeon General, 2000
http://www.cdc.gov/fluoridation/fact_sheets/sg04.htm
- Systematic Review of Water Fluoridation. UK/International study, 2000
<http://www.bmj.com/content/321/7265/855.full>
- Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States. US Department of Health and Human Services Centers for Disease Control and Prevention, 2001
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm>
- Forum on Fluoridation. Ireland, 2001
http://www.dohc.ie/publications/pdf/fluoridation_forum.pdf?direct=1
- A Systematic Review of the Efficacy and Safety of Fluoridation. National Health and Medical Research Council, Australian Government, 2007
<http://www.nhmrc.gov.au/publications/synopses/eh41syn.htm>



Conclusions

Health Canada continues to recognize the benefits of community water fluoridation, and supports it as a safe and an effective method to prevent tooth decay.