

The Face of Dental Fluorosis



Mild Fluorosis “Dean advised that when the average child in a community has mild fluorosis, “. . . it begins to constitute a public health problem warranting increasing consideration” (*Dean 1942, p. 29*).” *NRC 2006 p 106*

Photos from www.fluoridealert.org

Moderate fluorosis “In moderate to severe forms of fluorosis, porosity increases and lesions extend toward the inner enamel. After the tooth erupts, its porous areas may flake off, leaving enamel defects where debris and bacteria can be trapped. The opaque areas can become stained yellow to brown, with more severe structural damage possible, primarily in the form of pitting of the tooth surface.” *NRC 2006, p 79*



Severe Fluorosis . “In the most severe forms of dental fluorosis, the extent and degree of porosity within the enamel are so severe that most of the outermost enamel will be chipped off immediately following eruption” (*Fejerskov et al. 1990, p. 694*)” *NRC 2006, p 79*.

48% of children in Oakville, Ontario now have dental fluorosis
Data from Halton Region, Ontario shows that 10-11% of children have
Moderate to Severe forms of Dental Fluorosis.

Both cavities and fluorosis are areas of hypo-mineralization of the surface enamel. Mild fluorosis may be “easily mistaken” as cavities; “the more common mild fluorosis can be easily mistaken for early enamel demineralization due to caries.”

Hirasuna K, Fried D, Darling DL. Near-Infrared Imaging of Developmental Defects in Dental Enamel. *J Biomed Opt* 2008 13(4):044011.

Prof. (Dr.) A.K. Susheela, F.A.Sc., F.A.M.S. Ashoka Fellow Executive Director,
Fluorosis Research Foundation of India, Scientific Evidence on Adverse Effects of
Fluoride on Human Tissues

<http://www.fluorideandfluorosis.com/BritishParliament/Statement1.html>

The following 2 images are Scanning Electron Micrographs of Fluorosed Human
Teeth Surfaces



Figure 1: Showing Cracks and Fissures

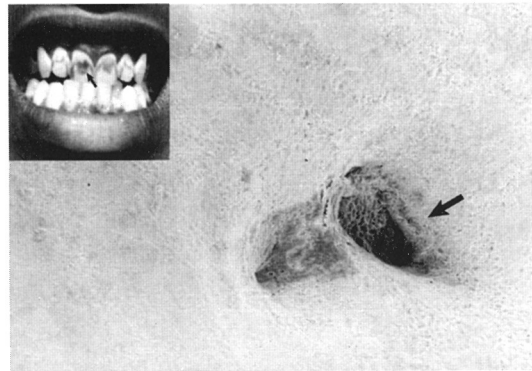


Figure 2: Showing Pits

**Treatment options: (estimate by Dr. Hardy Limeback, PhD, DDS)
Head of Preventive Dentistry, University of Toronto
Committee member of National Research Council 2006
Report on Fluorides in Drinking Water**

severity	procedure	cost	% children
Very mild and mild Moderate	polishing/bleaching	\$500	25
	microabrasion		
Severe	bleaching	\$1000	10
	porcelain veneers	\$10,000	0.2
	full crowns	\$600-\$900/tooth	

Lifetime of Porcelain Veneers for dental fluorosis: 10-15 years

Dr. Bill Osmunson, DDS, MPH: “Dental fluorosis has significantly increased and no one
disputes the damage fluoride and fluoridation causes to teeth. Two thirds of children show some
signs of too much fluoride. Life time costs for repairs can exceed \$100,000 per person. Parents
often pay about \$14,000 for treatment of dental fluorosis with expected 10-15 year longevity.”
(http://www.skagitcleanwater.com/Fluoridatio_concern_%20Brief_%20outline.pdf)