

Soda tax for adolescents and exercise for children best strategies for reducing obesity

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Childhood obesity in the United States remains high. A tax on sugar-sweetened beverages such as sodas, energy drinks, sweet teas, and sports drinks would reduce obesity in adolescents more than other policies, such as exercise or an advertising ban, and would also generate significant revenue for additional obesity prevention activities, say researchers writing in the *American Journal of Preventive Medicine*. The study also demonstrated that physical activity would benefit children ages 6-12 most.

Nearly one in three [young people](#) between two and 19 years old were overweight or obese in 2009-2010, and 17% were obese. There are significant disparities in [obesity](#) prevalence among racial/ethnic groups and by socioeconomic status. Obese adolescents tend to remain obese as adults, making childhood the ideal time to prevent obesity. For these reasons, policymakers are interested in effective programs and policies to reduce [childhood obesity](#).

States and localities are increasingly using laws, regulations, and other policy tools to promote healthy eating and physical activity. However, federal policies can reach larger populations and fund programs that benefit populations at risk for obesity, and thus play an essential role in improving public health.

In order to evaluate the potential long-term impact of federally recommended policies, investigators used a set of criteria to select three policies to reduce childhood obesity from among 26 recommended

policies: afterschool physical activity programs, a one cent per ounce excise tax on sugar-sweetened beverages (SSBs), and a ban on child-directed fast food television advertising. For each policy, the literature was reviewed from January 2000 through July 2012 to find evidence of effectiveness and to create average effect sizes. The investigators then used a Markov microsimulation model to estimate each policy's impact on diet or physical activity, and then BMI, in a simulated school-aged population in 2032, after 20 years of implementation.

The model predicted that all three policies could reduce the prevalence of childhood obesity, particularly among Blacks and Hispanics, who have higher rates of obesity than whites, thus demonstrating that federal policy could alter the childhood obesity epidemic.

Afterschool physical activity programs would reduce obesity the most among children ages 6-12 (1.8 percentage points) and the advertising ban would reduce obesity the least (0.9 percentage points). The SSB excise tax would reduce obesity the most among adolescents ages 13-18 (2.4 percentage points).

"Although the model predicts that each of these policies would reduce obesity in children and adolescents, the one cent tax on SSBs also has other characteristics that make it the best option," says lead investigator Alyson Kristensen, MPH, of Partnership for Prevention, Washington, DC. "The tax reduces obesity while at the same time generating significant revenue for additional obesity prevention activities."

An earlier study estimated that a national one cent per ounce SSB excise tax would have generated \$13.25 billion in 2010. Other advantages are that it would also reduce obesity among adults who consume SSBs, it does not require substantial federal funding to implement (unlike the afterschool policy), and would not face the legal hurdles that new regulations often encounter.

"Unfortunately, implementation of any of these policies in the near term is extremely unlikely," continues Kristensen. "However, this may change as the evidence base for these policies grows and changes in public knowledge increase calls for stronger governmental action. Research showing the harms of consuming SSBs continues to grow and the need for new revenue sources may spur Congress to consider a national SSB excise tax, such as the recently introduced SWEET Act.

"In the meantime, the findings support state- and local-level action to enact SSB excise taxes, promote [physical activity](#) in afterschool settings, and reduce marketing and advertising of unhealthy foods and beverages in public schools."

More information: "Reducing Childhood Obesity through U.S. Federal Policy: A Microsimulation Analysis," by Alyson H. Kristensen, MPH; Thomas J. Flottemesch, PhD; Michael V. Maciosek, PhD; Jennifer Jenson, MPH, MPP; Gillian Barclay, DDS, MPH, DrPH; Marice Ashe, JD, MPH; Eduardo J. Sanchez, MD, MPH; Mary Story, PhD, RD; Steven M. Teutsch, MD, MPH; and Ross C Brownson, PhD, is published in the *American Journal of Preventive Medicine*, online ahead of Volume 47, Issue 6 (December 2014), [dx.doi.org/10.1016/j.amepre.2014.07.011](https://doi.org/10.1016/j.amepre.2014.07.011)

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