Baby Bottle Tooth Decay (BBTD) or Early Childhood Caries

Dilley GJ et al. Prolonged Nursing Habit: A Profile of Patients and Their Families. 
Of the 75 study participants, 84% presented with nursing-bottle decay in at least two maxillary incisors. Over 78 percent of parents reported that **they received no instructions for discontinuation of the bottle.**

Thakib AA et al. Primary incisor decay before age 4 as a risk factor for future dental caries. 
In summary, **initial primary incisor caries is a risk factor for developing future carious, extracted, and restored teeth.**

Duperon DF. Early Childhood Caries: A Continuing Dilemma. 
The primary precipitating factor for **this 100-year-old problem** is prolonged use of the bottle or breast past 9 to 12 months of age. North American Indians have reported an incidence of 53 percent; Inuit (Eskimo) children have shown a 60%-65% incidence and Mexican American migrant farm workers, 30%.

Kelly M et al. The Prevalence of Baby Bottle Tooth Decay Among Two Native American Populations. 
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.**

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 finding of 47% of the children having experienced dental caries in their primary teeth does not differ greatly with other studies of low socioeconomic status and racial ethnic groups. **Washington D.C. has been fluoridated since 1952.**
Weinstein P et al. Mexican-American parents with children at risk for baby bottle tooth decay: Pilot study at a migrant farmworkers clinic. *J Dent for Children*; 376-83, Sept-Oct, 1992. Overall, 37 of the 125 children (29.6 percent) were found to have BBTD. Compliance in putting fluoride drops in bottle once a day was identical between BBTD and non-BBTD groups.

Tang JMW et al. Dental Caries Prevalence and Treatment Levels in Arizona Preschool Children. *Public Health Reports*; 112:319-29, 1997. Although Head Start is mandated to provide dental care for all enrolled children, in approximately half of the 11 surveys of Head Start children, the percentage of decayed surfaces or teeth was greater than 50%. Approximately 70% of children residing in the 32 survey communities had access to public drinking water containing greater than 0.6 ppm of fluoride.

Bruerd B et al. Preventing Baby Bottle Tooth Decay: Eight-Year Results. *Public Health Reports*; 111; 63-65, 1996. In 1986, a program to prevent BBTD was implemented in 12 Head Start centers in 10 states. In three years BBTD decreased from 57% to 43%. Funding was discontinued in 1990.

Johnsen DC et al. Background comparisons of pre-3-year-old children with nursing caries in four practice settings. *Pediatric Dentistry*; 6: 50-54, 1984. The lesions are first noticed by the parents at about 20 months. This study sample was made up of 134 children with caries in three of the four incisors, and 90 caries-free children. Baton Rouge was not fluoridated while Akron, Cleveland, and Morgantown are fluoridated.

Von Burg MM et al. Baby Bottle Tooth Decay: A Concern for All Mothers. *Pediatric Nursing*; 21:515-519, 1995. “Data from Head Start surveys show the prevalence of baby bottle tooth decay is about three times the national average among poor urban children, even in communities with a fluoridated water supply.” (Note: all three authors are members of the Indiana (97% fluoridated) Healthy Mothers, Healthy Babies, Oral Health Subcommittee.)

O’Sullivan DM et al. Dental Caries Prevalence and Treatment among Navajo Preschool Children. *J Public Health Dent*; 54:139-44, 1994. Nearly 75% of children with the proximal pattern have the bottle caries pattern. This suggests that preventing the development of bottle caries may significantly reduce ‘between teeth’ caries. (Note: Arizona has a fluoridated Indian population of 92,000 and New Mexico has a fluoridated population of nearly 68,000.)

Febres C et al. Parental awareness, habits, and social factors and their relationship to baby bottle tooth decay. *Pediatric Dentistry*; 19:22-27, 1997. Of 100 children in this study, 19 had BBTD on at least two maxillary incisors: Hispanic 13, Black 3, White 1. (Note: Houston was fluoridated in 1982.)

Of 369 children who attended the University of Texas-Houston Health Center (Houston is fluoridated), 56% between 2 and 3 years old had decay. Among the 3 year olds, 46% had more than three decayed teeth. The children without decay were weaned from the bottle at an average age of 10 months. Those with severe decay were weaned at 16.9 months.


Of 77 infants, the average age was 23.6 months and almost 50 percent continued to use the nursing bottle. Children using the bottle were significantly associated with having caries compared to those not using the bottle: 63.9 percent vs. 29.3 percent respectively.


18% of children 4 years old and younger seen in the pediatric program at Tufts University School of Dental Medicine in 1995 had baby bottle tooth decay. Treatment can cost up to $4,000 per child. About 90% of 107 Boston high school students needed dental treatment, and an unpublished 1996 study reported that the city’s students had four times more untreated cavities than the national average. *Boston was fluoridated in 1978.*

The Fluoridation Census, 1992, U.S. Dept of Health & Human Services, was used to determine fluoridation status.