Policy on Vending Machines Snacks and Beverages Sold in Schools

Originating Council
Council on Clinical Affairs

Review Council
Council on Clinical Affairs

Adopted
2002

Revised
2005, 2009, 2017

Reaffirmed
2012

Purpose
The American Academy of Pediatric Dentistry (AAPD) recognizes that targeted marketing and easy access to sweetened foods and beverages (acidulated carbonated and noncarbonated) 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 is an update of the previous policy adopted in 2002 and last revised in 2009. It is based upon a review of current dental and medical literature, including a systematic literature search of the PubMed® database using the following parameters: Terms: school, vending machines, AND dental caries; Fields: all; Limits: within the last 10 years, humans, English, clinical trials, and ages birth through 18. The update also included a review of the American Academy of Pediatrics’ policy on soft drinks in schools\(^1\), the American Academy of Pediatrics’ policy on snacks, sweetened beverages added sugars and schools\(^2\) and the U.S. Department of Agriculture’s (USDA’s) policy on school meals\(^3,4\). Papers for review were chosen from the resultant lists and from hand searches. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians. Expert and/or consensus opinion by experienced researchers and clinicians was also considered.
Background

There has been a reduction in untreated caries among certain demographic groups of children and adolescents in recent years (Brown, Wall, and Lazar 2000). Frequent consumption of refined carbohydrates, however, can be a significant factor in the child and adolescent diet that contributes to the initiation and progression of caries (Ismail, Burt, and Eklund 1984).

Contemporary changes in beverage consumption patterns have the potential to increase dental caries rates in children. Vending machines provide ready access to highly-refined carbohydrates, especially soft drinks. Consumption of regular soda pop, powdered beverages, and to a lesser extent 100 percent juice have been associated with an increased caries risk. The acids present in carbonated beverages can have a greater deleterious effect (i.e., erosion) on enamel than the acids generated by oral flora from the sugars present in sweetened drinks. Analysis of the third National Health and Nutrition Examination Survey data indicated that 13 percent of children aged 2 through 10 had diets high in consumption of carbonated soft drinks, and these children had a significantly higher dental caries experience in the primary dentition than did children with other fluid consumption patterns. Many soft drinks also contain significant amounts of caffeine which, if consumed regularly, may lead to increased, even habitual usage (Majewski, 2001). A significant increase in caries scores has been reported for children who attended schools that had vending machines.

There is growing concern that vending machine items with limited nutritional value are “competitive foods”, resulting in snack options that are considered to be of poor nutritional quality. An effort is underway to increase the healthy choices available in vending machines by replacing sugar-sweetened drinks with bottled water, candy bars with nutrition bars, and potato chips with dried fruits and nuts (USDA 2011).

Increased consumption of refined carbohydrates by children and adolescents may have a negative impact on their overall nutrition by displacing foods with higher nutrient density (Freeman and Sheiham 1997). Nutrient density refers to the amount of nutrients in a food compared to the calories. Foods low in calories and high in nutrients are nutrient rich (dense). Foods high in calories and low in nutrients are of poor nutritional quality. As teenage girls have increased their consumption of soft drinks, their consumption of milk has decreased by 40 percent, which may
contribute to a decrease in bone density, subsequent increase in fractures, and future risk of osteoporosis. Increased ingestion of sugar-sweetened drinks also has been linked to the increased incidence of childhood obesity. Of all beverages, increasing soda consumption predicted the greatest increase of body mass index (BMI) and the lowest increase in calcium intake. 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. Many soft drinks also contain significant amounts of caffeine which, if consumed regularly, may lead to increased, even habitual, usage.

Many beverage and snack food products are targeted specifically and aggressively at the child and adolescent market. Vending machines containing these products are readily accessible to children and adolescents in schools (Rovner et al. 2011; Turner and Chaloupka 2011). Exchange for money to the individual school or districts, “pouring rights contracts” give beverage companies exclusive rights to sell their products at school events and place vending machines on school property, along with other measures that increase student exposure to the beverages (Maihofer 2000). Presently, several states have legislation and others are considering legislation to limit pouring rights contracts to healthier options (Berthold 2000; NCSL 2005; Kubik, Lytle, and Farbakhsh 2011; Shatley et al. 2011).

In 2013, the USDA initiated smart snacks standards prompting school districts to offer healthier food and beverages in vending machines, school stores, and à la carte cafeteria lines. The final rules released by the USDA in July, 2016 state that schools must continue to meet strong nutritional guidelines for snacks/drinks sold to children, and they prevent marketing of foods and drinks inconsistent with those standards. The USDA’s rules establish a national baseline of these standards with the overall goal of improving health and nutrition of our children.

Policy statement

The AAPD:

- 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 sweetened drinks (carbonated and noncarbonated) sugar sweetened beverages and low nutrient dense snack foods on infant, child, and adolescent children’s oral health.
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• 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.

• Opposes any arrangements that may decrease access to healthy nutritional choices for children and adolescents in schools.

• 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 more healthy choices should be available instead of soft drinks.

• Promotes educating and informing the public about the importance of good oral hygiene and nutritional habits as they pertain to consumption of items available in vending machines.

References


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