

# Fluoridation – Health for All

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# Who Benefits from Community Water Fluoridation?

*Everyone. . .*

The biggest advantage of water fluoridation is that it benefits all residents in a community, regardless of age, socioeconomic status, education, or employment.”

- **Children from deprived families** benefit more from water fluoridation than children in affluent families

# How does Fluoride work?

- Strengthens teeth so they are more resistant to demineralization from acids made by bacteria in foods
- Promotes remineralization or repair of the tooth at the earliest stages of tooth decay/demineralization

Centers for Disease Control and Prevention (2008, May 15). *Community water fluoridation: Frequently asked questions: How does fluoride work?* [electronic]. Department of Health and Human Services. Retrieved August 14, 2009, from <http://www.cdc.gov/FLUORIDATION/faqs.htm#2>



# How much does fluoridation cost?

\$0.60 - \$1.00 per person per year

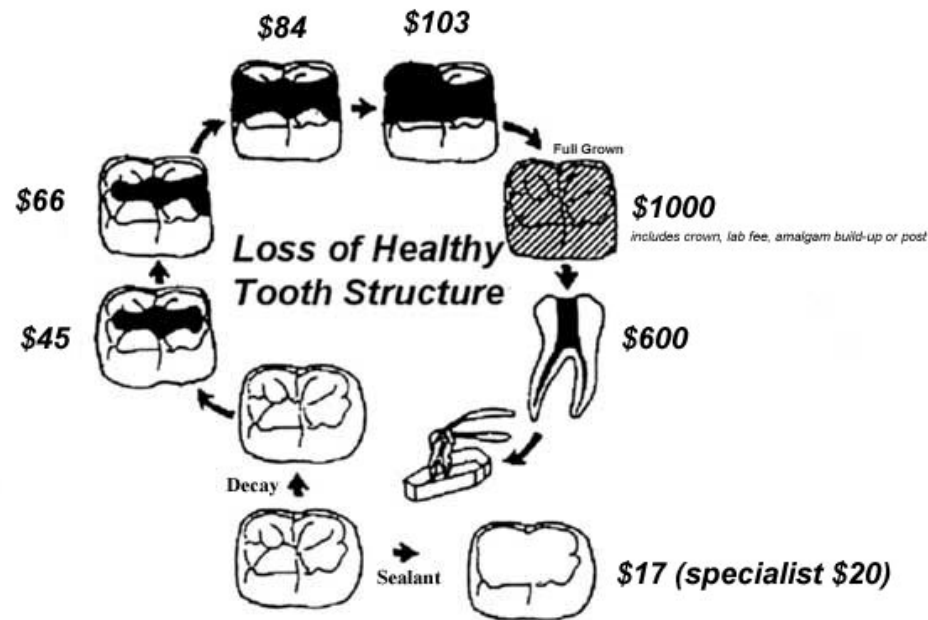
Rabb-Waytowich, D. (2009, July/August). *Water fluoridation in Canada: Past and present* [Electronic]. *Journal Canadian Dental Association* (75) 6. pp. 451-454. Retrieved August 14, 2009, from <http://www.cda-adc.ca/jcda/vol-75/issue-6/451.pdf>

“every dollar invested in fluoridation saves  
\$38 or more in treatment costs”

National Institute of Dental and Craniofacial Research (2004, July) *Statement on water fluoridation* [Electronic]. Retrieved August 14, 2009, from <http://www.nidcr.nih.gov/OralHealth/Topics/Fluoride/StatementWaterFluoridation.htm>

# Prevention Costs vs. Decay Costs

## *Lifecycle of a Molar Tooth* Cost of Re-Restoring Teeth



# Barriers to Accessing Care

Monthly Costs	Family of 4 income assistance	Single parent 2 children income assistance	Family of 4 low earned income	Family of 4 average income
Disposable income	\$1711	\$1671	\$2274	\$4289
Cost of Shelter	\$1104	\$1104	\$1104	\$1427
% income needed for shelter	65%	66%	49%	33%
Cost of food	\$715	\$521	\$715	\$715
% income needed for food	42%	31%	31%	17%
<b>% income (\$) left for all other costs</b>	<b>-7% (-\$108)</b>	<b>3% (\$46)</b>	<b>20% (\$455)</b>	<b>50% (\$2147)</b>

Adapted From: Dietitians of Canada (2007). *The cost of eating in BC- 2007* [electronic]. Retrieved August 14, 2009 from <http://www.dietitians.ca/resources/resourcesearch.asp?fn=view&contentid=1944>



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# Unfair Burden on the Poor

“The cost of a dental visit is the same  
as a month’s worth of groceries.  
What would you pick?”

Wallace, B. (2000). *Brushed aside: Poverty and dental care in Victoria* [electronic].  
Vancouver Island Public Interest Research Group. Retrieved August 14, 2009,  
from [http://www.coolaid.org/publications/00\\_brushed\\_aside.pdf](http://www.coolaid.org/publications/00_brushed_aside.pdf)

# Poor Oral Health- Who is most affected?

“ . . . populations demonstrating moderate to high risk of dental decay.”

## Our most vulnerable citizens:

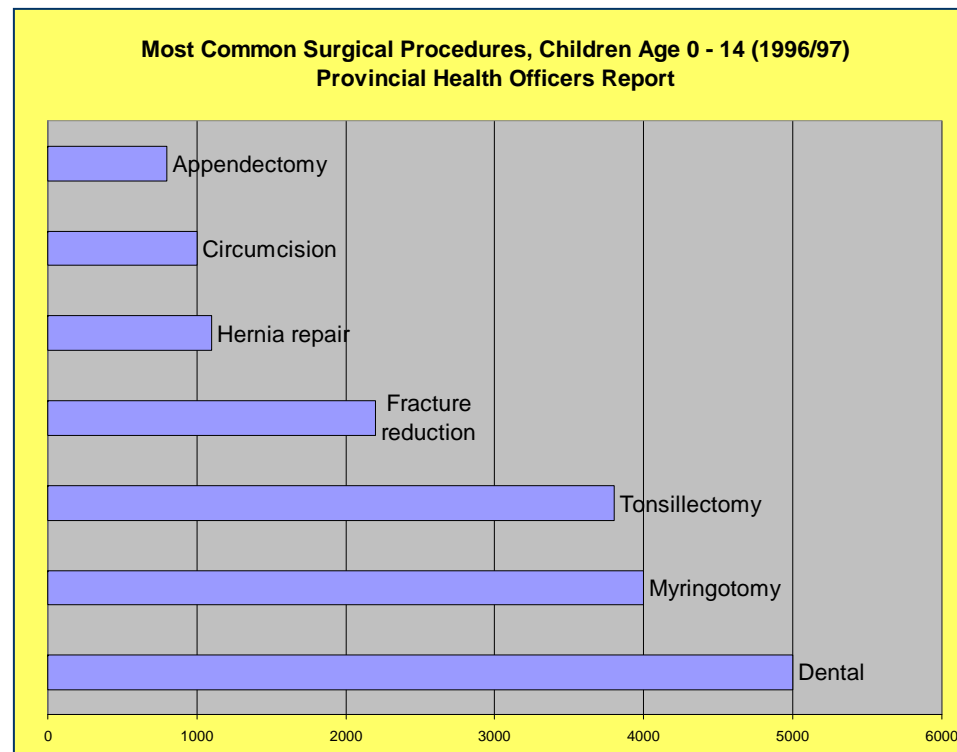
- Aboriginal People
- Low-Income Groups
- Homeless Populations
- Low-Income Seniors
- Children

FDI World Dental Federation (2008, September, 26). *FDI Policy Statement: Promoting dental health through water fluoridation* [Electronic]. Retrieved August 14, 2009, from <http://www.fdiworldental.org/federation/assets/statements/ENGLISH/2008/Promoting-dental-health-through-water-fluoridation.pdf>

# Tooth Decay – Interesting Facts

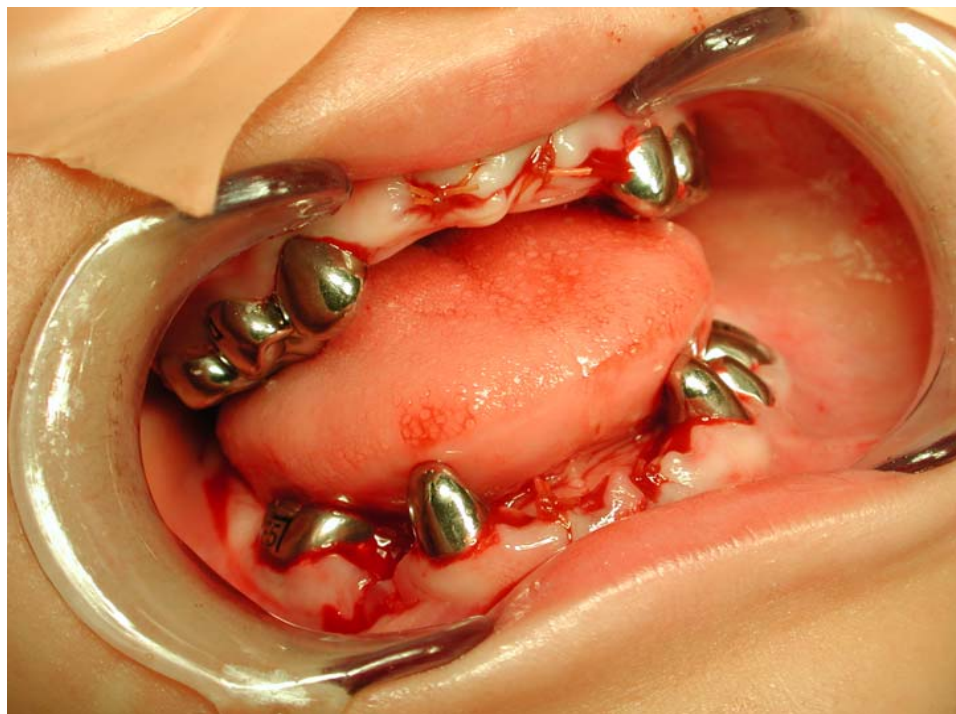
- Tooth decay is the most prevalent chronic disease threatening children in BC
- estimated 20% of children experience 80% of the decay
- Tooth decay remains 5 times more common than asthma. Only the common cold, the flu and ear infections occur more often among toddlers and young children

# Most Common Surgical Procedure for Children in BC : Dental Surgery



Ministry of Healthy Living and Sport (1998). *Provincial health officer's annual report 1997: Feature report: The health and well-being of British Columbia's children* [electronic]. Retrieved August 14, 2009, from <http://www.hls.gov.bc.ca/pho/pdf/phoannual1997.pdf>

## Fluoridation: Reduces Risk of Fillings, Extractions and Use of Anaesthetic



# The Cost of Dental Treatment in Northern Health's Hospitals

1012 cases/ year at an estimated \$1500-\$2500/case

**= \$1,518,000 - \$2,530,000**

*(includes anesthesia, hospitalization and dental fees)*

“vast majority of the procedures were performed on  
the ages of 1 and 10 years of age”

Northern Health (2004, Spring). *Community health profiles: Dental restorations/Extractions performed in Hospital CMG 089 Fiscal 2000-2001*



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# What Happens if Fluoride is Removed?

- Studies of children aged 4-17 years of varying socio-economic status
- When fluoridation was started or continued 29.1% **decrease** in tooth decay in group A (richer) and a 50.7% decrease in group B (poorer).
- When fluoridation stopped, **increases** in tooth decay of 17.9% in study group A (richer) and a 59.5% **increase** in group B (poorer).
- Following a systematic review on population-based opportunities to promote health and prevent disease or injury, the CDC Task Force on Community Preventive Services 'strongly recommended' community water fluoridation as an intervention to improve oral health.



# Fluorosis: Is it a Concern?



Mild Fluorosis

FDI World Dental Federation (2008, September, 26). *FDI Policy Statement: Promoting dental health through water fluoridation* [Electronic]. Retrieved August 14, 2009, from <http://www.fdiworldental.org/federation/assets/statements/ENGLISH/2008/Promoting-dental-health-through-water-fluoridation.pdf>

# Fluoridation Reduces Risk of Root Decay



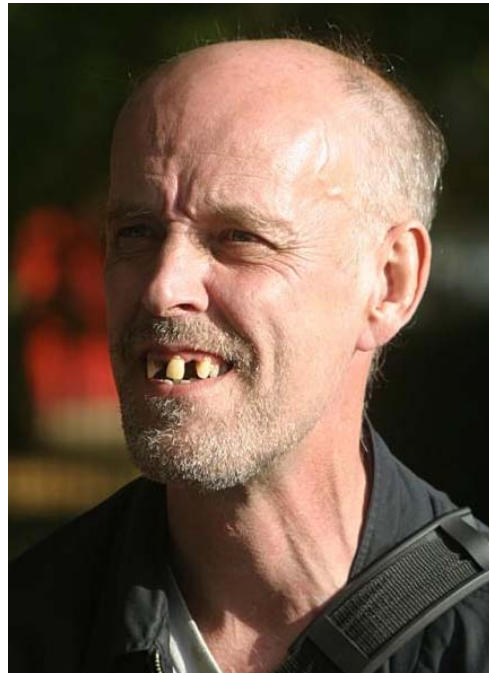
In BC, the North has the highest projected growth rate of seniors

[www.northernhealth.ca](http://www.northernhealth.ca)

1 in 10 (8%) BC seniors living below poverty line (2004)

Batoul, S., MacEntee, M. Wyatt, C., Johnston, JI, and Boyd, S. (2008, November). *Report on seniors' oral health* [[Electronic]. British Columbia Dental Association. Retrieved August 14, 2009, from [http://www.bcdental.org/uploadedFiles/MemberSite/Publications\\_Resources/Reports/BCDA%20Report%20on%20Seniors%20FINAL.pdf](http://www.bcdental.org/uploadedFiles/MemberSite/Publications_Resources/Reports/BCDA%20Report%20on%20Seniors%20FINAL.pdf)

# Poor Oral Health Affects More Than Just Teeth



*Fluoridation reaches everyone in a community*

# Fluoridation – Is it Safe?

**“Yes.** The safety of community water fluoridation has been studied more thoroughly than any other public health measure during the past 50 years.

Since the 1940s, hundreds of scientific studies have shown that the use of fluoride at levels for optimal dental health has no harmful effects”

BC Ministry of Health Services (2004, May). *HealthLink BC File #28: Water fluoridation facts: Is fluoridation safe?* [electronic]. Retrieved August 14, 2009, from <http://www.healthlinkbc.ca/healthfiles/hfile28.stm#E46E605>



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# Fluoridation Endorsement

World Health Organization  
FDI World Dental Federation  
Center for Disease Control  
Canadian Association of Public Health Dentistry  
Canadian Dental Association  
Canadian Dental Hygienists Association  
Canadian Medical Association  
Canadian Pediatric Society  
Chief Dental Officer of Canada  
Health Canada  
Public Health Agency of Canada  
Federal, Provincial & Territorial Dental Working  
Group  
BC Ministry of Health Services  
American Dental Association  
The U.S. Surgeon General

Australian Dental Association  
Australian Dental Association  
British Dental Association  
British Medical Association  
Irish Ministry for Health and  
Children  
Health & Medical Research  
Council Australia  
National Institute of Dental  
& Craniofacial Research

# Healthy Mouth, Happy Smiles



*...the gift of opportunity for a lifetime*