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# RUDD REPORT



## **SUGAR-SWEETENED BEVERAGE TAXES**

An Updated Policy Brief



YALE RUDD CENTER  
FOR FOOD POLICY & OBESITY

[www.yaleruddcenter.org](http://www.yaleruddcenter.org)

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# SUGAR-SWEETENED BEVERAGE TAXES

## An Updated Policy Brief

Since the Rudd Center's 2009 publication of our first policy brief on soft drink taxes, significant progress has been made in the effort to reduce consumption of sugar-sweetened beverages (SSBs). The body of scientific literature that links consumption to overweight, obesity, and chronic illnesses has grown substantially. Dozens of cities and states have launched public health SSB campaigns and implemented or proposed policies to reduce SSB availability.

Taxing SSBs is still considered by many public health experts and policymakers to be one of the best strategies to improve the nation's nutrition, raise revenue for health programs, and recover the medical and insurance costs of treating diet-related diseases. Since 2009, policymakers in approximately 24 states and 6 cities<sup>1</sup> have proposed SSB taxes, and more than 25 national and state organizations have recommended or endorsed them.<sup>2</sup> Other countries, including Denmark, Finland, France, and Hungary, have taxes on SSBs.

### Definition of SSBs

Any beverage with added sugar or other caloric sweeteners such as high fructose corn syrup, including soda, sports drinks, fruit drinks, teas, flavored/enhanced waters, and energy drinks.

### Revenue Potential<sup>7</sup>

- A national tax of a penny per ounce on SSBs would generate approximately \$13 billion in 2013 alone, and \$39 billion over three years.
- At the state level, a penny-per-ounce excise tax on SSBs in Mississippi, Louisiana, and West Virginia, the three states with the highest rates of adult obesity, is projected to bring in approximately \$136 million, \$210 million, and \$84 million, respectively, in 2013. Revenues in larger states are significantly higher: \$1 billion in Texas; \$781 million in New York; and \$1 billion in California.

## Why Consider SSB Taxes?

Sugar-sweetened beverages are staples of today's American diet. These beverages are inexpensive, abundant, high in calories, deliver little or no nutrition, and appeal to our taste for sweetness. They are heavily marketed, especially to children, often using celebrities, sports stars, and cartoon characters. More than for any category of food, rigorous scientific studies have shown that consumption of SSBs contributes to poor diet, and risk for obesity, diabetes and a number of other serious health problems.

Chronic diseases related to poor diet cost the United States billions of health care dollars each year—economists estimate the health care costs of obesity alone to be in the range of \$147 to \$190 billion<sup>3,4</sup>—and are complex problems that must be addressed with multifaceted strategies. Taxing certain classes of products to reduce consumption is a proven strategy, as we have seen with tobacco taxes.

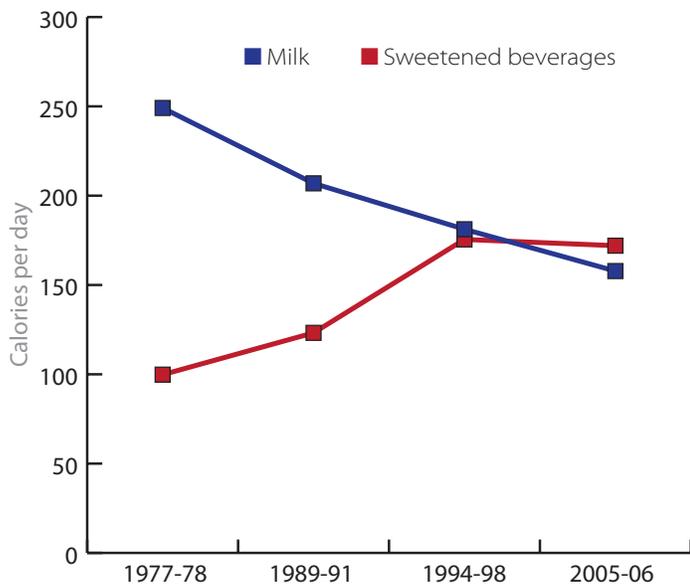
Thirty-four states and Washington, D.C. now have sales taxes on SSBs,<sup>5</sup> but the taxes are too small to affect consumption, in many cases consumers do not know the taxes exist, and revenues are not used for programs to promote good nutrition.<sup>6</sup> Policymakers are turning to larger excise taxes, with revenues dedicated to public health programs, as the next step toward improving the nation's health.

## What Would Taxes Accomplish?

Taxes on SSBs can be conceived with two goals: raising revenue and changing consumption. They can:

- raise considerable funds to be earmarked for nutrition initiatives such as subsidies for healthy foods or programs in schools;
- raise the relative price of unhealthy beverages, thereby discouraging consumption;
- decrease sales of unhealthy beverages, and influence demand for healthier alternatives, which may encourage beverage manufacturers to reformulate their products; and
- convey the message that government and policymakers are concerned about nutrition and the public's health.

## Trends in Calories Consumed from Sweetened beverages and Milk, for Children Ages 2-18<sup>8</sup>



## Issues Concerning SSB Taxes and Results of Scientific Research

### ISSUE: CONSUMPTION

#### Consumption continues to increase

- Since the late 1970s, intake of SSBs among adults ages 19 and older has more than doubled.<sup>8</sup>
- Americans drink about 45 gallons per person, per year,<sup>9</sup> with about one-half of the population drinking SSBs on any given day.<sup>10</sup>
  - Males consume more than females; teens and young adults consume more than other age groups; and low-income people consume more in relation to their overall diet than those with higher incomes.<sup>10</sup>
- A 2010 study found that SSBs (defined as soda, energy and sports drinks, and sweetened water) and fruit drinks combined provided the largest source of daily calories in the diets of US children ages 2-18. Soda alone was the third largest source.<sup>11</sup>
- In the late 1990s the intake of SSBs began surpassing that of milk.<sup>8</sup>
- Sports drinks, energy drinks, and sweetened waters and teas are showing significant growth in the marketplace, while traditional carbonated drinks are losing market share.<sup>12</sup>
- Research suggests that people do not compensate well for the calories they get from liquids by eating less food; hence the large number of calories from beverages is a matter of great concern.<sup>13,14,15,16</sup>
- Sugar-sweetened beverage consumption is highest among groups that are at greatest risk of obesity and type 2 diabetes.<sup>17</sup>

### ISSUE: HEALTH EFFECTS

#### Studies continue to show negative health effects

- Among children:
  - each extra serving of SSBs consumed per day increases their chance of becoming obese by 60%;<sup>18</sup>
  - in an 18-month randomized controlled trial of 4-11 year olds, replacing SSBs with non-caloric beverages significantly reduced weight gain and body fat;<sup>19</sup>
  - in a randomized controlled trial of overweight and obese adolescents, those in the 1-year intervention to dramatically reduce SSB consumption achieved a smaller BMI increase than the control group;<sup>20</sup>
  - greater SSB consumption in childhood or adolescence predicted weight gain into adulthood;<sup>21</sup>
  - consumption of fructose and added sugars (found in SSBs) is associated with a greater risk of cardiovascular disease in adolescents,<sup>22,23</sup> and
  - consumption is associated with higher blood pressure in adolescents,<sup>24</sup> dental caries,<sup>25,26</sup> and inadequate intake of critical nutrients such as calcium, iron, and vitamin A in children's diets.<sup>27,28,29</sup>
- Among adults, consumption of SSBs is associated with:
  - a risk of weight gain and obesity,<sup>30,31,32,33,34</sup>
  - cardiovascular risk,<sup>32,35,36</sup> a significantly higher risk of stroke,<sup>37</sup> high blood pressure;<sup>38,39</sup>
  - type 2 diabetes;<sup>32,33,40,41</sup>
  - dental erosion;<sup>42,43</sup> and
  - a risk of pancreatic cancer.<sup>44,45</sup>
- Many papers showing weak or no associations between consumption and chronic disease are funded by the beverage or sugar industries.<sup>33</sup>

### ISSUE: PRICE

#### Price changes affect consumption

- The demand for SSBs goes down when prices go up. A 10% increase in price is estimated to result in an 8% to 12.6% decrease in consumption.<sup>46,47</sup> The 10% increase in price can be achieved with a penny-per-ounce tax.<sup>46</sup>
- The effects of a price increase could be higher for heavy users of SSBs.<sup>48</sup>
- In a recent intervention, increasing the price of SSBs by 35% resulted in a 26% decrease in sales. Sales decreased by an additional 18% when coupled with an educational campaign about the positive health impact of reducing consumption.<sup>49</sup>
- Experiments show that when healthier foods are less expensive than unhealthy foods, people are more likely to purchase the healthy items.<sup>50,51,52</sup>

## ISSUE: TAXING

**Taxing alcohol and cigarettes has proved to be highly successful in reducing consumption and its consequences, resulting in major public health benefits.<sup>53</sup> Economists also predict significant public health benefits for taxes on SSBs.**

- Based on the best estimates to date, a tax on SSBs has the potential to reduce:
  - consumption;<sup>46,53,54,55</sup> type 2 diabetes;<sup>53,55</sup> and
  - coronary heart events.<sup>55</sup>

- One study estimates that a 24% reduction in consumption from a penny-per-ounce tax could reduce daily per-capita caloric intake by 145-150 calories.<sup>9</sup>
- A 2011 study of the potential impact of SSB taxes in Illinois estimated that a penny-per-ounce excise tax would reduce:
  - the number of obese youth by 9.3%, and obese adults by 5.2%;
  - diabetes incidence by more than 3400 cases;
  - diabetes-related health care costs by \$20.7 million; and
  - obesity-related health care costs by \$150.8 million.<sup>53</sup>

## POLICY RECOMMENDATIONS

### Tax considerations

#### TYPE OF TAX

##### Excise

Note: Taxes should be indexed to inflation to avoid erosion of the impact as prices rise.

#### ADVANTAGES

- Consumers see the increased price at the point of purchase.
- Can be imposed at the bottler, distributor, wholesaler, or importer level, making it easier to collect.
- Does not change if industry reduces prices.
- Will include the syrup used in fountain drinks.
- Generates more stable and predictable revenues.
- Does not encourage the purchase of large containers.

#### DISADVANTAGES

- Industry may absorb the cost of the tax across product lines, making the shelf-price increase insignificant.
- May be difficult to implement on a local level.

##### Sales

Note: In states where groceries are not taxed, or are taxed at a lower rate than other goods, SSBs could be defined as “non-groceries” and taxed just like other consumer goods.

- Rises with inflation.

- Encourages consumers to buy larger containers because the cost per ounce is lower, so the tax per ounce would be lower as well.
- Retailers, especially small ones without computerized cash registers, may be inconvenienced by having to charge taxes on some beverages and not others. This may motivate them to oppose the taxes.

##### Exempting diet beverages from taxes

- May encourage consumers to switch to diet or “light” beverages. This may be beneficial in combating weight gain, although there is inconclusive evidence about the role that artificial sweeteners play in obesity prevention<sup>61</sup> or overall health.

- Generates less revenue.

## PUBLIC HEALTH MESSAGE RECOMMENDATIONS

- Make the public health message explicit to increase public support for a tax: the purpose is to fund nutrition programs and obesity prevention, to reduce consumption of unhealthy products, and to recoup costs for diet-related diseases now covered by public funds.
- Note that the tax is not just directed at overweight or obese people. Poor nutrition affects the health of everyone, overweight or not. In addition, children can develop consumption habits and brand loyalties well in advance of becoming overweight.

## USE OF THE REVENUE \*

It is important to designate all or a portion of the revenue produced by a tax for programs related to health, such as nutrition or obesity prevention, especially for underserved populations.

Such initiatives could include:

- **subsidizing fresh fruits and vegetables** in schools and for SNAP (food stamp) recipients;
- **school-based interventions and policies** such as farm-to-school programs, easy access to clean drinking water, or Safe Routes to School programs;
- **increased access to healthy food in low-income neighborhoods** such as incentives to attract supermarkets;
- **social marketing campaigns** to counteract the marketing strategies used by the beverage industry to advertise SSBs to children;
- **statewide, comprehensive obesity-prevention programs**; and
- **improving the built environment for increased physical activity.**

\*For more suggestions, see “Earmarks Proposed in SSB Tax Legislation” under the “Legislation and Policies” link.  
[www.yaleruddcenter.org/ssbtax](http://www.yaleruddcenter.org/ssbtax)

## RESOURCES

The Rudd Center for Food Policy and Obesity ([www.yaleruddcenter.org/ssbtax](http://www.yaleruddcenter.org/ssbtax)) resources include:

- a revenue calculator;
  - maps of legislation;
  - fact sheets;
  - a list of all local and state campaigns and education programs; and
  - synopses of scientific studies.
- Bridging the Gap conducts research on state-level taxes on snack foods, soda, and other sweetened beverages. [www.bridgingthegapresearch.org/research/sodasnack\\_taxes](http://www.bridgingthegapresearch.org/research/sodasnack_taxes)
  - Kick The Can, sponsored by the California Center for Public Health Advocacy. [www.KickTheCan.info](http://www.KickTheCan.info)
  - Life is Sweeter, sponsored by the Center for Science in the Public Interest, with links to materials from the 2012 National Soda Summit. [www.fewersugarydrinks.org](http://www.fewersugarydrinks.org)

## ISSUE: PUBLIC SUPPORT

### Will the public support SSB taxes?

- Taxes are most likely to receive public support when the revenues are designated to promote the health of key groups, such as children and underserved populations.<sup>56,57</sup>
- A 2012 California poll of voters found that 62% supported a state fee on soda and soft drinks that would be used to fund childhood obesity prevention.<sup>58</sup>

- A 2011 Vermont poll showed that 42% of voters would support an SSB tax.
  - Support rose to 77% when the revenue would be used to make health care programs for low- and middle-income children more affordable, or to fund oral health programs for these children.<sup>59</sup>
- A 2010 Mississippi poll found that 34% of voters would support a tax on SSBs; the number rose to 52% when funds would be used for programs to fight childhood obesity.<sup>60</sup>

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# ARGUMENTS FOR AND AGAINST SUGAR-SWEETENED BEVERAGE EXCISE TAXES

## OPPONENTS SAY:

### **SSB taxes are regressive.**

They will disproportionately hurt the poor and minorities who can least afford it.

### **The government should stay out of private behavior.**

It should not act like a “nanny” by regulating what people eat or drink.

### **People who consume too many SSBs are just making bad personal decisions.**

Everyone else shouldn’t have to bear the burden of these decisions.

### **Taxes aren’t necessary because industry is part of the solution, not the problem.**

### **It’s wrong to blame SSBs for obesity because sales of regular soft drinks have decreased but obesity rates are still rising.**

**SSB taxes can’t be compared to cigarette and alcohol taxes.** The use of tobacco and alcohol can have adverse consequences (called “negative externalities”) for non-users, such as second-hand smoke and drunk-driving accidents. This is not true for SSB consumption.

## PROPONENTS SAY:

- Obesity is a regressive disease that disproportionately hurts poor and minority populations.
- SSB excise taxes have the potential to be most beneficial to low-income people who:
  - may currently consume more SSBs;
  - may be more sensitive to higher prices and therefore may benefit most from reducing consumption; and
  - may have access to new programs that would be funded by SSB tax revenues.
- SSBs are not a necessary part of the diet and deliver many calories with little or no nutrition.
- Water is readily available as a no-cost alternative.
- SSB taxes would reduce health inequities.

- Americans expect the government to exercise its role as a protector of public health when there are crises affecting the nation. Major government interventions have significantly improved the nation’s health. Examples include tobacco taxes, mandatory airbags and seat belts, fluoridated water, and vaccinations.
- Obesity is also a national health crisis. It shortens the lives of its citizens, costs the country billions in health care and lost productivity, and is even undermining military recruitment.

- Consumers, especially young ones, may not know the risks involved in overconsumption of SSBs or calories.
  - For example, most people cannot estimate the number of calories they consume when they eat out. Even experienced nutritionists underestimate the numbers.
- The industry undermines people’s ability to resist overconsuming SSBs by:
  - spending millions every year (\$948m in 2010<sup>62</sup>) to advertise them, especially to children;
  - lowering the price per ounce as the size increases; and
  - making them widely available.

- The purpose of a corporation is to make money for its shareholders. The industry must try to sell as much of its product as possible, and cannot, at the same time, help its customers reduce their consumption of SSBs. Taxes can do that.
- Beverage companies claim to be part of the solution by funding community and school initiatives for obesity prevention. If the industry were serious about being part of the solution, it would grant these funds *anonymously*, rather than using donations as another marketing opportunity.
- The best role the beverage industry could play is to reduce the amount of sugar in SSBs, stop marketing them relentlessly (especially to children), and focus instead on promoting low- and no-calorie options.

- Sales of traditional carbonated sodas may be down, but sales of sports drinks, energy drinks, sweetened waters, and teas have increased; hence the recommendation that all SSBs be taxed.

- Just like tobacco and alcohol, consumption of SSBs has consequences that affect everyone, even those who don’t consume them. For example, half the nation’s estimated \$147-190 billion in obesity-related medical expenditures are paid for by taxpayers, through Medicaid and Medicare. In addition, consumption of these beverages is contributing to health inequities.

# ENDNOTES

1. See [www.yaleruddcenter.org/ssbtax](http://www.yaleruddcenter.org/ssbtax) for maps of current and past legislation.
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