American Academy of Pediatric Dentistry
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Early Childhood Caries (ECC)

Children who are frequently exposed to sugary liquids—such as milk, breast milk, formula, fruit juice, and other sweet liquids—for long periods of time run a great risk of suffering from Early Childhood Caries.

- ECC is an infectious disease that can begin as early as the teeth begin to emerge (around 6 months or so), often progresses rapidly, and can cause great pain to the child.
- ECC is defined as the presence of one or more decayed teeth, missing teeth (resulting from caries), or filled tooth surfaces in any primary tooth in a child 6 years old or younger.
- Tooth decay is the single most common chronic childhood disease—5 times more common than asthma, 4 times more common than early-childhood obesity, and 20 times more common than diabetes.
- ECC is a multifactorial disease process initiated by bacteria (primarily Streptococcus mutans). This simply means that after food enters the body, the bacteria can break down the carbohydrates, producing acids that cause mineral loss from teeth—a process that often results in cavities.
- Typically, ECC that requires extensive dental repair (often in an operating room under general anesthesia) appears in children aged 22 months.
- Left untreated, it can destroy the child's teeth, and have a strong, lasting effect on a child's overall general health.

Statistics

- According to the 2007 Report by the Centers for Disease Control and Prevention (the most current report to date), cavities have increased for toddlers and preschoolers. Cavities in children ages 2 to 5 increased from 24 percent to 28 percent between 1988-1994 and 1999-2004. [1]
- For children ages 2 to 5, 70% of the caries is found in 8% of the population.[2]

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[1] Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thorton-Evans G, et al. Trends in oral health status: United States, 1988-1994 and 1999-2004. National Center for Health Statistics. Vital Health Stat 11(248). 2007.

[2] Macek MD, Heller KE, Selwitz RH, Manz MC. 2004. Is 75 percent of dental caries really found in 25 percent of the population? Journal of Public Health Dentistry 64(1):20-25.

- ECC is disproportionately concentrated among socially disadvantaged children, especially those who qualify for Medicaid coverage.
- An estimated 5% of children under the age of 6, roughly 300,000 U.S. children, experience significant levels of ECC; an additional 15%, roughly 1.5 million U.S. children, experience lesser levels of ECC.
- Children between the ages of 2 and 5 who have not visited a dentist with the past 12 months are more likely to have caries in their primary teeth.[i]
- 50% of all children have NEVER visited a dentist. [1]
- Mexican-American children ages 2 to 5 are more likely than their non-Hispanic black and non-Hispanic white peers to suffer from caries. [3]
- For children ages 2 to 5 from families with incomes above the federal poverty level, those who do not eat breakfast daily or who eat fewer than 5 servings of fruit and vegetables a day run a greater risk of experiencing caries in primary teeth. [3]

Costs of ECC

- ECC goes beyond pain and infection; ECC can affect speech and communication, eating and dietary nutrition, sleeping, learning, playing and quality of life, even into adulthood.
- Many children with ECC require costly, restorative treatment in an operating room under general anesthesia. Under Medicaid expenditures, such operations range from $1,500 to $2,000 per child per year.

Consequences of ECC

- Higher risk of new carious lesions in both the primary and permanent dentitions.
- Greater number of hospitalization and Emergency Room visits
- Increased treatment costs and time.
- Insufficient physical development (especially in height/weight).
- Loss of school days and increased days with restrictive activity.
- Diminished ability to learn.
- Diminished oral health-related quality of life.

The **American Academy of Pediatric Dentistry (AAPD)** recommends the following steps for parents to help prevent children from getting Early Childhood Caries:

Infant

- Visit a pediatric dentist no later than the child's first birthday.
- Wipe infant's gums with a clean, wet gauze pad or washcloth after each feeding.
- Begin brushing infant's teeth as soon as first tooth appears twice daily with a fluoridated toothpaste and a soft, age-appropriate sized toothbrush. Parents should use a 'smear' of toothpaste to brush the teeth of a child less than two years of age.
- Twice-daily use has benefits greater than once-daily brushing.
- Do not nurse or breast feed for prolonged periods.
- Infants should not be put to sleep with a bottle of milk, formula, sugar water, or fruit juice.
- If an infant falls asleep while feeding, the teeth should be cleaned before placing the child in bed.

Toddlers & Young Children

- Encourage children to drink from a cup by their first birthday; a training (sippy) cup is only meant to serve as a transitional tool from helping kids adjust from the bottle to cup.
- Only put water in sippy cups—except during mealtime. By filling the sippy cup with juice, or even milk, and allowing a child to drink from it throughout the day, bathes the child's teeth in cavity causing bacteria.
- Parents should dispense a 'pea-size' amount of toothpaste and perform or assist w/their child's toothbrushing.
- Supervise child when brushing and teach him/her to spit out, not swallow, the toothpaste.
- Help child develop good eating habits early and choose sensible, nutritious snacks.

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[3] Dye BA, Shenkin JD, Ogden CL, Marshall TA, Levy SM, Kanellis MJ. 2004. The relationship between healthful eating practices and dental caries in children ages 2-5 years in the United States, 1988-1994. Journal of the American Dental Association 135(1):55-66.