Policy on Nutrition and Dietary Counseling in the Pediatric Dental Setting

Latest Revision
2026

Abbreviations
AAP: American Academy of Pediatrics.
AAPD: American Academy of Pediatric Dentistry.
AHA: American Heart Association.
BMI: Body mass index.
LCS: Low-calorie sweeteners.
Majr: Medical subject headings major topic.
MeSH: Medical subject heading.
NHANES: National Health and Nutrition Examination Survey.
SCBs: Sugar-containing beverages.
SNAP: Supplemental Nutrition Assistance Program.
SSB: Sugar-sweetened beverages.
USDA: US Department of Agriculture.
Tiab: Title and abstract.
WIC: Women, Infants, and Children

** Used in the PubMed search to identify all terms that begin with this truncated base.*

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, adolescents, and persons with special health care needs. A healthy diet is essential to optimal growth and development and prevention of chronic diet-related diseases such as caries, obesity, and cardiovascular disease. A dietary assessment and individualized counseling embedded in evidence-based nutritional recommendations will encourage healthy feeding at all ages.

Methods
This policy was developed by the Clinical Affairs Committee, adopted in 1993,[1] and last revised in 2022.[2] This revision is based upon a review of current dental and medical literature, including a search of the PubMed/MEDLINE database using the terms: (*evidence based dentistry* [**Majr**] OR *pediatric dentistry* [Majr] OR *dental care for children* [Majr] OR *paediatric dentistry* [**Tiab**] OR *dental health services* [Majr] OR *dentistry* [Majr] OR *public health dentistry* [Majr] OR *community dentistry* [Majr] OR *oral health* [Majr]) AND (*nutrition policy* [majr] OR ***LCS*** [Tiab] OR *low-calorie sweetener** OR **NHANES** [tiab] OR *National Health and Nutrition Examination Survey* [Tiab] OR *sugar-sweetened beverages* [Majr] OR ***SSB*** [Tiab] OR *sugar-sweetened beverage** OR ***SCBs*** [Tiab] OR *sugar-containing beverage** OR *school nutrition program** OR *school lunch program** OR *child nutrition sciences* [Majr] OR *child nutrition disorders* [**MeSH**] OR *diet, healthy* [MeSH] OR *food assistance* [MeSH] OR ***SNAP*** *benefit** OR f*ood assistance* [Majr] OR ***WIC*** [Tiab]); fields: all; limits: within the last 10 years, humans, English, and ages birth through 18. Three hundred thirty-one papers were identified and reviewed by title and abstract. Expert and consensus opinions by experienced researchers and clinicians, including recommendations[3,4] developed through a collaboration of the Academy of Nutrition and Dietetics, the AAPD, the American Academy of Pediatrics (**AAP**), and the American Heart Association (**AHA**) under the leadership of Healthy Eating Research, also were considered.

Background

A healthy diet in early childhood is essential to supporting optimal growth and development and preventing chronic diet-related diseases. An assessment of feeding habits and nutritional intake is an important component of the initial and periodic dental visit, particularly as it relates to caries risk and other oral conditions. During infancy, feeding habits that affect caries risk include frequency of breastfeeding or bottle use, exposure to fluoridated water, and introduction of solid foods.[5,6] Experts across health care disciplines recognize the importance of breastfeeding during infancy[3,7] Human milk and breastfeeding 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.[8,9] A longitudinal study concluded that children exposed to long durations of breastfeeding up to age 12 months had reduced risk of caries.[10] However, children breastfed more than 12 months had an increased risk of caries, and those children breastfed nocturnally or more frequently had a further increased caries risk.[11,12] Bottle feeding to sleep at 24 months of age, beyond the recommended age of bottle cessation, is associated with greater early childhood caries (ECC) prevalence and overweight risk in early childhood.[13] Communicating appropriate sleep, settling, and bottle-cessation methods throughout early childhood can help with prevention.[13] Plain (ie, not flavored, sweetened, or carbonated) fluoridated water can be introduced beginning at 6 months of age for children who have started solid foods to familiarize the child with water as well as with drinking from a cup; the volume of water offered is based on the intake of other recommended beverages.[3,7] Plain drinking water has been recommended as the primary beverage for hydration throughout childhood and adolescence.[4] Drinking fluoridated water is a safe and effective method of reducing caries.[4,14] While considered safe in limited quantities, plain carbonated water is not recommended due to the negative effects of acidic beverages on the dentition.[4]

Establishment of a dental home by 12 months of age provides time-critical opportunities to assess caries risk and implement individualized caries-preventive strategies, including dietary recommendations, as the primary teeth begin to erupt.[15] Beverages contribute significantly to the early diet. Feeding that avoids sugar-sweetened beverages and foods is essential to good oral health. Food and flavor preferences may be established during the early years.[7,16] Establishing health dietary patterns during the first 2 years of life can have lifelong health benefits.[16]

In 2019 and 2025, consensus statements on health beverage consumption for children 0-5 years and 5-18 years, respectively, were developed through a collaboration of the Academy of Nutrition and Dietetics, AAPD, AAP, and AHA under the leadership of Healthy Eating Research, a nutrition research organization.[3,4] These organizations recommend breast milk, infant formula, water, and plain milk for children under age 5.[3] Fluoridated water is the preferred beverage for children and adolescents when consumed outside of meals or snacks.[4,7] Plant-based/nondairy milks (eg, almond, rice, oat) were noted to provide no unique nutritional value, but unsweetened varieties may be useful when medically indicated (eg, allergy or intolerance to cow's milk) or to meet specific dietary preferences (eg, vegan).[3,4,7] The consensus statements cautioned against beverages that are sources of added sugars, including flavored milks (eg, chocolate, strawberry).[3,4] The AHA also recommends that children less than 2 years of age avoid added sugars in their diets.[17] Sugar-sweetened beverages (**SSB**) include any liquid (eg, regular soda, fruit drinks, sports drinks, tea and coffee drinks, energy drinks) with added sugar (eg, fructose, corn syrup, sucrose [table sugar], agave syrup, high fructose corn syrup, rice syrup, glucose, dextrose, cane sugar, beet sugar, turbinado sugar, maltose, lactose, fruit juice concentrate, honey, non-nutritive sweeteners such as aspartame, sucralose, saccharin, xylitol, and acesulfame K).[18-20] A longitudinal study found introduction of SSB before age 1 was associated with obesity at age 6.[21] Sugar-containing beverages (SCB) include SSB as well as beverages in which sugar, generally glucose or fructose, is naturally present, such as 100% fruit juice. In 2017, the AAP reaffirmed that 100% juice and juice drinks have no essential role in a healthy diet for children and contribute to excessive calorie intake and risk of dental caries in children.[22] AAP recommendations include: juice should not be introduced to infants before 1 year of age; intake of juice should be limited to 4 ounces a day for children 1 through 3 years of age, 4 to 6 ounces for children 4

through 6 years of age, and 8 ounces for children 7 through 18 years of age; toddlers should not be given juice in containers that foster easy consumption; and toddlers should not be given juice at bedtime.[22] The mentioned volumes are recommended maximums, not daily requirements, and fresh fruit is preferred to fruit juice.[22] The 2019 consensus statement also advised against a wide variety of new beverage markets that are targeted to young children (eg, toddler formulas) as they provide no unique nutritional value beyond what could be obtained with healthy foods and may contain added sugars.[3]

Nonsugar sweeteners are not recommended as a sugar substitute for children and adolescents.[3,4] Because the long-term health effects of consumption of low-calorie sweeteners and nonsugar sweeteners by children and adolescents is unknown and they may pose potential health risks,[7,23] their consumption is not recommended as part of a healthy diet.[3,4,24]Additionally, nonnutritive sweeteners have potential to heighten taste preference for sweets in children and paradoxically contribute to risk of obesity.[24] Consumption of caffeine can cause negative health effects (eg, sleeplessness, anxiety, headaches, gastrointestinal issues) in children and adolescents and is not recommended.[25]

In addition to increasing caries risk, frequent consumption of acidic beverages such as sports drinks, energy drinks, and carbonated beverages can lead to enamel erosion and dental sensitivity.[26] Likewise, acidic foods (eg, sour candies, citrus fruits) are potential contributors to enamel erosion.[27]

The bidirectional relationship between systemic health and oral health highlights the need for dentists to have an in-depth awareness of nutrition and diet. Dentists may encourage children to eat a variety of foods and avoid satiating with milk instead of solids during the complementary feeding period between the age of 6-23 months due to risk for anemia.[28] Recognition of oral manifestations of systemic conditions triggered by diet may aid in diagnosis and inform need for medical intervention. Patients with signs of erosion will benefit from evaluation for possible gastroesophageal reflux disease (GERD)[29]; dietary counseling may include avoidance of spicy foods that could exacerbate reflux and dental problems. When evaluating dietary intake in patients who exhibit selective eating habits or pediatric feeding disorders, heightened attention to gingival signs of malnutrition may be warranted. Patients with vitamin deficiencies that result in gingival erythema, edema, and bleeding(have been reported.[30] Oral signs of gastrointestinal conditions (eg, mucosal changes associated with Crohn's disease) may highlight the need for further discussion of diet and referral to a gastrointestinal specialist.[31]

The causes of dental caries and obesity are multifactorial, with both having significant dietary components. Contributors to obesity include genetic components, lifestyle, and environmental variables, as well as nutritional factors.[32] When consumed in excess, beverages containing sugar or saturated fats can be harmful.[3] A longitudinal study found introduction of SSB before age 1 was associated with obesity at age 6.[21] An updated systemic review and meta-analysis confirms that SSB consumption promotes higher body mass index (**BMI**) and body weight in children and adults.[19] Health initiatives in the US and other countries have specifically targeted SSB in an effort to reduce the number of calories that children and adolescents consume per day.[33] Youth with obesity are at increased risk for health problems (eg, heart disease, type 2 diabetes) during the teenage years and beyond.[19]

BMI is a simple, non-invasive means to monitor growth patterns and weight trends and help assess the risk of obesity. While BMI can be an assessment tool, it is not a stand-alone measure for an individual's overall health. The Centers for Disease Control and Prevention provides an online calculator for BMI[34] as well as forms to record BMI[35] for age and gender. Oral health care professionals can monitor BMI to help identify children at risk for obesity and provide appropriate referrals to pediatric or nutritional specialists. A 2016 survey of pediatric dentists reported 17% offer childhood obesity interventions, while 94% offer information or other interventions on the consumption of SSB.[36] Barriers to addressing weight concerns in the dental setting include fear of offending the parent, appearing judgmental, creating parent dissatisfaction, and lack of parental acceptance of advice about weight management from a dentist.[36]

The US Department of Health and Human Services and the US Department of Agriculture (**USDA**) 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 *2025-2030 Dietary Guidelines for Americans*[37] includes guidance regarding food groups, macronutrients, added sugars, and sodium across life stages. It also emphasizes basing caloric needs on age, weight, height, and level of physical activity and limiting highly-processed foods.[37] Specific quantitative recommendations include limiting added sugars to no more than 10 grams per meal.[37]

To prevent unhealthy weight gain, the World Health Organization recommends energy intake and expenditure be balanced, with a goal of total fat not exceeding 30% of energy intake and a shift from away from saturated fat and trans fats.[38] Limiting intake of free sugars to less than 5% of total energy intake per day offers additional health benefits.[38] Additionally, the AHA recommends limiting consumption of added sugars to no more than 6% of calories[39]; for children and adolescents, their recommended limit is less than 25 grams (100 calories or approximately 6 teaspoons) of added sugar per day.[17] Notably, 8 ounces (ie, 1 measured cup) of regular soft drink contain approximately 26 grams of sugar; a 12 ounce can of regular soda contains approximately 10 teaspoons of sugar and has no nutritional value.[39]

Snacking can help a child meet daily nutritional requirements. Nearly 25% of children's daily caloric intake may come from snacks.[40p4] The AAP recommends that toddlers be given 2 to 3 healthy snacks daily to supply nutrients that the child cannot consume at mealtime; they should be consumed at a planned time while seated with adult supervision.[41] The AAP cautions against confusing snack time with treats for fun as well as continuous/all day snacking.[41]

Using 2021-2023 National Health and Nutrition Examination Survey (NHANES) data, the USDA reported more than 20% of males and female ages 6 through 19 consumed 4 or more snacks daily.[42] The USDA has established guidelines for healthy snacks at school.[40] Standards for foods to qualify as a school "smart snack" include

> "• Be a grain product that contains 50 percent or more whole grains by weight (have a whole grain as the first ingredient); or
> • Have as the first ingredient a fruit, a vegetable, a dairy product, or a protein food; or
> • Be a combination food that contains at least ¼ cup of fruit and/or vegetable (for example, ¼ cup of raisins with enriched pretzels); and
> • The food must meet the nutrient standards for calories, sodium, fats, and total sugars".[40p9]

A customized approach to dietary counseling is optimal for encouraging health behaviors that will improve both oral and systemic health. Nutritional assessment tools can be helpful in determining where an individual may benefit from dietary modifications.[43,44] Compliance with dietary recommendations is affected by food access and affordability.[45] Low food security is tied to increased risk for obesity, developmental problems, and poorer mental health among children.[45,46] Dietary recommendations that account for social and structural determinants of health will help facilitate healthy and practical food choices.[47,48] Food security screening tools may be useful[46] and responsible implementation in the clinical setting includes counseling on how to seek assistance when possible (eg, food pantries, public benefits enrollment).

Policy statement

The AAPD recognizes a healthy diet in early childhood is essential to optimal growth and development and prevention of chronic diet-related diseases such as caries, obesity, and cardiovascular disease. Through dietary and nutritional counseling, dentists assume a significant role in preventing oral disease and promoting overall health among children. The AAPD especially recognizes the importance of and supports

- breastfeeding of infants prior to 12 months of age to ensure the best possible health and developmental and psychosocial outcomes for infants.
- introducing plain, fluoridated water to the infant's diet beginning at age 6 months for hydration, to familiarize the child with the taste, and for the caries-protective benefits of fluoride.
- fluoridated water as the preferred source of hydration for children and adolescents.
- avoiding added sugars in the diet of children younger than age 2 and minimizing exposure to sweet-tasting drinks and foods during early life to reduce taste preferences for sweets.
- recommendations from the USDA for individuals aged 2 and older to consume a diet of nutrient-dense lean or low-fat foods from across 5 food groups (ie, fruits, vegetables, protein, grains, and dairy) that are prepared without added salt, starches, sugars, or fat.
- limiting consumption of sugar to less than 5% of total energy intake to reduce children's risk of weight gain and dental caries.
- establishing healthy beverage consumption patterns during the first 5 years to promote intake of healthy nutrients, limit excess intake of sugars and saturated fats, and initiate beneficial long-term dietary habits.
- unsweetened nutrient-dense snacks that supplement meals to meet daily nutritional requirements.
- avoiding drinks with nonsugar sweeteners and beverages with caffeine and other stimulants to minimize potential health-related risks.
- additional health practices such as meal portion control and energy balance to help prevent overweight and obesity.

Furthermore, the AAPD encourages:

- education of health professionals and the public regarding the bidirectional relationship between systemic health and oral health as well as healthy dietary patterns and daily nutritional requirements, including awareness of the sugar content of foods and beverages.
- oral healthcare professionals to identify children whose dietary patterns place them at increased risk for dental caries and obesity and, when necessary, refer for dietary counseling from a pediatric or nutritional specialist.
- a healthy, active lifestyle so energy consumption and energy expenditure promote general health and wellbeing.
- public policies and nutrition assistance programs that enhance access to nutritious food to improve overall health outcomes.
- additional research on the benefits and effects of long-term consumption of nonsugar sweeteners and full-fat dairy products by children.

References

1. American Academy of Pediatric Dentistry. Dietary recommendations for oral health. American Academy of Pediatric Dentistry; 1993.
2. American Academy of Pediatric Dentistry. Policy on dietary recommendations for infants, children, and adolescents. *The Reference Manual of Pediatric Dentistry*. American Academy of Pediatric Dentistry; 2022:96-100.
3. Lott M, Callahan E, Welker Duffy E, Story M, Daniels S. Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations. Consensus Statement. Healthy Eating Research; September 2019. Accessed January 9, 2026. https://healthyeatingresearch.org/wp-content/uploads/2019/09/HER-HealthyBeverage-ConsensusStatement.pdf
4. Lott M, Reed L, Deuman K, Story M, Cradock A, Patel AI. Healthy Beverage Consumption in School-Age Children and Adolescents: Recommendations from Key National Health and Nutrition Organizations. Consensus Statement. Healthy Eating Research; January 2025. Accessed January 9, 2026. https://healthyeatingresearch.org/wp-content/uploads/2024/11/HER_ConsensusStatement_FINAL.pdf

5. American Academy of Pediatric Dentistry. Policy on early childhood caries (ECC): Consequences and preventive strategies. *The Reference Manual of Pediatric Dentistry*. American Academy of Pediatric Dentistry; 2026:PENDING.
6. van Meijeren-van Lunteren AW, Voortman T, Elfrink MEC, Wolvius EB, Kragt L. Breastfeeding and childhood dental caries: Results from a socially diverse birth cohort study. *Caries Res*. 2021;55(2):153-161. DOI: 10.1159/000514502
7. Lott M, Callahan E, Welker Duffy E, Story M, Daniels S. Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations. Technical Scientific Report. Healthy Eating Research; September 2019. Accessed January 9, 2026. https://healthyeatingresearch.org/wp-content/uploads/2019/09/HER-HealthyBeverageTechnicalReport.pdf
8. Meek JY, Noble L; American Academy of Pediatrics Section on Breastfeeding. Policy statement: Breastfeeding and the use of human milk. *Pediatrics*. 2022;150(1):e2022057988. DOI: 10.1542/peds.2022-057988
9. Meek JY, Noble L. Technical report: Breastfeeding and the use of human milk. *Pediatrics*. 2022;150(1):e2022057989. DOI: 10.1542/peds.2022-057989
10. Sritangsirikul S, Kitsahawong K, Matangkasombut O, Seminario AL, Pitiphat W. A longitudinal study on the impact of breastfeeding with or without formula milk on dental caries. *Sci Rep*. 2024;14:10384. DOI: 10.1038/s41598-024-60582-w
11. Panchanadikar NT, S A, Muthu MS, H S, Jayakumar P, Agarwal A. Breastfeeding and its association with early childhood caries - An umbrella review. *J Clin Pediatr Dent*. 2022;46(2):75-85. DOI: 10.17796/1053-4625-46.2.1
12. Shrestha SK, Arora A, Manohar N, Ekanayake K, Foster J. Association of breastfeeding and early childhood caries: A systematic review and meta-analysis. *Nutrients*. 2024;16(9):1355. DOI: 10.3390/nu16091355
13. Cheng H, John J, Scott J, et al. Bottle feeding to sleep beyond 12 months is associated with higher risk of tooth decay and overweight in Australian children: Findings from the Healthy Smiles Healthy Kids cohort study. *Aust N Z J Public Health*. 2025;49(2):100224. DOI: 10.1016/j.anzjph.2025.100224
14. American Academy of Pediatric Dentistry. Fluoride therapy. *The Reference Manual of Pediatric Dentistry*. American Academy of Pediatric Dentistry; 2026:PENDING.
15. American Academy of Pediatric Dentistry. Policy on the dental home. *The Reference Manual of Pediatric Dentistry*. American Academy of Pediatric Dentistry; 2026:PENDING.
16. Beckerman JP, Alike Q, Lovin E, Tamez M, Mattei J. The development and public health implications of food preferences in children. *Front Nutr*. 2017;4:66. DOI: 10.3389/fnut.2017.00066
17. Vos MB, Kaar JL, Welsh JA, et al. Added sugars and cardiovascular disease risk in children: A scientific statement from the American Heart Association. *Circulation*. 2017;135(19):e1017-e1034. DOI: 10.1161/CIR.0000000000000439
18. Centers for Disease Control and Prevention. Get the facts: Sugar-sweetened beverages and consumption. January 11, 2024. Accessed January 9, 2026. https://www.cdc.gov/nutrition/php/data-research/sugar-sweetened-beverages
19. Nguyen M, Jarvis SE, Tinajero MG, et al. Sugar-sweetened beverage consumption and weight gain in children and adults: A systematic review and meta-analysis of prospective cohort studies and randomized controlled trials. *Am J Clin Nutr*. 2023;117(1):160-174. DOI: 10.1016/j.ajcnut.2022.11.008
20. US Department of Agriculture, US Department of Health and Human Services. Dietary guidelines for Americans, 2025-2030. January 2026. Accessed January 9, 2026. https://cdn.realfood.gov/DGA.pdf
21. Pan L, Li R, Park S, Galuska DA, Sherry B, Freedman DS. A longitudinal analysis of sugar-sweetened beverage intake in infancy and obesity at 6 years. *Pediatrics*. 2014;134(suppl 1):S29–S35. DOI: 10.1542/peds.2014-0646F
22. Heyman MB, Abrams SA. Fruit juice in infants, children, and adolescents: Current recommendations. *Pediatrics*. 2017;139(6):e20170967. DOI: 10.1542/peds.2017-0967

23. Lott M, Reed L, Deuman K, Story M, Cradock AL, Patel AI. Healthy Beverage Consumption in School-Age Children and Adolescents: Recommendations from Key National Health and Nutrition Organizations. Technical Scientific Report. Healthy Eating Research; January 2025. Accessed January 9, 2026. https://healthyeatingresearch.org/wp-content/uploads/2019/09/HER-HealthyBeverageTechnicalReport.pdf
24. Baker-Smith CM, de Ferranti SD, Cochran WJ; AAP Committee on Nutrition, Section on Gastroenterology, Hepatology, and Nutrition. The use of nonnutritive sweeteners in children. Reaffirmed August 2025. *Pediatrics*. 2019;144(5):e2019276. DOI: 10.1542/peds.2019-2765
25. Schering S. Children should avoid drinks with sugar, caffeine. *AAP News*. December 1, 2023. Accessed February 15, 2026. https://publications.aap.org/aapnews/news/27276/Children-should-avoid-drinks-with-sugar-caffeine
26. Memon MA, Khan MA, Ahmad M, et al. Sports drinks and dental erosion: Unveiling the evidence from a systematic review. *Curr Oral Health Rep*. 2025;12:11. DOI: 10.1007/s40496-025-00401-x
27. Chan AS, Tran TTK, Hsu YH, Liu SYS, Kroon J. A systematic review of dietary acids and habits on dental erosion in adolescents. *Int J Paediatr Dent*. 2020;30:713-733. DOI: 10.1111/ipd.12643
28. Miniello VL, Verga MC, Miniello A, Di Mauro C, Diaferio L, Francavilla R. Complementary feeding and iron status: "The unbearable lightness of being" infants. *Nutrients*. 2021;13(12):4201. DOI: 10.3390/nu13124201
29. De Oliveira PA, Paiva SM, De Abreu MH, Auad SM. Dental erosion in children with gastroesophageal reflux disease. *Pediatr Dent*. 2016;38(3):246-250.
30. Lešić S, Ivanišević Z, Špiljak B, Tomas M, Šoštarić M, Včev A. The impact of vitamin deficiencies on oral manifestations in children. *Dent J (Basel)*. 2024;12(4):109. DOI: 10.3390/dj12040109
31. Eckel A, Lee D, Deutsch G, Maxin A, Oda D. Oral manifestations as the first presenting sign of Crohn's disease in a pediatric patient. *J Clin Exp Dent*. 20171;9(7):e934-e938. DOI: 10.4317/jced.53914
32. Lee A, Cardel M, Donahoo WT. Social and environmental factors influencing obesity. [Updated 2019 Oct 12]. In: Feingold KR, Anawalt B, Boyce A, et al., eds. *Endotext* [Internet]. MDText.com, Inc.; 2000. Accessed January 9, 2026. https://www.ncbi.nlm.nih.gov/books/NBK278977/
33. von Philipsborn P, Stratil JM, Burns J, et al. Environmental interventions to reduce the consumption of sugar-sweetened beverages and their effects on health. *Cochrane Database Syst Rev*. 2019;2019(6):CD012292. DOI: 10.1002/14651858.CD012292.pub2
34. Center for Disease Control and Prevention. Child and teen BMI calculator. June 2025. Accessed January 8, 2026. https://www.cdc.gov/bmi/child-teen-calculator/index.html
35. Centers for Disease Control and Prevention. Clinical charts with 5th and 95th percentiles. September 2, 2024. Accessed January 9, 2026. https://www.cdc.gov/growthcharts/clinical_charts.htm#Set1
36. Wright R, Casamassimo PS. Assessing the attitudes and actions of pediatric dentists toward childhood obesity and sugar-sweetened beverages. *J Public Health Dent*. 2017;77(Suppl 1):S79-S87. DOI: 10.1111/jphd.12240
37. US Department of Agriculture, US Department of Health and Human Services. Dietary guidelines for Americans 2025-2030. January 2026. Accessed January 9, 2026. https://cdn.realfood.gov/DGA,pdf
38. World Health Organization. Healthy diet. April 29, 2020. Accessed January 9, 2026. https://www.who.int/news-room/fact-sheets/detail/healthy-diet
39. American Heart Association. Added Sugars. 2024. Accessed January 7, 2026. https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sugar/added-sugars
40. US Department of Agriculture Food and Nutrition Service. A guide to smart snacks in school. Slightly revised May 2022. Accessed January 9, 2026. https://fns-prod.azureedge.us/sites/default/files/resource-files/smartsnacks.pdf
41. American Academy of Pediatrics. Toddler food and feeding: Healthy snacking. Updated July 8, 2021. Accessed October 1, 2025. https://www.aap.org/en/patient-care/healthy-activeliving-for-families/toddler-food-and-feeding/

42. US Department of Agriculture, Agricultural Research Service. 2024. Snacks: Distribution of snack occasions, by male/female and age, what we eat in America, NHANES August 2021-August 2023. Accessed February 21, 2026. https://www.ars.usda.gov/ARSUserFiles/80400530/pdf/2123/Table_29_DSO_MaleFemale_2123.pdf
43. Kesari A, Noel JY. Nutritional Assessment. [Updated 2023 Apr 10]. In: *StatPearls* [Internet]. StatPearls Publishing; 2025. Accessed: January 8, 2026. https://www.ncbi.nlm.nih.gov/books/NBK580496/
44. Touger-Decker R, Mobley C; Academy of Nutrition and Dietetics. Position of the Academy of Nutrition and Dietetics: Oral health and nutrition. *J Acad Nutr Diet*. 2013;113(5):693-701. DOI: 10.1016/j.jand.2013.03.001
45. US Department of Health and Human Services-Office of Disease Prevention and Health Promotion. Healthy People 2030: Access to foods that support healthy dietary patterns. 2024. Accessed December 6, 2025. https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/access-foods-support-healthy-dietary-patterns
46. US Department of Agriculture Economic Research Service. Food security in the U.S. – Research tools. Updated January 2, 2026. Accessed January 8, 2026. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools
47. Mackenbach JD, Ibouanga EL, van der Veen MH, Ziesemer KA, Pinho MGM. Relation between the food environment and oral health-systematic review. *Eur J Public Health*. 2022;32(4):606-616. DOI: 10.1093/eurpub/ckac086
48. Chamut S, Alhassan M, Hameedaldeen A, et al. Every bite counts to achieve oral health: A scoping review on diet and oral health preventive practices. *Int J Equity Health*. 2024;23(1):261. DOI: 10.1186/s12939-024-02279-0