

# Removing school vending machines is not enough to cut soda consumption

August 11 2014, by Sherri McGinnis González

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(Medical Xpress)—Banning vending machines from schools can actually increase soda and fast food consumption among students if it's the only school food policy change implemented, according to research conducted at the University of Illinois at Chicago.

The study, published online in the journal *PLOS ONE*, looked

exclusively at regular [soda](#) consumption – not [diet soda](#) or other sugar sweetened beverages – and [fast food](#).

The authors are analyzing other sugar sweetened beverages in an independent, ongoing study.

The researchers wanted to find out if having [vending machines](#) in schools affected daily intake of soda and eating unhealthy fast foods outside of school when combined with other factors such as state [tax rates](#) and soda bans in schools. The study included 8,245 [high school students](#) in 27 states.

The study linked student data from the National Youth Physical Activity and Nutrition Study with state-level data on soda taxes, restaurant taxes, and laws governing the sale of soda in schools in 2010.

The researchers found that 23 percent of students reported drinking at least one soda per day if they had access to vending machines in schools, compared to 28 percent of students who did not have access. However, these differences were only observed in states where soda was taxed less or students were able to buy soda from the school cafeteria or the school store.

The study also found that students eat more fast food when vending machines are removed, particularly when state sales tax rates for restaurant foods are lower, according to the authors.

The study shows that "there may be unintended effects if you only make small-scale changes. When more comprehensive changes were implemented, there were no unintended effects," said Daniel Taber, lead author and a former researcher at UIC's Institute for Health Research and Policy.

The authors caution that the study does not necessarily mean bad news for school nutrition policies – only that an isolated change in the [school food](#) environment is not likely to have an impact when kids have access to high-fat, high-calorie foods and beverages from other sources.

Other studies have shown that long-term, comprehensive changes in school food policies, including strengthening school meal standards, can have a positive impact on students' health.

"Policy changes really need to be comprehensive and not just focused on one item such as regular soda or one location such as cafeterias," said Jamie Chriqui, a study coauthor and senior research scientist at UIC's Institute for Health Research and Policy.

The study reinforces why comprehensive policies are needed such as the new U.S. Department of Agriculture's Smart Snacks in Schools rule which begins implementation with the 2014-15 [school](#) year, Chriqui said.

Co-authors include Jamie Chriqui and Frank Chaloupka of UIC and Renee Vuillaume of Harvard University. Taber is currently an assistant professor at The University of Texas Health Science Center at Houston School of Public Health.

The study was supported by the Robert Wood Johnson Foundation through its Bridging the Gap program and the National Institutes of Health.

**More information:** Taber DR, Chriqui JF, Vuillaume R, Chaloupka FJ (2014) How State Taxes and Policies Targeting Soda Consumption Modify the Association between School Vending Machines and Student Dietary Behaviors: A Cross-Sectional Analysis. *PLoS ONE* 9(8): e98249. [DOI: 10.1371/journal.pone.0098249](https://doi.org/10.1371/journal.pone.0098249)

Provided by University of Illinois at Chicago

Citation: Removing school vending machines is not enough to cut soda consumption (2014, August 11) retrieved 2 May 2024 from <https://medicalxpress.com/news/2014-08-school-vending-machines-soda-consumption.html>

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