

Prevention of early childhood caries (ECC)--review of literature published 1998-2007. Twetman S. European Archives Paediatric Dentistry 2008; 9(1):12-8.

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AIM: This was to examine the literature published during the last decade and review the effectiveness of methods used for the prevention of early childhood caries (ECC).

Study design: A critical review of papers.

METHODS: A broad search of the PubMed database was conducted from 1998 through September 2007, using "early childhood caries", "baby bottle tooth decay", "nursing caries", "infant caries", "caries prevention" and "oral health education" as index terms. Relevant papers published in English between 1998 and 2007 were identified after a review of their abstracts. Papers were selected if they reported a prospective controlled design with preventive or non-invasive intervention directed to children under the age of 3 years. A defined endpoint measure of cavitated or non-cavitated clinical caries, expressed as incidence or prevalence, was required. The targeted publications were critically assessed by the author concerning design, methodology and performance.

RESULTS: The initial search revealed 66 papers of which 22 met the inclusion criteria. The results reinforced the role of fluoride toothpaste as the most cost-effective home-care measure and semi-annual fluoride varnish applications as the best professional method for infants at risk. The evidence concerning the preventive effect of antibacterial agents, primary-primary prevention and dental health education were inconclusive but the included studies supported the importance of early start, outreach activities and motivational interviewing as key factors to overcome cultural and socioeconomic barriers.

CONCLUSIONS: Although there is a body of evidence for the use of fluoride in preventing ECC, further high-quality studies are needed to further establish the best way to maintain oral health in infants.