

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

Policy on Dietary Recommendations for Infants, Children, and Adolescents

Originating Committee

Clinical Affairs Committee

Review Council

Council on Clinical Affairs

Adopted

1993

Revised

1999, 2002, 2005, 2006, 2008, 2012, 2017

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes its role in promoting well-balanced, low caries-risk, and nutrient-dense diets for infants, children.

Methods

~~The revision of this policy is based on a review of current dental and medical literature related to diet and nutrition for infants, children, and adolescents. This document is an update of the previous version, revised in 2008. The update included an electronic PubMed® search combining terms such as caries and body mass index, breast feeding, diabetes, hypertension, physical activity, nutrition, obesity, sugar sweetened beverages, sugar sweetened medications, sugar containing medications, chewable vitamins, and sugar sweetened vitamin supplements and relevant articles from dental and medical literature. The search returned 3,755 articles. The reviewers agreed upon the inclusion of 36 articles that met the defined criteria. Relevant policies and guidelines of the AAPD, the American Academy of Pediatrics (AAP), US Department of Agriculture (USDA), Department of Health and Human Services (DHHS), and Academy of Nutrition and Dietetics also are included.~~

The current revision includes searches of articles published in English between 1995 and 2017 using Medline, Embase, and Google Scholar. Key terms included childhood, obesity, dental caries, diet, and nutrition. Additional terms included health education, breast feeding, food habits, dietary guidelines, sugar, sugar-sweetened beverages, and body mass index. After conducting the literature searches, articles were screened by viewing titles and abstracts. Data from 194 articles were abstracted and

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

used to summarize dietary policies and research on diet and nutrition for infants, children, and adolescents.

Background

~~Establishment of a dental home by 12 months of age allows the institution of individualized caries-preventive strategies, including dietary recommendations and appropriate oral hygiene instruction, as the primary teeth begin to erupt (AAPD Dental Home Policy). Dietary choices affect oral health as well as general health and well-being.~~

~~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 (AAP Breastfeeding policy). Human breast milk is uniquely superior in providing the best possible nutrition to infants and has not been epidemiologically associated with caries (Erickson and Mazhari 1999; Iida et al 2007; Mohebbi et al 2008). Frequent night time bottle feeding with milk is associated with, but not consistently implicated in, early childhood caries (ECC) (Reisine and Douglass 1998). Breastfeeding greater than or equal to seven times daily after 12 months of age is associated with increased risk for ECC (Feldens et al 2010). Ad libitum breastfeeding after introduction of other dietary carbohydrates and inadequate oral hygiene are risk factors for ECC.~~

~~The AAP 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 (AAP Fruit Juice Policy). 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 (Tinanoff, Kanellis, and Vargas 2002; Tinanoff and Palmer 2000).~~

~~ECC can be a particularly aggressive form of caries, beginning soon after tooth eruption, developing on smooth surfaces, progressing rapidly, and having a lasting detrimental impact on the dentition (AAPD Infant Oral Health Guideline). Consequences of this disease may lead to more widespread health issues (Acs et al 1992; Low, Tan, and Schwartz 1999; Clarke et al 2006).~~

~~Caries and its sequelae are among the most prevalent health problems facing American infants,~~

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

children, and adolescents. Frequent ingestion of sugars and other carbohydrates (eg, fruit juices, acidic beverages) and prolonged contact of these substances with teeth are particular risk factors in the development of caries. Along with increasing caries risk, increased consumption of sugar-sweetened beverages and snack foods also has been linked to obesity (Ludwig, Peterson, and Gormaker 2001; Malik, Schulze, and Hu 2006). Childhood overweight and obesity have reached epidemic proportions worldwide, and the prevalence among US youth has quadrupled in children ages six to 11 and nearly doubled in adolescents ages 12 to 19 in the past 25 years (Hedley et al 2004). Results from a study 2007–2008 that measured height and weight estimated 16.9 percent of children and adolescents in the US aged two through 19 were obese (Ogden and Carroll 2010). Differences were seen in estimates among ethnic groups, ranging from the lowest (14.5 percent) among non-Hispanic white girls to the highest (26.8 percent) among Mexican American boys (Ogden and Carroll 2010). Health risks associated with childhood overweight and obesity are strong indicators for predisposition to adult morbidity and mortality and include type II diabetes, cardiovascular disease (hypertension, hypercholesterolemia, and dyslipidemia), and psychological stress (depression and low self-esteem), as well as respiratory (obstructive sleep apnea and asthma), orthopedic (genu varum and slipped capital femoral epiphysis), and hepatic (steatohepatitis) problems (AAP Obesity Policy).

Although studies are limited in the pediatric population, one study indicated that adolescents aged 17 to 21 years had an increased risk of periodontal disease for each one kg increase in body weight and one cm increase in waist circumference (Reeves et al 2006). Incipient periodontal disease has been found to be increased in children and adolescents with diabetes (Lalla et al 2006). Excessive consumption of fruit juice has been associated with small stature in some children (Dennison, Rockwell, and Baker 1997). It has been shown that nearly 54 percent of US preschool children were given some form of over-the-counter (OTC) medications, most commonly as analgesics, antipyretics, and cough and cold medications (Kogan et al 1994). Numerous OTC and prescribed oral liquid medications have been found to have a high sugar content to increase palatability and acceptance by children (Kenny and Somaya 1989; Maguire, Rugg-Gunn, and Butler, 1996; Bigeard 2000). Frequent ingestion of sugar-sweetened medications has demonstrated a higher incidence of caries in chronically ill children (Kenny and Somaya 1989; Maguire, Rugg-Gunn, and Butler, 1996; Foster and Fitzgerald 2005; da Fonseca et al 2009; Alaki, Burt, and Garetz 2010). To motivate children to consume vitamins, numerous companies have made jelly, gummy, and candy-like chewable vitamin supplements (Lam et al 2006). Cases of vitamin A toxicity have been reported as a result of excessive

consumption of candy like vitamin supplements (Lam et al 2006). The AAP has recommended that the optimal way to obtain adequate amounts of vitamins is to consume a healthy and well balanced diet (Gidding et al 2006).

Dietary Behaviors and Prevalence of Dental Caries and Obesity in Children

The causes of dental caries and obesity are multifactorial, with both having significant dietary components. One of the behaviors associated with dental caries and obesity in children is the consumption of large quantities of sugar-sweetened foods and beverages. Sugar-sweetened beverages (SSBs) are defined by the Centers for Disease Control and Prevention to include soft drinks (soda or pop), fruit drinks, sports drinks, tea and coffee drinks, energy drinks, sweetened milk or milk alternatives, and any other beverages to which sugar, generally high-fructose corn syrup or sucrose (table sugar), has been added.¹ Sugar-containing beverages (SCBs) include SSBs as well as beverages in which sugar, generally glucose or fructose, is naturally present, such as 100% fruit juice.

Children's and adolescent's consumption of SSBs in the United States is high, and it increased from 242 calories/day between 1988–1994 to 270 calories/day between 1999–2004.² Additionally, adolescents with low-educated parents have higher total SSB consumption and higher energy intake from SSBs.³

Dental caries prevalence in children has been variable but remains high. For instance, prevalence of dental caries in primary teeth for children aged 2–5 increased from 22 percent to 30 percent between 1988–1994 and 1999–2004 and then decreased to 23 percent in 2011–2012.⁴ The causes of dental caries involve a combination of factors and include diet, bacteria capable of fermenting carbohydrates, fluoride exposure, and a susceptible host.⁵ While sugar, especially high frequency consumption, is a factor contributing to dental caries, a systematic study of sugar consumption and caries risk concluded that the relationship between sugar consumption and caries is weaker after the introduction of fluoride exposure.⁶

The causes of obesity include genetic components, lifestyle, and environmental variables as well as nutritional factors. Health initiatives in the United States and other countries have specifically targeted reducing consumption of SSBs in an effort to lower the number of calories that children and

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

adolescents consume per day. For children and adolescents aged 2–19, the prevalence of obesity has remained constant at about 17 percent, with obesity affecting about 12.7 million children and adolescents for the past decade.⁷ Children and adolescents who are obese are likely to be obese as adults and at risk in adulthood for health problems such as heart disease, type 2 diabetes, stroke, several types of cancer, and osteoarthritis.¹

Because of the persistent high prevalence of dental caries and childhood obesity, the need remains for research, policy, advocacy, education, and professional engagement to further advance healthy dietary practices for infants, children, and adolescents.

National and International Dietary Guidelines

The U.S. Department of Health and Human Services and the U.S. Department of Agriculture develop dietary guidelines every 5 years to help Americans aged 2 and older make healthy food choices to help prevent chronic disease and enjoy a healthy diet. The 2015–2020 Dietary Guidelines for Americans emphasize consuming a healthy eating pattern that includes a variety of vegetables, fruits, grains, fat-free or low-fat dairy products, a variety of protein foods, and oils with limits on saturated and trans fats, added sugars, and sodium. The Dietary Guidelines for Americans give specific quantitative guidelines for consumers, such as consuming less than 10 percent of calories per day from added sugars, consuming less than 10 percent of calories per day from saturated fats, and consuming less than 2,300 milligrams per day of sodium.⁸ In addition, the World Health Organization recommends reducing the intake of sugar to less than 10 percent of total energy intake, and to reduce children’s risk of weight gain and dental caries, limiting the intake of sugar to less than 5 percent of total energy intake per day (less than 16 grams of sugar for children aged 4–8).⁹ Additionally, the American Heart Association recommends reducing sugar consumption in children and adolescents to < 25 grams of added sugar per day.¹⁰ One should note that eight ounces of soft drink contain approximately 26 grams of sugar.

Dietary Recommendations in Dental Practice

Dietary choices affect oral health as well as general health and well-being. Establishment of a dental home by 12 months of age allows the institution of individualized caries-preventive strategies,

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

including dietary recommendations and appropriate oral hygiene instruction, as the primary teeth begin to erupt.¹¹

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.¹² A systematic review cariogenic potential of milk and infant formulas in animal models found that cow's milk and human milk are less cariogenic than sucrose solutions.¹³ Another systematic review concluded that children exposed to long durations of breastfeeding up to age 12 months had reduced risk of caries. However, children breastfed more than 12 months has an increased risk of caries; and those children breastfed nocturnally or more frequently had a further increased caries risk.¹⁴

The AAP 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 (i.e., not a bottle or covered cup) and as part of a meal or snack.¹⁵ 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 (e.g., juice, formula, soda) increase the risk of caries.¹⁶

It has been shown that nearly 54 percent of US preschool children were given some form of over-the-counter (OTC) medications, most commonly as analgesics, antipyretics, and cough and cold medications.¹⁷ Numerous OTC and prescribed oral liquid medications have been found to have a high sugar content to increase palatability and acceptance by children.¹⁸⁻²⁰ Frequent ingestion of sugar-sweetened medications is associated with dental caries in chronically ill children.^{18,19,21} To motivate children to consume vitamins, numerous companies have made sugar containing jelly, gummy, and candy-like chewable vitamin supplements; and cases of vitamin A toxicity have been reported as a result of excessive consumption of candy-like vitamin supplements.²² The AAP has recommended that the optimal way to obtain adequate amounts of vitamins is to consume a healthy and well-balanced diet.²³

With regard to obesity, oral health professionals need to be more engaged in identifying children at risk for obesity and provide appropriate referral to pediatrician or nutritional specialist. A 2016 survey of pediatric dentists reported that 17 percent offer childhood obesity interventions, while 94 percent offer information or other interventions on the consumption of sugar sweetened beverages. Barriers

to providing healthy weight interventions including fear of offending the parent, appearing judgmental, creating parent dissatisfaction, and lack of parental acceptance of advice about weight management from a dentist.²⁴

ECC can be a particularly aggressive form of caries, beginning soon after tooth eruption, developing on smooth surfaces, progressing rapidly, and having a lasting detrimental impact on the dentition (AAPD Infant Oral Health Guideline). Consequences of this disease may lead to more widespread health issues (Acs et al 1992; Low, Tan, and Schwartz 1999; Clarke et al 2006). Caries and its sequelae are among the most prevalent health problems facing American infants, children, and adolescents. Frequent ingestion of sugars and other carbohydrates (eg, fruit juices, acidic beverages) and prolonged contact of these substances with teeth are particular risk factors in the development of caries. Along with increasing caries risk, increased consumption of sugar-sweetened beverages and snack foods also has been linked to obesity (Ludwig, Peterson, and Gormaker 2001; Malik, Schulze, and Hu 2006). Childhood overweight and obesity have reached epidemic proportions worldwide, and the prevalence among US youth has quadrupled in children ages six to 11 and nearly doubled in adolescents ages 12 to 19 in the past 25 years (Hedley et al 2004). Results from a study 2007-2008 that measured height and weight estimated 16.9 percent of children and adolescents in the US aged two through 19 were obese (Ogden and Carroll 2010). Differences were seen in estimates among ethnic groups, ranging from the lowest (14.5 percent) among non-Hispanic white girls to the highest (26.8 percent) among Mexican-American boys (Ogden and Carroll 2010). Health risks associated with childhood overweight and obesity are strong indicators for predisposition to adult morbidity and mortality and include type II diabetes, cardiovascular disease (hypertension, hypercholesterolemia, and dyslipidemia), and psychological stress (depression and low self-esteem), as well as respiratory (obstructive sleep apnea and asthma), orthopedic (genu varum and slipped capital femoral epiphysis), and hepatic (steatohepatitis) problems (AAP Obesity Policy).

Although studies are limited in the pediatric population, one study indicated that adolescents aged 17 to 21 years had an increased risk of periodontal disease for each one kg increase in body weight and one cm increase in waist circumference (Reeves et al 2006). Incipient periodontal disease has been found to be increased in children and adolescents with diabetes (Lalla et al 2006). Excessive consumption of fruit juice has been associated with small stature in some children (Dennison, Rockwell, and Baker 1997).

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

To help the public make choices for a healthy diet, the USDA and DHHS published Dietary Guidelines for Americans (Tinanoff and Palmer 2000; USDA/USDHHS 2010). These guidelines include:

- Eating a variety of nutrient dense foods and beverages.
- Balancing foods eaten with physical activity to maintain a healthy body mass index.
- Maintaining a caloric intake adequate to support normal growth and development and to reach or maintain a healthy weight.
- Choosing a diet with plenty of vegetables, fruits, and whole grains and low in fat, saturated (especially trans saturated) fat, and cholesterol.
- Using sugars and salt (sodium) in moderation (Tinanoff and Palmer 2000; USDA/USDHHS 2010).

Food companies can encourage food and beverage selections that contribute to healthier lifestyles by increasing the prominence, simplicity, and uniformity of nutritional information on food packaging labels.

The AAPD, in its efforts to promote optimal health for infants, children, and adolescents, supports the position of the Academy of Nutrition and Dietetics that all children should have access to healthy food and nutrition programs that ensure the availability of a safe and adequate food supply that promotes optimal physical, cognitive, and social growth and development (Stang and Bayerl 2010).

The AAPD encourages:

- Educating the public about the association between frequent consumption of carbohydrates and caries.
- Educating the public about other health risks associated with excess consumption of simple carbohydrates, fat, saturated fat, and sodium.

Furthermore, the AAPD encourages:

- Pediatric dentists and other health care providers who treat children to provide dietary and nutrition counseling (commensurate with their training and experience) in conjunction with other preventive services for their patients.
- Food and beverage manufacturers to make nutritional content on food labels more prominent

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

and “consumer friendly”.

- ~~Consumers to monitor the presence and relative amounts of carbohydrates and saturated fats as listed on food labels.~~
- ~~School health education programs and food services to promote nutrition programs that provide well balanced and nutrient dense foods of low caries risk, in conjunction with encouraging increased levels of physical activity.~~
- ~~Research, education, and appropriate legislation to promote diverse and balanced diets.~~
- ~~Pediatric dentists and other health care providers to recommend or prescribe sugar free medications whenever possible.~~
- ~~Educating parents of the risks of overdose from excessive consumption of candy like chewable vitamin supplements.~~

~~Additional information on nutrition recommendations may be obtained from websites for the USDA (USDA <http://www.choose-myplate.gov>), USDA and DHHS (Stang and Bayerl 2010), Academy of Nutrition and Dietetics (Academy of Nutrition and Dietetics, <http://www.eatright.org>), and Centers for Disease Control and Prevention (CDC, <http://www.cdc.gov/nutrition/everyone/>).~~

The AAPD supports:

- The recommendation of national and international organizations to reduce the consumption of sugar to less than 10 percent of total energy intake; and to reduce children’s risk of weight gain and dental caries, sugar intake should be less than 5 percent of total energy intake (less than 16 grams of sugar for children aged 4–8).
- Breast feeding of infants prior to 12 months of age to ensure the best possible health and developmental and psychosocial outcomes of infants. ~~with care to wiping or brushing as the first primary tooth begins to erupt and other dietary carbohydrates are introduced.~~
- Education of health professionals and parents regarding daily sugar-consumption recommendations, as well as the sugar content foods, beverages and oral liquid medications.

- Dental professionals becoming more engaged in identifying children who consume frequent or large quantities of sugar-containing foods and beverages, and who are at risk for dental caries and obesity.
- Dental professionals engagement in nutrition education; and providing, when necessary, appropriate referral for dietary counseling from pediatrician or nutritional specialist

References

1. U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans, 8th ed, Washington, DC:U.S. Department of Health and Human Services and U.S. Department of Agriculture; 2016.
2. Wang YC, Bleich SN, Gortmaker SL. Increasing caloric contribution from sugar-sweetened beverage, and 100 percent fruit juices among US children and adolescents, 1988-2004. Pediatrics 2008;121(6):e1604-14.
3. Han E, Powell LM. Consumption patterns of sugar-sweetened beverages in the United States. J Acad Nutr Diet. 2013;113(1):43-53.
4. Dye BA, Hsu KL, Afful J. Prevalence and measurement of dental caries in young children. Pediatric Dent 2015;37(3):200-16.
5. Slayton RL, Fontana M, Young D, Tinanoff, N, Nový B, Robinson L. Dental Caries Management in Children and Adults. Institute of Medicine, 2016; Discussion Paper, National Academy of Medicine, Washington, DC. Available at: “<https://nam.edu/dental-caries-management-in-children-and-adults/>”. Accessed March 21, 2017. (Archived by WebCite® at “<http://www.webcitation.org/6p8Spd8l9>”)
6. Burt BA, Satishchandra P. The relationship between low birthweight and subsequent development of caries: A systematic review. J Dent Ed 2001;65(10):1017-23.
7. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999–2010. JAMA 2012;307(5):483-90.
8. CDC Guide to Strategies for Reducing the Consumption of Sugar-sweetened Beverages. Available at: “http://www.cdph.ca.gov/SiteCollectionDocuments/StratstoReduce_Sugar_Sweetened_Bevs.pdf”. Accessed March 21, 2017. (Archived by WebCite® at

- [“http://www.webcitation.org/6p8T5uXrT”](http://www.webcitation.org/6p8T5uXrT))
9. World Health Organization. Guideline: Sugars Intake for Adults and Children. Geneva, Switzerland: World Health Organization; 2015. Available at: “http://apps.who.int/iris/bitstream/10665/149782/1/9789241549028_eng.pdf?ua=1”. Accessed March 21, 2017. (Archived by WebCite® at “http://www.webcitation.org/6p8TH1hvk”)
 10. Vos MB, Kaar JL, Welsh JA, Van Horn LV, et al. Added sugars and cardiovascular disease risk in children: A scientific statements from the American Heart Association. *Circulation* 2016; PMID:2755094, August 22.
 11. American Academy of Pediatric Dentistry. Policy on the dental home. Available at “http://www.aapd.org/media/Policies_Guidelines/P_DentalHome1.pdf”. Accessed March 21, 2015. (Archived by WebCite® at “http://www.webcitation.org/6p8TNugUm”)
 12. American Academy of Pediatrics. Policy statement: Breastfeeding and the use of human milk. *Pediatrics* 2012;129 (3):e827-41.
 13. Aarthi J, Muthu S, Sujatha S. Cariogenic potential of milk and infant formulas: A systematic review. *Eur Arch Paediatr Dent* 2013 Oct;14(5):289-300. doi: 10.1007/s40368-013-0088-6. Epub 2013, Oct 9.
 14. Tham R, Bowatte G, Dharmage SC, Tan DJ, et al. Breastfeeding and the risk of dental caries: A systematic review and meta-analysis. *Acta Paediatr* 2015;104(467):62-84. DOI: 10.1111/apa.13118. December.
 15. 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.
 16. Tinanoff N, Kanellis MJ, Vargas CM. Current understanding of the epidemiology, mechanisms, and prevention of dental caries in preschool children. *Pediatr Dent* 2002;24(6):543-51.
 17. Kogan MD, Pappas G, Yu SM, Kotelchuck M. Over-the-counter medication use among US preschool children. *J Am Med Assoc* 1994;272(13):1025-30.
 18. Kenny DJ, Somaya P. Sugar load of oral liquid medications on chronically ill children. *J Can Dent Assoc* 1989; 55(1):43-6.
 19. Maguire A, Rugg-Gunn AJ, Butler TJ. Dental health of children taking antimicrobial and non-antimicrobial liquid oral medication long-term. *Caries Res* 1996;30(1):16-21.
 20. Bigeard L. The role of medication and sugars in pediatric dental patients. *Dent Clin North Am*

- 2000;44(3):443-56.
 21. Foster H, Fitzgerald J. Dental disease in children with chronic illness. Arch Dis Child 2005;90(7):703-8.
 22. Lam HS, Chow CH, Poon WT, et al. Risk of vitamin A toxicity from candy-like chewable vitamin supplements for children. Pediatrics 2006;118(2):820-4.
 23. Gidding SS, Dennison BA, Birch LL, et al. Dietary recommendations for children and adolescents: A guide for practitioners. Pediatrics 2006;117(2):544-59.
 24. Wright R, Casamassimo PS. Assessing the attitudes and actions of Pediatric Dentists toward childhood obesity and sugar-sweetened beverages. J Pub Hlth Dent (in press, 2017).
- ~~Academy of Nutrition and Dietetics. Available at: "http://www.eatright.org". Accessed March 30, 2012.~~
- ~~Acs G, Lodolini G, Kaminshy S, Cisneros GJ. Effect of nursing caries on body weight in pediatric populations. Pediatr Dent 1992;14(5):302-5.~~
- ~~Alaki S, Burt BA, Garetz SL. The association between antibiotics usage in early childhood and early childhood caries. Oral Health 2010;100(1):32-40.~~
- ~~American Academy of Pediatric Dentistry. Guideline on infant oral health care. Pediatr Dent 2012;34(special issues):132-6.~~
- ~~American Academy of Pediatrics Committee on Nutrition. Policy statement on prevention of pediatric obesity and overweight. Pediatrics 2003;112(2):424-30. Reaffirmed October, 2006.~~
- ~~CDC. Nutrition for everyone. Available at: "http://www.cdc.gov/nutrition/everyone/". Accessed March 30, 2012.~~
- ~~Clarke M, Locker D, Berall G, Pencharz P, Kenny DJ, Judd P. Malnourishment in a population of young children with severe early childhood caries. Pediatr Dent 2006;28(3):254-9.~~
- ~~da Fonseca MA, Evans M, Teske D, Thikkurissy S, Amini H. The impact of oral health on the quality of life of young patients with congenital cardiac disease. Cardiol Young 2009;19(3):252-6.~~
- ~~Dennison BA, Rockwell HL, Baker SL. Excess fruit juice consumption by preschool-aged children is associated with short stature and obesity. Pediatrics 1997;99(1):15-22.~~

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

- Erickson PR, Mazhari E. Investigation of the role of human breast milk in caries development. *Pediatr Dent* 1999;21(2):86-90.
- Feldens CA, Giugliani ER, 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. Epub 2010 Sep 13.
- Hedley AA, Ogden CL, Johnson CL, Carroll MD, Curtin LR, Flegal KM. Overweight and obesity among US children, adolescents, and adults, 1999-2002. *JAMA* 2004; 291(23):2847-50.
- 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.
- Lalla E, Cheng B, Lal S, et al. Periodontal changes in children and adolescents with diabetes: A case-control study. *Diabetes Care* 2006;29(2):295-9.
- 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.
- Ludwig DS, Peterson KE, Gormaker SL. Relation between consumption of sugar-sweetened drinks and childhood obesity: A prospective, observational analysis. *Lancet* 2001;357(9255):505-8.
- Malik VS, Schulze MB, Hu FB. Intake of sugar-sweetened beverages and weight gain: A systematic review. *Am J Clin Nutr* 2006;84(2):274-88.
- Mohebbi SZ, Virtanen JJ, 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.
- Ogden CL, Carroll MD. Prevalence of obesity among children and adolescents: United States, trends 1963-1965 through 2007-2008. In: *Health e-stat*. Centers for Disease Control and Prevention. June, 2010. Available at: "http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.pdf". Accessed June 24, 2012.
- Reeves AF, Rees JM, Schiff M, Hujoel P. Total body weight and waist circumference associated with chronic periodontitis among adolescents in the United States. *Arch Pediatr Adolesc Med* 2006;160(9):894-9.
- Reisine S, Douglass JM. Psychosocial and behavioral issues in early childhood caries. *Community Dent Oral Epidemiol* 1998;26(1 Suppl):32-44.

This draft does not constitute an official AAPD health oral policy or clinical guideline until approval by the General Assembly. Circulation is limited to AAPD members.

~~Stang J, Bayerl CT, American Dietetic Association. Position of the American Dietetic Association: Child and adolescent nutrition assistance programs. J Am Diet Assoc 2010;110(5):791-9.~~

~~Tinanoff N, Palmer CA. Dietary determinants of dental caries and dietary recommendations for preschool children. J Public Health Dent 2000;60(3):197-206; discussion 207-9.~~

~~US Dept of Agriculture, US Dept of Health and Human Services. Dietary Guidelines for Americans. 7th ed. Washington, DC: US Dept of Agriculture and US Dept of Health and Human Services; 2010. Available at: "http://www.health.gov/dietaryguidelines/dga2010/dietary-guidelines2010.pdf". Accessed June 24, 2012.~~

~~US Dept of Agriculture. Available at: "http://www.choose-myplate.gov". Accessed March 30, 2012.~~