



## Study Synopses: Sugar-Sweetened Beverages (SSBs) and Taxes

Citation	Funder(s)	Conclusions
Lopez, R.A., Fantuzzi, K.L. (2012). Demand for carbonated soft drinks: implications for obesity policy. <i>Appl Econ</i> , 44, 2859 - 2865.	n/a	Taxes on SSBs could be effective in decreasing consumption but may have little impact on obesity.
Wang, C.Y., Coxson, P., Shen, Y., Goldman, L., Bibbins-Domingo, K. (2012). A penny-per-ounce tax on sugar-sweetened beverages would cut health and cost burdens of diabetes. <i>Health Affairs</i> , 31.1, 199 - 207.	American Heart Association, RWJF	A penny-per-ounce excise tax is estimated to reduce consumption by 15% among adults ages 25 - 64. Over the period 2010 - 20, the tax is estimated to prevent 2.4 million diabetes person-years, 95,000 coronary heart events, 8,000 strokes, and 26,00 premature deaths, as well as save more than \$17 billion in medical costs and generate approximately \$13 billion in annual tax revenue.
Andreyeva, T., Chaloupka, F.J., Brownell, K.D. (2011). Estimating the potential of taxes on sugar-sweetened beverages to reduce consumption and generate revenue. <i>Prev Med</i> , 52.6, 413 - 416.	Rudd Foundation; RWJF	An estimated 24% reduction in SSB consumption from a penny-per-ounce tax could reduce daily per capita caloric intake from 190 -200 cal to 145 - 150 cal, if there is no substitution to other caloric beverages or food. A national penny-per-ounce tax could generate new tax revenue of \$79 billion over 2010 - 2015.
Chaloupka, F.J., Wang, Y.C., Powell, L.M., Andreyeva, T., Chriqui, J.F., Rimkus, L.M. (2011). Estimating the potential impact of sugar-sweetened and other beverage excise taxes in Illinois. Chicago: Cook County Department of Public Health.	Department of Health and Human Services, Cook County Department of Public Health; Public Health Institute of Metropolitan Chicago	Researchers estimate that a penny-per-ounce tax in Illinois could result in the prevention of nearly 3,500 new cases of type 2 diabetes in 2011, an over \$20 million reduction in health care costs, an approximate 23.5% drop in consumption, the generation of more than \$600 million in revenue, and an average reduction in weight by approximately 1.7 pounds.

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Nederkoorn, C., Havermans, R.C., Giesen, J.C.A.H., Jansen, A. (2011). High tax on high energy dense foods and its effects on the purchase of calories in a supermarket. An experiment. <i>Appetite</i> , 56, 760 - 765.	n/a	A tax on high energy dense (HED) foods resulted in the purchase of fewer calories, particularly from HED foods. A 50% increase in the price of HED products led to a 16% reduction of purchases.
Pomeranz, J.L. (2012). Advanced policy options to regulate sugar-sweetened beverages to support public health. <i>J Public Health Pol</i> , 33, 75 - 88.	n/a	Policy options are available to governments to regulate sugar-sweetened beverages, including mandatory factual disclosures, earmarked taxation, and regulating sales, including placement within retail and food service establishments.
Taber, D.R., Chriqui, J.F., Powell, L.M., Chaloupka, F.J. (2012). Banning all sugar-sweetened beverages in middle schools. <i>Arch Pediatr Adolesc Med</i> , 166, 256 - 262.	RWJF; National Heart, Lung, and Blood Institute	State policies that ban all SSBs in middle schools appear to reduce in-school access and purchasing of SSBs but do not reduce overall consumption.
Andreyeva, T., Long, M.W., Brownell, K.D. (2010). The impact of food prices on consumption: A systematic review of research on price elasticity of demand for food. <i>Am J Pub Health</i> , 100.2, 216 - 222.	Rudd Foundation	Price elasticities of demand for certain foods provides opportunities to influence consumption. Data on price elasticities can help develop policies that might have the greatest impact on consumer food choices, nutrition and health.
Block, J.P., Chandra, A. McManus, K.D., Willett, W.C. (2010). Point-of-purchase price and education intervention to reduce consumption of sugary soft drinks. <i>Am J Pub Health</i> , 100.8, 1427 - 1433.	RWJF	Increasing the price of regular soft drinks resulted in a 26% decline in sales. Combining education with a price increase resulted in an additional 18% decline. Education alone had no effect on sales.
Epstein, L.H., Dearing, K.K., Roba, L.G., Finkelstein, E. (2010). The influence of taxes and subsidies on energy purchased in an experimental purchasing study. <i>Psychol Sci</i> , 21.3, 1 - 9.	School of Medicine and Biomedical Sciences, University at Buffalo, Buffalo, NY; Duke-NUS Graduate Medical School, Singapore	Taxing less healthy foods with low nutrient density reduced the total energy/calories purchased in a shopping day, in addition to reducing the proportion of fat, and increasing the proportion of protein purchased by mothers.

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Finkelstein, E.A., Zhen, C., Nonnemaker, J., Todd, J.E. (2010). Impact of targeted beverage taxes on higher- and lower-income households. <i>Arch Intern Med</i> , 170.22, 2028 - 2034.	RWJF	Large taxes on SSBs have the potential to positively influence weight outcomes, especially for middle-income households. These taxes would also generate substantial revenue that could be used to fund obesity prevention programs or for other causes.
Smith, T.A., Lin, B.H., Lee, J.Y. (2010). Taxing calorie sweetened beverages: Potential effects on beverage consumption, calorie intake, and obesity. <i>USDA Economic Research Report</i> , 100, 1 - 23.	USDA-ERS Cooperative Agreement	A tax-induced 20% price increase on caloric sweetened beverages is estimated to cause an average reduction of 37 calories per day, or 3.8 pounds of body weight over a year, for adults and an average of 43 calories per day, or 4.5 pounds over a year, for children.
Brownell, K.D., Farley, T., Willett, W.C., Popkin, B.M., Chaloupka, F.J., Thompson, J.W., Ludwig, D.S. (2009). The public health and economic benefits of taxing sugar-sweetened beverages. <i>New Eng J Med</i> , 361, 1599 - 1606.	Rudd Foundation; NIH; RWJF	There are compelling reasons to tax SSBs: 1) escalating health care costs and the rising burden of diseases related to poor diet create an urgent need for solutions; 2) research to date suggests that an SSB tax would have strong positive effects on reducing consumption; and 3) taxes could generate substantial revenue to prevent obesity and address other external costs.
Finkelstein, E. A., Trogdon, J.G., Cohen, J.W., Dietz, W. (2009). Annual medical spending attributable to obesity: payer- and service- specific estimates. <i>Health Aff</i> , 28.5, 822 - 831.	CDC Foundation	In 1998 estimates for obesity were approximately \$78.5 billion or 6.5% of health expenditures, with roughly half financed by Medicare/Medicaid. A newer analysis found that in 2006 - 2008 obesity was responsible for \$147 billion or 9.1% of health expenditures, with roughly half financed by Medicare/Medicaid.
Powell, L.M. and Chaloupka, F.J. (2009). Food prices and obesity: Evidence and policy implications for taxes and subsidies. <i>Milbank Q</i> , 87, 229 - 257.	University of Illinois at Chicago	While small taxes or subsidies are not likely to decrease BMI significantly, larger taxes might have a measureable effect on American's weight, particularly for children, adolescents, low socio-economic status populations, and those most at risk for becoming overweight.
Powell, L., Chiqui, J., Chaloupka, F.J. (2009). Associations between state-level soda taxes and adolescent body mass index. <i>J Adol Health</i> , 45.3, S57 - S63.	RWJF; National Institute on Drug Abuse	Current state-level tax rates are not linked to a decrease in adolescent weight. Taxes would need to be raised substantially in order to detect an association.

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Williams, R. and Christ, K. (2009). Mercatus on Policy No. 52 -- Taxing Sin: Are Excise Taxes Efficient? Fairfax, VA: George Mason University.	The Mercatus Center, George Mason University	Taxing SSBs to reduce obesity and raise revenue to fund obesity-prevention programs is problematic because 1) soft drink consumption is a small part of overweight people's diets; 2) substitutes for SSBs may be highly caloric; 3) governments may not spend the revenue on obesity prevention; and 4) the burden of taxation would likely fall disproportionately on the poor.
Chriqui, J., Eidson, S.S., Bates, H., Kowalczyk, S., Chaloupka, F.J. (2008). State sales tax rates for soft drinks and snacks sold through grocery stores and vending machines, 2007. <i>J Pub Health Pol</i> , 29, 226 - 249.	RWJF; MayaTech Corporation	In 2007, forty states imposed a sales tax on soft drinks; several were higher than the "standard" taxes rate (therefore called "disfavored"). Chicago is the only metropolitan area with a specific tax on soft drinks. An excise tax, if levied, would be an additional tax, on top of the sales tax. The only state-level taxes on soft drinks are sales taxes. All state excise taxes were repealed by the early 2000s.
Congressional Budget Office (CBO). (2008). Budget Options, Volume 1: Health Care. Washington, D.C.: Congressional Budget Office (Option 106).	Congress of the United States	In 2008, the CBO estimated that a federal excise tax of \$.03 per 12 ounces of SSBs would generate approximately \$24 billion over the 2009 - 2013 period and \$50 billion over the 2009 - 2018 period.
Schroeter, C., Lusk, J., Tyner, W. (2008). Determining the impact of food price and income changes on body weight. <i>J Health Econ</i> , 27.1, 45 - 68.	College of Agriculture, Arkansas State University; Department of Agricultural Economics, Oklahoma State University; Department of Agricultural Economics, Purdue University, West Lafayette, IN	This study suggests that a tax on caloric soft drink will likely decrease body weight.
Caraher, M. & Cowburn, G. (2005). Taxing food: implications for public health nutrition. <i>Public Health Nutr</i> , 8.8, 1242 - 1249.	The Centre for Food Policy, Institute of Health Sciences, City University, London; BHF Health Promotion Research Group, Department of Public Health, University of Oxford	Small taxes with the clear purpose of promoting the health of key groups, e.g. children, are more likely to receive public support.

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Finkelstein, E.A., Ruhm, C.J., Kosa, K.M. (2005). Economic causes and consequences of obesity. <i>Ann Rev Public Health</i> , 26, 239 - 257.	RTI International; Bryan School, University of North Carolina, Greensboro	Obesity is costly and financed mostly by taxpayers, which is a rationale for government intervention. However, because obesity may result from poor information and addictive behavior and/or as a result of living in an obesogenic environment, interventions will need to be multifaceted to ensure success.
Cawley, J. (2004). An economic framework for understanding physical activity and eating behaviors. <i>Am J Prev Med</i> , 27, 117 - 125.	Department of Policy Analysis and Management, Cornell University, Ithaca, NY; Partnership to Promote Healthy Eating and Active Living, Boston, MA	From an economic standpoint, interventions to reduce obesity are justified if there are 'market failures,' i.e., the production or use of goods is not optimal or efficient. There are three broad market failures under which SSB consumption falls, suggesting the need for policy intervention: 1) information deficits; 2) externalities; and 3) a lack of rationality.
Yen, S.T., Lin, B-H., Smallwood, D.M., Andrews, M. (2004). Demand for nonalcoholic beverages: The case of low income households. <i>Agribusiness</i> , 20.3, 309 - 321.	USDA-ERS Cooperative Agreement	Soft drinks have replaced milk at home in part because they are lower-priced. This suggests that raising the price of soft drinks through such methods as taxes can be effective in curtailing soft drink consumption and promoting milk consumption.
Bahl, R., Bird, R., Walker, M.B. (2003). The uneasy case against discriminatory excise taxation: Soft drink taxes in Ireland. <i>Public Financ Rev</i> , 1.5, 510 - 533.	Andrew Young School of Policy, Georgia State University; International Tax Program, Rotman School of Management, University of Toronto	A 10% increase in the price of soft drinks could lead to an 11% decrease in the number of liters consumed.
State snack and soda sales tax data ( <a href="http://www.impactteen.org/obesitystatedata.htm">http://www.impactteen.org/obesitystatedata.htm</a> )	RWJF; MayaTech Corporation	As of January 2009, 33 states have sales taxes on soft drinks at an average rate of 5.2%.

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