# Guideline on Infant Oral Health Care

## **Originating Committee**

Clinical Affairs Committee – Infant Oral Health Subcommittee

#### **Review Council**

Council on Clinical Affairs

## **Adopted**

1986

#### Revised

1989, 1994, 2001, 2004, 2009, 2011, 2012, 2014\*

## Purpose

The American Academy of Pediatric Dentistry (AAPD) recognizes that infant oral health is one of the foundations upon which preventive education and dental care must be built to enhance the opportunity for a lifetime free from preventable oral disease. The AAPD proposes recommendations for preventive strategies, oral health risk assessment, anticipatory guidance, and therapeutic interventions to be followed by dental, medical, nursing, and allied health professional programs.

#### Methods

This guideline is an update of the previous Guideline on Infant Oral Health Care, revised in 2009. This revision included a hand search of literature as well as a new search of the MEDLINE/PubMed® electronic database using the following parameters: Terms: infant oral health, infant oral health care, and early childhood caries; Fields: all; Limits: within the last 10 years, humans, English, and clinical trials. Papers for review were chosen from the resultant list of 449 articles and from references within selected articles. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

#### **Background**

The Centers for Disease Control and Prevention reports that caries is the most prevalent infectious disease in our nation's children.¹ More than 40 percent of children have caries by the time they reach kindergarten.² In contrast to declining prevalence of dental caries among children in older age groups, the prevalence of caries in poor US children under the age of five is increasing.³ Early childhood caries (ECC) and the more severe form of ECC (S-ECC) can be particularly virulent forms of caries, beginning soon after tooth eruption, developing on smooth surfaces, progressing rapidly, and having a lasting detrimental impact on the dentition.⁴ This disease affects the general population but is 32 times more likely to occur in infants who are of low socioeconomic status, who consume a diet high in sugar, and whose mothers have a low education level.¹ Caries in primary teeth can affect children's growth,

result in significant pain and potentially life-threatening infection, and diminish overall quality of life. 12-21 Since medical health care professionals are far more likely to see new mothers and infants than are dentists, it is essential that they be aware of the infectious etiology and associated risk factors of ECC, make appropriate decisions regarding timely and effective intervention, and facilitate the establishment of the dental home. 4,22-25

#### **Dental caries**

Dental caries is a common chronic infectious transmissible disease resulting from tooth-adherent specific bacteria, primarily mutans streptococci (MS), that metabolize sugars to produce acid which, over time, demineralizes tooth structure. MS generally is considered to be the principal group of bacterial organisms responsible for the initiation of dental caries. MS colonization of an infant may occur from the time of birth. Significant colonization occurs after dental eruption as teeth provide non-shedding surfaces for adherence. Other surfaces also may harbor MS. Significant colonization occurs after dental eruption of the tongue appear to be an important ecological niche in harboring the bacteria in predentate infants.

Vertical transmission of MS from mother to infant is well documented.<sup>37-39</sup> Genotypes of MS in infants appear identical to those present in mothers in 17 reports, ranging from 24 to 100 percent.<sup>39</sup> The higher the levels of maternal salivary MS, the greater the risk of the infant being colonized. 40 Along with salivary levels of MS, mother's oral hygiene, periodontal disease, snack frequency, and socioeconomic status also are associated with infant colonization.<sup>36</sup> Reports indicate that horizontal transmission (ie, transmission between members of a group such as siblings of a similar age or children in a daycare center) also may be of concern. 41-44 Dental caries is a disease that generally is preventable. Early risk assessment allows for identification of parent-infant groups who are at risk for ECC and would benefit from early preventive intervention. The ultimate goal of early assessment is the timely delivery of educational information to populations at high risk for developing caries in order to prevent the need for later surgical intervention.

<sup>\*</sup> The 2014 revision is limited to use of fluoridated toothpaste in young children.

### Anticipatory guidance

Caries-risk assessment for infants allows for the institution of appropriate strategies as the primary dentition begins to erupt. Even the most judiciously designed and implemented cariesrisk assessment, however, can fail to identify all infants at risk for developing ECC. In these cases, the mother may not be the colonization source of the infant's oral flora, the dietary intake of simple carbohydrates may be extremely high, or other uncontrollable factors may combine to place the infant at risk for developing dental caries. Therefore, screening for risk of caries in the parent and infant, coupled with oral health counseling, is not a substitute for the early establishment of the dental home. 40 The early establishment of a dental home, including ECC prevention and management, is the ideal approach to infant oral health care. 25,37 The inclusion of education regarding the infectious and transmissible nature of bacteria that cause ECC, as well as methods of oral health risk assessment, anticipatory guidance, and early intervention, into the curriculum of medical, nursing, and allied health professional programs has shown to be effective in increasing the establishment of a dental home. 45,46 Recent studies, noting that a majority of pediatricians and general dentists were not advising patients to see a dentist by one year of age, point to the need for increased infant oral health care education in the medical and dental communities. 47,48

#### Recommendations

#### Recommendations for parental oral health<sup>49</sup>

Oral health education: All primary health care professionals who serve parents and infants should provide education on the etiology and prevention of ECC. Educating the parent on avoiding saliva-sharing behaviors (eg, sharing spoons and other utensils, sharing cups, cleaning a dropped pacifier or toy with their mouth) can help prevent early colonization of MS

Comprehensive oral examination: Referral for a comprehensive oral examination and treatment during pregnancy is especially important for the mother.

Professional oral health care: Routine professional dental care for the parent can help optimize oral health. Removal of active caries, with subsequent restoration of remaining tooth structure, in the parents suppresses the MS reservoir and minimizes the transfer of MS to the infant, thereby decreasing the infant's risk of developing ECC.<sup>50</sup>

Oral hygiene: Brushing with fluoridated toothpaste and flossing by the parent are important to help dislodge food and reduce bacterial plaque levels.

Diet: Dietary education for the parents includes the cariogenicity of certain foods and beverages, role of frequency of consumption of these substances, and the demineralization/ remineralization process.

Fluoride: Using a fluoridated toothpaste and rinsing with an alcohol-free, over-the-counter mouth rinse containing 0.05 percent sodium fluoride once a day or 0.02 percent sodium fluoride rinse twice a day have been suggested to help reduce plaque levels and promote enamel remineralization.<sup>22</sup>

Xylitol chewing gum: Evidence suggests that the use of xylitol chewing gum (at least two to three times a day by the mother) has a significant impact on mother-child transmission of MS and decreasing the child's caries rate. 51-53

#### Recommendations for the infant's oral health

Oral health risk assessment: Every infant should receive an oral health risk assessment from his/her primary health care provider or qualified health care professional by six months of age. This initial assessment should evaluate the patient's risk of developing oral diseases of soft and hard tissues, including caries-risk assessment, provide education on infant oral health, and evaluate and optimize fluoride exposure.

Establishment of a dental home: Parents should establish a dental home for infants by 12 months of age. 54,55 The initial visit should include thorough medical (infant) and dental (parent and infant) histories, a thorough oral examination, performance of an age-appropriate tooth brushing demonstration, and prophylaxis and fluoride varnish treatment if indicated.<sup>55</sup> In addition, assessing the infant's risk of developing caries and determining a prevention plan and interval for periodic re-evaluation should be done. Infants should be referred to the appropriate health professional if specialized intervention is necessary. Providing anticipatory guidance regarding dental and oral development, fluoride status, nonnutritive sucking habits, teething, injury prevention, oral hygiene instruction, and the effects of diet on the dentition are also important components of the initial visit.

Teething: Teething can lead to intermittent localized discomfort in the area of erupting primary teeth, irritability, and excessive salivation; however, many children have no apparent difficulties. Treatment of symptoms includes oral analgesics and chilled rings for the child to gum.<sup>56</sup> Use of topical anesthetics, including over-the-counter teething gels, to relieve discomfort are discouraged due to potential toxicity of these products in infants.<sup>57-59</sup>

Oral hygiene: Oral hygiene measures should be implemented no later than the time of eruption of the first primary tooth. Tooth-brushing should be performed for children by a parent twice daily, using a soft toothbrush of age-appropriate size and the correct amount of fluoridated toothpaste (see below in the Fluoride section).

Diet: Epidemiological research shows that human milk and breast-feeding of infants provide general health, nutritional, developmental, psychological, social, economic, and environmental advantages while significantly decreasing risk for a large number of acute and chronic diseases. 60 Human breast milk is uniquely superior in providing the best possible nutrition to infants and has not been epidemiologically associated with caries. 61-63 Frequent night time bottle feeding with milk and ad libitum breast-feeding are associated with, but not consistently implicated in, ECC.<sup>64</sup> Breastfeeding greater than seven times daily after 12 months of age is associated with increased risk for ECC.<sup>65</sup> Night time bottle feeding with juice, repeated use of a sippy or no-spill cup, and frequent in between meal consumption of sugar-containing snacks or drinks

(eg, juice, formula, soda) increase the risk of caries. 66,67 Highsugar dietary practices appear to be established early, by 12 months of age, and are maintained throughout early childhood. 68,69 The American Academy of Pediatrics has recommended children one through six years of age consume no more than four to six ounces of fruit juice per day, from a cup (ie, not a bottle or covered cup) and as part of a meal or snack.<sup>70</sup> Fluoride: Optimal exposure to fluoride is important to all dentate infants and children.<sup>71</sup> Decisions concerning the administration of fluoride are based on the unique needs of each patient.72-74 The use of fluoride for the prevention and control of caries is documented to be both safe and effective. 75-79 When determining the risk-benefit of fluoride, the key issue is mild fluorosis versus preventing devastating dental disease. The correct amount of fluoridated toothpaste should be used twice daily. No more than a smear or rice-sized amount of fluoridate toothpaste should be used for children under age three; no more than a pea-sized amount should be used for children ages three to six.80 Professionally-applied topical fluoride, such as fluoride varnish, should be considered for children at risk for caries. 75,78,79,81,82 Systemically-administered fluoride should be considered for all children at caries risk who drink fluoride deficient water (less than 0.6 ppm) after determining all other dietary sources of fluoride exposure.83 Careful monitoring of fluoride is indicated in the use of fluoridecontaining products. Fluorosis has been associated with cumulative fluoride intake during enamel development.

*Injury prevention:* Practitioners should provide age-appropriate injury prevention counseling for orofacial trauma. Initially, discussions would include play objects, pacifiers, car seats, and electric cords.<sup>55</sup>

*Non-nutritive habits:* Non-nutritive oral habits (eg, digit or pacifier sucking, bruxism, abnormal tongue thrust) may apply forces to teeth and dentoalveolar structures. It is important to discuss the need for early sucking and the need to wean infants from these habits before malocclusion or skeletal dysplasias occur.<sup>55</sup>

#### Additional recommendations

Health care professionals and all other stakeholders in children's oral health should support the identification of a dental home for all infants by 12 months of age. Legislators, policy makers, and third party payers should be educated regarding the importance of early interventions to prevent ECC.

#### References

- US Dept of Health and Human Services. Oral health in America: A report of the Surgeon General. Rockville, Md: US Dept of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health; 2000.
- 2. Pierce KM, Rozier RG, Vann WF Jr. Accuracy of pediatric primary care providers' screening and referral for early childhood caries. Pediatrics 2002;109(5):E82-2.

- 3. Dye BA, Tan S, Smith V, et al. Trends in oral health status: United States, 1988-1994 and 1999-2004. National Center for Health Statistics. Vital Health Stat 2007;11(248).
- 4. Nowak AJ, Warren JJ. Infant oral health and oral habits. Pediatr Clin North Am 2000;47(5):1043-66.
- 5. Gray MM, Marchment MD, Anderson RJ. The relationship between caries experience in deciduous molars at 5 years and in first permanent molars of the same child at 7 years. Community Dent Health 1991;8(1):3-7.
- 6. Grindefjord M, Dahllöf G, Modéer T. Caries development in children from 2.5 to 3.5 years of age: A longitudinal study. Caries Res 1995;29(6):449-54.
- 7. O'Sullivan DM, Tinanoff N. The association of early dental caries patterns with caries incidence in preschool children. J Public Health Dent 1996;56(2):81-3.
- 8. Johnsen DC, Gerstenmaier JH, DiSantis TA, Berkowitz RJ. Susceptibility of nursing-caries children to future approximal molar decay. Pediatr Dent 1997;19(1):37-41.
- 9. Heller KE, Eklund SA, Pittman J, Ismail AA. Associations between dental treatment in the primary and permanent dentitions using insurance claims data. Pediatr Dent 2000; 22(6):469-74.
- 10. Drury TF, Horowitz AM, Ismail AA, et al. Diagnosing and reporting early childhood caries for research purposes. J Public Health Dent 1999;59(3):192-7.
- 11. Mobley C, Marshall TA, Milgrom P, Coldwell SE. The contribution of dietary factors to dental caries and disparities in caries. Acad Pediatr 2009;9(6):410-4.
- 12. Acs G, Lodolini G, Kaminsky S, Cisneros GJ. Effect of nursing caries on body weight in a pediatric population. Pediatr Dent 1992;14(5):302-5.
- 13. Ayhan H, Suskan E, Yildirim S. The effect of nursing or rampant caries on height, body weight, and head circumference. J Clin Pediatr Dent 1996;20(3):209-12.
- 14. Fleming P, Gregg TA, Saunders ID. Analysis of an emergency dental service provided at a children's hospital. Int J Paediatr Dent 1991;1(1):25-30.
- 15. Schwartz S. A one-year statistical analysis of dental emergencies in a pediatric hospital. J Can Dent Assoc 1994; 60(11):959-62, 966-8.
- 16. Sheller B, Williams BJ, Lombardi SM. Diagnosis and treatment of dental caries-related emergencies in a children's hospital. Pediatr Dent 1997;19(8):470-5.
- 17. Low W, Tan S, Schwartz S. The effect of severe caries on the quality of life in young children. Pediatr Dent 1999;21(6):325-6.
- 18. Acs G, Pretzer S, Foley M, Ng MW. Perceived outcomes and parental satisfaction following dental rehabilitation under general anesthesia. Pediatr Dent 2001;23(5): 419-23.
- 19. Thomas CW, Primosch RE. Changes in incremental weight and well-being of children with rampant caries following complete dental rehabilitation. Pediatr Dent 2002;24(2):109-13.

- 20. Cunnion DT, Spiro A III, Jones JA, et al. Pediatric oral health-related quality of life improvement after treatment of early childhood caries: A prospective multi-site study. J Dent Child 2010;77(1):4-11.
- 21. Sheller B, Churchill SS, Williams BJ, Davidson B. Body mass index of children with severe early childhood caries. Pediatr Dent 2009;31(3):216-21.
- 22. American Academy of Pediatrics. Policy on oral health risk assessment timing and establishment of the dental home. Pediatrics 2003;111(5Pt1):1113-6.
- 23. Lewis CW, Grossman DC, Domoto PK, et al. The role of the pediatrician in the oral health of children: A national survey. Pediatrics 2000;106(6):E84.
- 24. Harrison R. Oral health promotion for high-risk children: Case studies from British Columbia. J Can Dent A ssoc 2003;69(5):292-6.
- 25. American Academy of Pediatrics, Section on Pediatric Dentistry and Oral Health. A policy statement: Preventive intervention for pediatricians. Pediatrics 2008;122 (6):1387-94.
- 26. Loesche WJ. Role of *Streptococcus mutans* in human dental decay. Microbiol Rev 1986;50(4):353-80.
- 27. Ge Y, Caufield PW, Fisch GS, Li Y. *Streptococcus mutans* and *Streptococcus sanguis* colonization correlated with caries experience in children. Caries Res 2008;42(6): 444-8. Epub October 3, 2008.
- 28. Berkowitz RJ, Jordan HV, White G. The early establishment of *Streptococcus mutans* in the mouths of infants. Arch Oral Biol 1975;20(3):171-4.
- 29. Stiles HM, Meyers R, Brunnelle JA, Wittig AB. Occurrence of *Streptococcus mutans* and *Streptococcus sanguis* in the oral cavity and feces of young children. In: Stiles M, Loesch WJ, O'Brien T, eds. Microbial Aspects of Dental Caries. Washington, DC: Information Retrieval; 1976:187
- Loesche WJ. Microbial adhesion and plaque. In: Dental Caries: A Treatable Infection. 2nd ed. Grand Haven, Mich; Automated Diagnostic Documentation, Inc; 1993: 81-116.
- 31. Wan AK, Seow WK, Purdie DM, Bird PS, Walsh LJ, Tudehope DI. A longitudinal study of *Streptococcus mutans* colonization in infants after tooth eruption. J Dent Res 2003;82(7):504-8.
- 32. Wan AK, Seow WK, Walsh LJ, Bird P, Tudehope DI, Purdie DM. Association of *Streptococcus mutans* infection and oral developmental nodules in predentate infants. J Dent Res 2001;80(10):1945-8.
- 33. Berkowitz RJ. Mutans streptococci: Acquisition and transmission. Pediatr Dent 2006;28(2):106-9, discussion 192-8.
- 34. Law V, Seow WK, Townsend G. Factors influencing oral colonization of mutans streptococci in young children. Aust Dent J 2007;52(2):93-100, quiz 159.
- 35. Tanner ACR, Milgrom PK, Kent R Jr, et al. The microbiotia of young children from tooth and tongue samples. J Dent Res 2002;81(1):53-7.

- 36. Wan AK, Seow WK, Purdie DM, Bird PS, Walsh LJ, Tudehope DI. Oral colonization of *Streptococcus mutans* in six-month-old predentate infants. J Dent Res 2001; 80(12):2060-5.
- 37. Davey AL, Rogers AH. Multiple types of the bacterium *Streptococcus mutans* in the human mouth and their intrafamily transmission. Arch Oral Biol 1984;29(6):453-60.
- 38. Berkowitz R, Jones P. Mouth-to-mouth transmission of the bacterium *Streptococcus mutans* between mother and child. Arch Oral Biol 1985;30(4):377-9.
- 39. Douglass JM, Li Y, Tinanoff N. Association of mutans streptococci between caregivers and their children. Pediatr Dent 2008;29(5):375-87.
- 40. Parisotto TM, Steiner-Oliveira C, Silva CM, Rodrigues LK, Nobre-dos-Santos M. Early childhood caries and mutans streptococci: A systematic review. Oral Health Prev Dent 2010;8(1):59-70.
- 41. Mattos-Graner RO, Li Y, Caufield PW, Duncan M, Smith DJ. Genotypic diversity of Mutans streptococci in Brazilian nursery children suggests horizontal transmission. J Clin Microbiol 2001;39(6):2313-6.
- 42. Van Loveren C, Bujis JF, ten Cate JM. Similarity of bacteriocin activity profiles of Mutans streptococci within the family when the children acquire strains after the age of 5. Caries Res 2000;34(6):481-5.
- 43. Emanuelsson L, Wang X. Demonstration of identical strains of Mutans streptococci within Chinese families by genotyping. Eur J Oral Sci 1998;106(3):778-94.
- 44. Mitchell SC, Ruby JD, Moser S, et al. Maternal transmission of Mutans streptococci in severe-early childhood caries. Pediatr Dent 2009;31(3):193-201.
- 45. Douglass JM, Douglass AB, Silk HJ. Infant oral health education for pediatric and family practice residents. Pediatr Dent 2005;27(4):284-91.
- Fein JE, Quiñonez RB, Phillips C. Introducing infant oral health into dental curricula: A clinical intervention. J Dent Educ 2009;73(10):1171-7.
- 47. Brickhouse TH, Unkel JH, Kancitis I, Best AM, Davis RD. Infant oral health care: A survey of general dentists, pediatric dentists, and pediatricians in Virginia. Pediatr Dent 2008;30(2):147-53.
- 48. Malcheff S, Pink TC, Sohn W, Inglehart MR, Briskie D. Infant oral health examinations: Pediatric dentists' professional behavior and attitudes. Pediatr Dent 2009;31(3): 202-9.
- 49. Nowak AJ, Casamassimo PS. Using anticipatory guidance to provide early dental intervention. J Am Dent Assoc 1995;126(8):1156-63.
- 50. New York State Department of Health. Oral health care during pregnancy and early childhood: Practice guidelines. Aug, 2006. Available at: "http://www.nyhealth.gov/publications/0824.pdf". Accessed September 6, 2012.
- 51. Isokangas P, Söderling E, Pienihäkkinen K, Alanen P. Occurrence of dental decay in children after maternal consumption of xylitol chewing gum: A follow-up from 0 to 5 years of age. J Dent Res 2000;79(11):1885-9.

- 52. Söderling E, Isokangas P, Pienihäkkinen K, Tenovou J. Influence of maternal xylitol consumption on acquisition of mutans streptococci by infants. J Dent Res 2000;79 (3):882-7.
- 53. Thorild I, Lindau B, Twetman S. Caries in 4-year-old children after maternal chewing of gums containing combinations of xylitol, sorbitol, chlorhexidine, and fluoride. Eur Arch Paediatr Dent 2006;7(4):241-5.
- 54. American Academy of Pediatric Dentistry. Policy on the dental home. Pediatr Dent 2011;33(special issue):24-5.
- 55. American Academy of Pediatric Dentistry. Guideline on periodicity of examination, preventive dental services, anticipatory guidance/counseling, and oral treatment for infants, children, and adolescents. Pediatr Dent 2010;32 (special issue):93-100.
- Tinanoff NT. The oral cavity. In: Kliegman RM, Stanton BF, St Geme J, Schor N, Behrman RE eds. Nelson Textbook of Pediatrics, 19th ed. Philadelphia, Pa: Elsevier (Saunders); 2011:1257.
- 57. Balicer RD, Kitai E. Methemoglobinemia caused by topical teething preparation: A case report. Scientific World J 2004;15(4):517-20.
- 58. Bong CL, Hilliard J, Seefelder C. Severe methemoglobinemia from topical benzocaine 7.5% (baby Orajel) use for teething pain in a toddler. Clin Pediatr 2009;48(2): 201-11.
- 59. US Food and Drug Administration. FDA drug safety communication: Reports of a rare, but serious and potentially fatal adverse effect with the use of over-the-counter (OTC) benzocaine gels and liquids applies to the gums or mouth. Available at: "http://www.fda.gov/Drugs/Drug Safety/ucm250024.htm". Accessed September 6, 2012.
- 60. American Academy of Pediatrics. Policy statement: Breast-feeding and the use of human milk. Pediatrics 2012;129(3):e827-41.
- 61. Erickson PR, Mazhari E. Investigation of the role of human breast milk in caries development. Pediatr Dent 1999;21(2):86-90.
- 62. Iida H, Auinger P, Billings RJ, Weitzman M. Association between infant breastfeeding and early childhood caries in the United States. Pediatrics 2007;120(4):e944-52.
- 63. Mohebbi SZ, Virtanen JI, Vahid-Golpayegani M, Vehkalahti MM. Feeding habits as determinants of early childhood caries in a population where prolonged breastfeeding is the norm. Community Dent Oral Epidemiol 2008; 36(4):363-9.
- 64. Reisine S, Douglass JM. Psychosocial and behavioral issues in early childhood caries. Commun Dent Oral Epidem 1998;26(suppl):32-44.
- 65. Feldens CA, Giugliani ERJ, Vigo Á, Vítolo MR. Early feeding practices and severe early childhood caries in four-year-old children from southern Brazil: A birth cohort study. Caries Res 2010;44(5):445-52.
- 66. Tinanoff NT, Kanellis MJ, Vargas CM. Current understanding of the epidemiology, mechanism, and preven-

- tion of dental caries in preschool children. Pediatr Dent 2002;24(6):543-51.
- 67. Tinanoff N, Palmer C. Dietary determinants of dental caries in preschool children and dietary recommendation for preschool children. J Pub Health Dent 2000;60(3): 197-206.
- 68. Douglass JM. Response to Tinanoff and Palmer: Dietary determinants of dental caries and dietary recommendations for pre-school children. J Public Health Dent 2000;60(3):207-9.
- 69. Kranz S, Smiciklas-Wright H, Francis LA. Diet quality, added sugar, and dietary fiber intake in American preschoolers. Pediatr Dent 2006;28(2):164-71.
- 70. American Academy of Pediatrics Committee on Nutrition. Policy statement: The use and misuse of fruit juices in pediatrics. Pediatrics 2001;107(5):1210-3. Reaffirmed October, 2006.
- 71. Milgrom PM, Huebner CE, Ly KA. Fluoridated tooth-paste and the prevention of early childhood caries: A failure to meet the needs of our young. J Am Dent Assoc 2009;140(6):628, 630-1.
- 72. American Academy of Pediatric Dentistry. Policy on use of fluoride. Pediatr Dent 2012;34(special issue):43-4.
- 73. Hale K, Heller K. Fluorides: Getting the benefits, avoiding the risks. Contemp Pediatr 2000;2:121.
- 74. American Dental Association. Caries diagnosis and risk assessment: A review of preventive strategies and management. J Am Dent Assoc 1995;126(suppl):1S-24S.
- 75. Adair SM. Evidence-based use of fluoride in contemporary pediatric dental practice. Pediatr Dent 2006;28(2): 133-42.
- 76. Whitford GM. The physiological and toxicological characteristics of fluoride. J Dent Res 1990;69(special issue): 539-49, discussion 556-7.
- 77. Workshop Reports I, II, III from "A symposium on changing patterns of fluoride intake" held at UNC-Chapel Hill, April 23-25, 1991. J Dent Res 1992;71(5):1214-27.
- 78. CDC. Recommendations for using fluoride to prevent and control dental caries in the United States. MMWR Recomm Rep 2001;50(RR-14):1-42.
- 79. Facts about fluoride. CDS Rev 2006;99(1):44.
- 80. American Dental Association Council on Scientific Affairs. Fluoride toothpaste use for young children. J Am Dent Assoc 2014;145(2):190-1.
- 81. American Dental Association Council on Scientific Affairs. Professionally-applied topical fluoride: Evidence-based clinical recommendations. J Amer Dent Assoc 2006;137(8):1151-9.
- 82. American Academy of Pediatric Dentistry. Guideline on caries-risk assessment and management for infants, children, and adolescents. Pediatr Dent 2011;33(special issue):110-7.
- 83. American Academy of Pediatric Dentistry. Guideline on fluoride therapy. Pediatr Dent 2012;34(special issue): 162.5