# EARLY CHILDHOOD TOOTH DECAY



What Is It?

Dental caries, commonly known as tooth decay, can occur at any stage of life. In a child less than 6 years of age, the term early childhood caries (ECC) is used when at least one decayed baby or primary tooth surface is present (American Academy of Pediatric Dentistry, 2012). Many know ECC by its former names like 'nursing bottle mouth,' 'baby bottle tooth decay,' 'nursing bottle syndrome' or 'nursing caries' (Slåttelid Skeie, Wendt, & Poulsen, 2009; Mejàre, Raadal, & Espelid, 2009).

However, these terms suggest that the cause of ECC is simply unfavourable feeding practices. We now know that ECC has multiple risk factors including biological (bacteria and sugar), psychosocial (fear, low economic status), and behavioural factors (oral hygiene, dental visits) (Ibid.). The tremendous oral health inequalities between Aboriginal¹ and non-Aboriginal populations in Canada extend to the dental health of young children (Schroth, Harrison, & Moffatt 2009; Lawrence,

2010; Health Canada, et al., 2011; First Nations Information Governance Centre [FNIGC], 2012). Countless Aboriginal children are affected by ECC but few receive treatment (FNIGC, 2012; Health Canada, et al., 2011).

# What To Look For?

White spots on the front or back surfaces of the top front baby teeth are the first signs of ECC; these white spots are evidence of early loss of tooth mineral. The upper front teeth are commonly the first to be affected. These early "white spots" may be reversible with proper brushing with an appropriate amount of fluoride toothpaste, change in diet and feeding habits, and application of fluoride varnish. However, if the white spots remain active, the decay will progress, causing the tooth surface to become brown and soft. At this stage, the enamel surface of the tooth has been broken. Once the tooth surface is brown and soft, pain may occur. The decay, if left untreated, may spread further leading to an abscess (painful swelling and infection).

# Prevalence

Multiple studies have shown that Aboriginal children are disproportionately burdened by ECC. Among First Nations children, 18.7% of infants and 30.9% of preschoolers aged 3-5 years of age had teeth affected by baby bottle tooth decay, while 85.3% of Inuit preschoolers aged 3-5 had one or more cavities (FNIFGC, 2012; Health Canada, et al., 2011). The impact of low socioeconomic status and decreased access to preventive care and dental

<sup>&</sup>lt;sup>1</sup> The term 'Aboriginal' is used here to refer inclusively to the First Nations, Inuit, and Métis people of Canada collectively, regardless of whether they reside on or off reserve or are registered as status Indians.





Photo: Early chidlhood caries

services are major contributors to the high rates of dental caries in young Aboriginal children. Many isolated communities receive treatment only when a dentist is flown in. Due to the high demands of these visits, only the most severe patients are treated, leaving less time for preventive care (Tait, 2008).

#### Risk Factors

Prolonged feeding or sipping from a bottle or sippy cup containing sugary liquids (fruit juices, pop) and poor toothbrushing habits are risk factors for ECC. Bottle feeding during sleep with a sugary liquid is particularly harmful to the teeth. Saliva acts as a protective barrier for teeth and decreases during sleep. In its absence, the teeth are more susceptible to decay. If a bottle must be given during sleep, plain water is recommended. Parents or caregivers should brush their young child's teeth twice daily with the recommended amount of fluoride toothpaste.

### **Prevention and Treatment**

Changing harmful feeding practices and adopting daily oral hygiene routines are recommended preventive strategies (Slåttelid Skeie, et al., 2009; Mejàre, et al., 2009). Also, caregivers should routinely lift the child's lips to check for white spots or

lines on the teeth. The Canadian Dental Association (2013) recommends that all children see a dental professional within 6 months of eruption of their first tooth or by one year of age. At the dental office, parents will be advised on proper feeding habits and toothbrushing techniques suitable for their child and the child's dental status will be assessed. If appropriate based on the child's risk, fluoride varnish may be applied. Together, these approaches may help stabilize the dental decay.

However, once early dental caries has progressed to cavitation, a child may require invasive treatment like fillings or even extractions. Frequently, younger children require treatment under general anesthesia in a hospital setting. Despite the fact that registered First Nations and Inuit people are covered by dental health benefits through the Non-Insured Health Benefits (NIHB) program, ECC often remains untreated because of challenges with access to complex care (Health Canada, 2013). The First Nations Regional Health Survey reported that only 40.6% of infants affected by baby bottle tooth decay had received treatment (FNIGC, 2012), and less than 30% of decayed teeth in Inuit children aged 3-5 had been filled (Health Canada, et al., 2011).

#### For More Information

- Canadian Dental Association www.cda-adc.ca/en/oral health
- · BC Dental Association www.bcdental.org/Dental\_health
- BC Dental Hygienists' Association www.bcdha.com/?page\_id=23
- Health Canada Dental Benefits First Nations and Inuit Health www.hc-sc.gc.ca/fniah-spnia/nihb-ssna/ benefit-prestation/dent/index-eng.php

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