

# California Adolescents Have Less Access and Lower Consumption of High-Calorie, Low-Nutrient Foods at School

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## Introduction

- The school food environment influences what children and adolescents eat, with roughly 35% of their daily calories being consumed at school.<sup>1</sup>
- Competitive foods, or foods that are not part of the federal school meal program, are widely available in schools.<sup>3</sup>
- Availability of competitive foods, especially low-nutrient high-calorie foods, is significantly higher in middle and high schools than in elementary schools.<sup>1,3</sup>
- A recent study showed that middle school students without access to high calorie low nutrient a la carte foods ate more vegetables than students in other schools. Similarly, high school youth with open campuses ate fewer vegetables than students who were required to stay on campus for meals.<sup>1</sup>

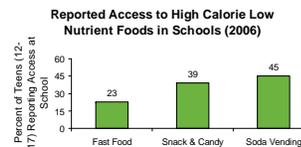
## CaITEENS Background & Methodology

- The California Teen Eating, Exercise and Nutrition Survey (CaITEENS) provides detailed information about California adolescent eating and physical activity behaviors of youth age 12-17 years old.
- Approximately 1,200 teens throughout California complete the survey biennially, having been selected using a random digit dial procedure.
- Each respondent completes a modified 24-hour dietary recall to determine daily servings of both nutritious and less nutritious foods, including high-fat foods, soda and sweets.
- The survey also asks about the school environment such as access to low nutrient foods and beverages at school.
- CaITEENS is a project of the California Department of Public Health's *Network for a Healthy California* and is administered by the Public Health Institute.

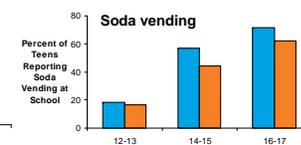
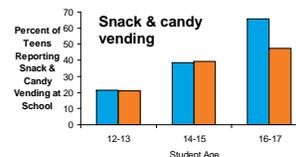
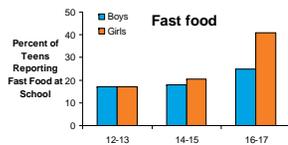


## Results from the 2004 and 2006 CaITEENS

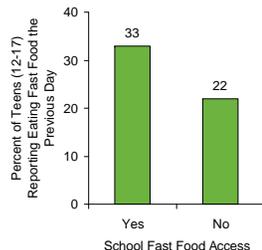
- In 2006, a substantial proportion of California's teens reported access to high-calorie, low-nutrient foods at school, specifically fast food (23%), snack and candy vending (39%), and soda vending machines (45%).
- Reported availability of fast food and vending machines at school increases with the age of teens responding to the survey ( $p < .001$ ).



Access to High Calorie Low Nutrient Food in Schools by California Teens by Age and Gender (2006)

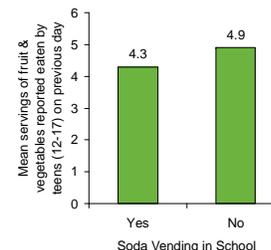


Reported Fast Food Consumption of Teens by Access to Fast Food at School (2004)



- In 2004, fast food in school was associated with increased consumption of fast food ( $p < .001$ )
- Students with soda vending machines at school ate fewer servings of F&V (4.3) than other teens (4.9 servings) ( $p < .01$ ).
- Students with snack and candy vending in school consumed fewer dairy servings (3.3 vs. 3.7) than other teens. ( $p < .05$ ).

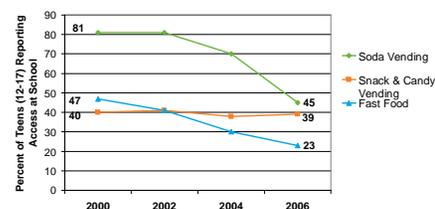
Servings of Fruits & Vegetables Eaten by Availability of Soda Vending at School (2004)



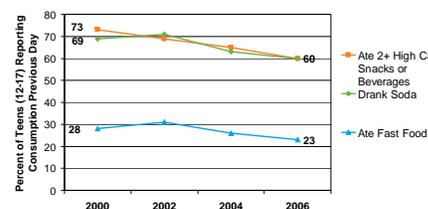
## CaITEENS Trend Results, 2000 – 2006

- Access by teens to soda vending ( $p < .001$ ) and fast food ( $p < .001$ ) in schools, but not snack and candy vending, declined significantly from 2000 to 2006.
- Likewise, reported consumption of fast food ( $p < .01$ ), soda and other sweetened beverages ( $p < .001$ ), and 2 or more servings of all high calorie low nutrient foods ( $p < .001$ ) have declined significantly from 2000 to 2006.

Access at School to High Calorie, Low Nutrient Foods, 2000 - 2006



Reported Consumption of High Calorie, Low Nutrient Foods, 2000 - 2006



## Summary & Conclusions

- From 2000 to 2006, teens reported reduced access to most high calorie, low nutrient foods and beverages in schools; however, no change was seen in snack and candy vending, and fast food and soda still remain widely available.
- Prevalence of fast food and vending machines in schools increases with the age of teens responding to the survey, consistent with results of previous research indicating that competitive foods are most prevalent in high schools.<sup>1</sup>
- As reported access to fast food and soda declined from 2000 to 2006, teens concurrently reported eating and drinking less of them.
- However, reported consumption of fast food and soda did not decline as rapidly as availability at schools, so we need to consider teens' access to these items outside of schools as well.
- Legislation such as California AB12, instituted in 2007, may have further reduced access to high calorie, low nutrient foods and beverages in schools. The data presented here provides a valuable comparison to assess the effectiveness of such policies.

## References

1. Briefel RR, Crepinsek MK, Cabili C, Wilson A, Gleason PM. School food environments and practices affect dietary behaviors of US public school children. *J Am Diet Assoc.* Feb 2009;109(2 Suppl):S91-107.
2. Fox MK, Gordon A, Nogales R, Wilson A. Availability and consumption of competitive foods in US public schools. *J Am Diet Assoc.* Feb 2009;109(2 Suppl):S57-66.
3. Finkelstein DM, Hill EL, Whitaker RC. School food environments and policies in US public schools. *Pediatrics.* Jul 2008;122(1):e251-259.

This material was produced by the California Department of Public Health, Network for a Healthy California, with funding from the USDA Supplemental Nutrition Assistance Program (formerly the Food Stamp Program). These institutions are equal opportunity providers and employees. In California, food stamps provide assistance to low-income households, and can help buy nutritious foods for better health. For food stamp information, call 877-687-6868. For important nutrition information visit [www.cdph.ca.gov](http://www.cdph.ca.gov).



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