

# 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

**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.

The **three main indexes** used to grade enamel fluorosis in research are:

- Dean's index,
- Thylstrup-Fejerskov index (TFI),
- tooth surface index of fluorosis (TSIF).

Studies done in Canada demonstrate that:

- non-fluoridated BC had fewer cavities than fluoridated regions of Canada,
- communities in BC which discontinued fluoridation saw a significant decrease in the incidence of dental fluorosis.

**“When fluoride was removed from the water supply in 1992, the prevalence and severity of TFI [Thylstrup-Fejerskov index] scores decreased significantly...”** Clark DC, Shulman JD, Maupome G, Levy SM. 2006 Changes in Dental Fluorosis Following Cessation of Water Fluoridation. Community of Dental and Oral Epidemiology Jun;34(3):197-204.

**“Survey results in British Columbia with only 11% of the population using fluoridated water show lower DMFT [decayed, missing, filled teeth] rates than provinces with 40-70% of the population drinking fluoridated water.”<sup>108</sup> and “school districts recently reporting the highest caries-free rates in the province were totally unfluoridated.”** Gray AS. 1987 Fluoridation. Time for a New Base Line? Journal of the Canadian Dental Association. 53(10): 763-765