

# Policy on Snacks and Sugar-Sweetened Beverages Sold in Schools

## Latest Revision

2026

## Abbreviations

Majr: MeSH major topic.

MeSH: Medical subject heading.

NNS: Nonnutritive sweeteners.

SSB: Sugar-sweetened beverages.

Tiab: Title and abstract.

USDA: United States Department of Agriculture.

WHO: World Health Organization.

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 recognizes that targeted marketing and easy access to foods and beverages by children and adolescents may increase the amount and frequency of their consumption which, in turn, may contribute to an increase in caries risk and a negative influence on overall nutrition and health.

## Methods

This document was developed by the Council on Clinical Affairs, adopted in 2002,<sup>1</sup> and last revised in 2022.<sup>2</sup> 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 *dental health services* [Majr] OR *public health dentistry* [Majr] OR *community dentistry* [Majr] OR *oral health* [Majr]) AND (*food dispensers, automatic* [Majr] OR *sugar-sweetened beverages* [Majr] OR **SSB** [Tiab] OR *sugar-sweetened beverage\** OR *carbonated drink\** OR *soda\** OR *snacks* [Majr] OR *dental caries* [Majr] 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 *food assistance* [Majr] OR **WIC** [Tiab] OR *dietary sucrose* [Majr] OR *sweetening agents* [Majr] OR *sugars* [Majr] OR *nutritional status* [Majr] OR *carbonated beverages* [Majr]); fields: all; limits: within the last 10 years, humans, English, clinical trials, and child: 6-12 years, and adolescent: 13-18 years. Nine-hundred ten articles met these criteria. The update also included a review of the US Department of Agriculture (**USDA**) nutrition standards for school meals<sup>3</sup>. Papers for review were chosen from the resultant lists Expert and/or consensus opinion by experienced researchers and clinicians also was considered.

## Background

Contemporary changes in beverage consumption patterns have the potential to increase dental caries rates in children.<sup>4</sup> Vending machines provide ready access to excess calories from added sugars, especially sugar-sweetened beverages (**SSB**). Consumption of SSB in the form of sodas or sport, energy, and fruit-flavored drinks and, to a lesser extent, 100% juice has been associated with an increased risk for developing dental caries<sup>4-8</sup> and for experiencing untreated dental caries<sup>6</sup>. The acids present in carbonated beverages can have a greater deleterious effect (ie, erosion) on enamel than the acids generated by oral flora from the sugars present in sweetened drinks.<sup>9</sup> Recent data indicate that for children and adolescents aged 2 through 19 years, while water is the most consumed beverage, approximately one-third of daily beverage intake is sweetened beverages.<sup>10</sup> For those 12 through 19 years, twice as many consume sweetened beverages as consume milk

daily (58% vs 29%).<sup>10</sup> A significant increase in caries scores has been reported for children who attended schools that had vending machines.<sup>11</sup>

Poor nutritional quality of many vending machine items is a significant concern as these many be chosen over healthier snack options.<sup>12-15</sup> Among adolescents, particularly girls higher SSB intake is associated with lower milk consumption, which may reduce bone density, increase fracture risk, and elevate future osteoporosis risk.<sup>16,17</sup> A systematic review and meta-analysis of prospective cohort studies and randomized controlled trials concluded that SSB consumption promotes higher body mass index (BMI) and body weight in both children and adults, confirming a positive linear dose-response association.<sup>18</sup> Of all beverages, increasing soda consumption predicted the greatest increase of body mass index and the lowest increase in calcium intake.<sup>19</sup> Carbonated soda consumption was negatively associated with vitamin A intake in all age strata, calcium intake in children younger than 12 years, and magnesium intake in children aged 6 years and older.<sup>20</sup> Many soft drinks also contain significant amounts of caffeine which, if consumed regularly, may lead to increased, even habitual, usage.<sup>21</sup> Most caffeine intake by children and adolescents is supplied by beverages<sup>10</sup>; however, beverage companies are not required to disclose caffeine content on nutritional labels.<sup>22</sup> Sports drinks that have no beneficial effects for non-elite athletes or children are available from vending machines. They have a high sugar content and low pH that increases the risk of obesity, type 2 diabetes, heart disease and the erosion of tooth enamel.<sup>23,24</sup> Similar to sports drinks, energy drinks also have low pH value and even higher titratable acidity that can result in greater enamel dissolution.<sup>25</sup> As many as 28% of the secondary schools in some US districts sell energy drinks in vending machines, school stores, canteens, or snack bars.<sup>26</sup> Energy drinks typically contain large amounts of caffeine, other additives, and legal stimulants such as guarana, taurine, and L-carnitine that can increase alertness, attention, and energy, as well as increase blood pressure, heart rate, and respiratory rate.<sup>27,28</sup> Overconsumption of energy drinks can potentially result in dangerous consequences.<sup>22,29,30</sup>

The consumption of nonnutritive sweeteners (NNS) among children has increased in recent years.<sup>31,32</sup> NNS may help reduce the incidence of dental caries in children.<sup>33</sup> Current US Food and Drug Administration-approved NNS include saccharin, aspartame, acesulfame potassium, sucralose, neotame, advantame, stevia, and monk fruit.<sup>34</sup> These agents are 180 to 20,000 times sweeter than sugar, potentially affecting preferences for sweet taste.<sup>34</sup> Nevertheless, long-term safety and health effects of NNS in children, including impact on weight, taste preferences, blood sugar levels, microbiome, and neurodevelopment, have not been adequately assessed through high-quality research.<sup>35</sup>

The USDA's *Guide to Smart Snacks in Schools* provides nutrition standards that prompt school districts to offer healthier food and beverages in vending machines, school stores, and à la carte cafeteria lines.<sup>3</sup> The 2024 USDA final rule, *Child Nutrition Programs: Meal Patterns Consistent with the 2020-2025 Dietary Guidelines for Americans*, supports the nutritional quality of school meals, updated the Smart Snacks nutrition standards, and continues to meet strong nutritional guidelines for snacks/drinks sold to children while prohibiting marketing of foods and drinks inconsistent with those standards.<sup>36</sup> By school year 2027-2028, added sugars will be part of these dietary specifications and must be less than 10% of calories per week.<sup>37</sup> This weekly limit is in addition to the product-based limits for breakfast cereals, yogurt, and flavored milk.<sup>37</sup>

Recently, the World Health Organization (WHO) recommended that free sugars account for less than 10% of daily energy intake (with an ideal target of less than 5%) and children under age 2 not consume sugar-sweetened beverages at all<sup>38</sup>; WHO also supports comprehensive school-based and policy-driven restrictions<sup>39</sup>. A 2025 consensus statement from national health organizations (ie, the American Academy of Pediatrics, American Academy of Pediatric Dentistry, American Heart Association, and Academy of Nutrition and Dietetics) advises that school-age children and adolescents avoid SSB entirely, limit added sugars to fewer than 25 grams per day (approximately 6 teaspoons), and consume no more than 8 fluid

ounces of sugary drinks per week.<sup>22</sup> Plain water and unsweetened milk are identified as the healthiest beverage choices.<sup>22</sup>

### Policy statement

The American Academy of Pediatric Dentistry

- encourages collaboration with other dental and medical organizations, governmental agencies, education officials, parent and consumer groups, and corporations to increase public awareness of the adverse effects of frequent and/or inappropriate intake of sugar-sweetened beverages and low nutrient-dense snack foods on children's oral health and general health.
- promotes educating and informing the public regarding the importance of good nutritional habits as they pertain to consumption of items available in vending machines.
- encourages school officials and parent groups to consider the importance of maintaining healthy choices in vending machines in schools and encourages the promotion of food and beverages of high nutritional value; bottled water and other healthy choices should be available instead of soft drinks.
- opposes any arrangements that may decrease access to healthy nutritional choices for children and adolescents in schools.
- support the USDA Food and Nutrition Service nutrition standards that prompts school districts to offer healthier food and beverages in vending machines, school stores, and à la carte cafeteria lines.
- recommends school nutrition policies align with the World Health Organization guidance on free sugar intake, prohibit provision of SSB to children under age 2, and reflect consensus recommendations that children/adolescents avoid SSB, limit added sugars to fewer than 25 grams per day, and restrict SSB to no more than 8 fluid ounces per week.

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