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BREASTFEEDING DURATION AND FREQUENCY IN THE CONTEXT OF EARLY CHILDHOOD CARIES

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The frequency of breastfeeding has been a topic of discussion for a long time, particularly in the context of the ongoing development of modern nutrition science. The potential link between prolonged breastfeeding and the onset of early childhood caries is a global health concern which continues to be debated within the dental community.

The aim of this research work is to assess the relationship between the duration of breastfeeding and the development of early childhood caries.

A systematic review of the PubMed electronic database was conducted. The following keywords and their combinations were used: breastfeeding, early childhood caries (ECC), dental caries, prolonged breastfeeding, nocturnal breastfeeding. The search was limited to publications from the past five years, with a preference for large meta-analyses and prospective cohort studies.

The results of our search are the following. Breast milk has a protective effect on developing tooth enamel before teeth eruption. Components such as secretory immunoglobulin A, lactoferrin, and lysozyme help prevent the adhesion of *Streptococcus mutans*, the primary cariogenic bacteria. The act of breastfeeding stimulates saliva production, which mechanically cleans erupted teeth, has buffering properties, and aids in enamel remineralization. However, risks arise with prolonged or nocturnal breastfeeding. At night, salivation is naturally reduced, and the buffering capacity of saliva is minimal, which results in prolonged contact between lactose and the enamel of erupted teeth. Lactose serves as a substrate for *Streptococcus mutans*, which metabolizes it into organic acids, primarily lactic acid. These acids cause enamel demineralization, especially in primary teeth, which are more susceptible to decay due to their thinner structure and higher permeability. Thus, the duration of breastfeeding determines the length of the acidic attack on enamel, explaining the observed dose-dependent effect. The risk associated with breastfeeding after 12 months correlates with the physiological timing of tooth eruption. A larger surface area of enamel in contact with lactose increases the adverse effects. Other factors contributing to the development of caries after the first year include poor oral hygiene, the introduction of sugary complementary foods, transmission of cariogenic bacteria through food or everyday items shared with relatives, and fluoride deficiency, all of which may occur alongside breastfeeding.

Based on the information mentioned above, we can make the following conclusions. Breast milk itself is not a cariogenic factor, but the duration of its contact with tooth enamel is. The risk of dental caries increases proportionally to the surface area of erupted teeth. Nocturnal breastfeeding is the most harmful due to physiologically reduced salivation and decreased buffering capacity of saliva. Prolonged breastfeeding is possible with careful and regular oral care for the child. Factors such as sugar in complementary foods, saliva exchange, fluoride deficiency and poor oral hygiene can distort the statistics.