Fluoridation: Where is the case for a significant reduction of tooth decay?

Regarding the recent Health Canada review and update of the 1996 document for the Canadian Drinking Water Quality Guideline (CDWQG); in light of the following documentation, where exactly is fluoridation's case for a significant reduction in tooth decay?

The dental literature is clear that elementary school children with a history of BBTD are more prone to decay in their permanent teeth. Thus tooth decay surveys of elementary school children must control or adjust for history of BBTD before they can claim a need for water fluoridation.

**Baby Teeth**


Among 2,520 children, the largest proportion with a history of falling asleep sipping milk/sweet substance was among Latinos/Hispanics (72% among Head Start and 65% among non-HS) and HS Asians (56%). Regarding the 30% and 33% resultant decay rates respectively; our analysis did not appear to be affected by whether or not children lived in an area with fluoridated water.


By either of the two criterion i.e., two of the four maxillary incisors or three of the four maxillary incisors, the rate for 5-year-olds was significantly higher than for 3-year-olds. Children attending centers showed no significant differences based on fluoride status for the total sample or other variables.


The prevalence of BBTD in the 18 communities of Head Start children ranged from 17 to 85 percent with a mean of 53%. The surveyed communities had a mixture of fluoridated and non fluoridated drinking water sources. Regardless of water fluoridation, the prevalence of BBTD remained high at all of the sites surveyed.

Auge, K. Denver Post Medical Writer. Doctors donate services to restore little girl's smile. The Denver Post, April 13, 2004. (Note: Denver, CO has been fluoridated since 1954.)

"Sippy cups are the worst invention in history. The problem is parents' propensity to let toddlers bed down with the cups, filled with juice or milk. The result is a sort of sleep-over party for mouth bacteria," said pediatric dentist Dr. Barbara Hymer as she applied $5,000 worth of silver caps onto a 6-year-old with decayed upper teeth. Dr. Brad Smith, a Denver pediatric dentist estimates that his practice treats up to 300
cases a year of what dentists call Early Childhood Caries; "Last year, Children's Hospital did 2,100 dental surgeries, many of which stemmed from the condition."

**Permanent Teeth**


"Fluoride primarily protects the smooth surfaces of teeth, and **sealants protect the pits and fissures (grooves)**, mainly on the chewing surfaces of the back teeth. Pit and fissure tooth surfaces were the site of 83% of tooth decay in U.S. children in 1986-87."

Letter, August 8, 2000, from Jeffrey P. Koplan, M.D., M.P.H. Director Centers for Disease Control and Prevention (CDC) Atlanta GA to Congressman Kenneth Calvert.

" we learned that almost 90 percent of the remaining decay is found in the pits and fissures (chewing surfaces) of children's teeth; **those surfaces that are not as affected by the protective benefit of fluoride.**"


"Nearly 90 percent of cavities in school children occur in the surfaces of teeth with vulnerable pits and grooves, **where fluoride is least effective.**"

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