

When science has little effect on policy: The example of a sugar tax

Abstract: Obesity may be unique in the extent to which there are multiple plausible causes resulting in multiple, competing proposed solutions. Advocacy around obesity is highly politicized. This analysis attempted to document the use of science in advocating for or against one possible policy lever in the fight against obesity. Despite the science and logic behind a tax of sugar-sweetened beverages, such a proposal has received little agenda space at the national level, reflecting the power of competing interests to limit proposed solutions.

The fight against obesity

Scientific attention to obesity spans many fields, including various branches of medical practice and biomedical science, psychology, sociology, urban planning, agriculture, economics, and marketing. “The literature on obesity is large and covers many disciplines, but there is little agreement about causes” (Offer, Pechey, and Ulijaszek 2010, 297). Obesity is generally thought to be a complex problem arising from a host of genetic, personal, social, and contextual factors affecting choices about energy balance, or how calories in balance with calories out—or not.

Concern has long since spilled over from the scientific arena to being an issue on the agenda of policymakers and the general public. A search for newspaper headlines (in the ProQuest Newspapers database) revealed the following exemplary headlines:

Friendly microbes could make you fat (2006, Dec 20), *Knight Ridder Tribune News Service*, p.

1.

Can architecture make you fat? (2007, Jan 3), *The Guardian* (London UK), p. 28.

Can your friends make you fat? (2007, Jul 26), *Wall Street Journal* (eastern edition), p. D1.

Western diets ‘turn on genes that make us obese’ (2009, Dec 1), *The Hindustan Times* (New Delhi).

Pray it ain't so: Religion could make you fat (2011, Mar 27), *Tulsa World*, p. D5.

Weight gain, hair loss could signal a thyroid problem (2011, Mar 28), *The Commercial Appeal* (Memphis TN), p. M3.

Could marathons make you fat? (2011, Apr 9), *The Times* (London UK), p. 11.

Organic food can make you fat (2011, Apr 10), *Sunday Times* (London UK; Scot region), p. 17.

More controversy on the diet front: Is fruit making us fat? (2011, Apr 11), *Boston Globe*, p. G10.

Your plate size may be making you fat (2011, Apr 12), *The Herald* (Everett WA).

Diet in pregnancy linked to obesity (2011, Apr 19), *Belfast Telegraph*, p. 8.

Does this birth control pill make me look fat? (2011 Apr 24), *South Florida Sun-Sentinel*, p. G10.

“The problem...is not figuring out what could have caused the rise in...obesity; the problem is that too many things could have caused it” (Cawley 2006, 70). Multiple causes result in multiple favored solutions among advocacy groups—what Kingdon (2003) called the policy stream. All those perspectives, from surgical to fiscal to infrastructural, come with competing messages and entrenched interests. Many beliefs have not been tested or do not stand up to sophisticated statistical scrutiny (i.e. accounting for selection). While there had been hope that First Lady Michelle Obama’s campaign against child obesity would unite these competing interests (Ambinder 2010), there remain few examples of consensus, no coalition of interest groups and policy entrepreneurs that has pushed any solution onto the Federal agenda. This paper analyzes the science and politics behind one of many proposed interventions into the obesity epidemic. The case of a sugar tax appears to be unique in that it has a

strong research base that united experts who have not always agreed in the past about favored causes or interventions. Despite this unique position in the research and advocacy arenas, I find that such a proposal has received very little attention at the Congressional level.

Price as a weapon

Economic forces have promoted availability and consumption of energy-dense foods, increased sedentariness, and reduced health consequences via improved medical treatment (Finkelstein and Strombotne 2010). Centralized production contributes to widespread availability of processed foods for ready snacking or drinking (Cutler, Glaeser, and Shapiro 2003). From 1989 to 2005, the real price of fats fell 26% and of sugars and sweets 33%, while the price of fruits and vegetables increased 75% (Cawley 2006). Thus, in testimony submitted to a Senate hearing on farm programs, Per Pinstrup-Andersen, PhD, professor of food, nutrition, public policy, and applied economics and management at Cornell, alluded to policies that have contributed to these relative price changes: “Government interventions related to specific commodities, such as price subsidies and research and development support, should pay attention to the nutrition effects” (see Appendix for source).

Besides addressing unintended consequences of existing market interventions, another common justification for government intervention is in the case of a negative externality. The costs of obesity borne by society, including increased health care expenses and decreased wages and productivity, would appear to represent an additional external cost of excess calorie consumption (Cawley 2006) although Finkelstein and Strombotne (2010) argue that there is no clear externality, at least for adults. Surveys, media accounts, and the money spent on diets, however, argue that many people feel they are overweight, indicating consumption may be higher than socially optimal. Raising prices on high calorie foods will discourage consumption and encourage substitution of lower calorie options, reducing any externality and promoting a healthier energy balance. Furthermore, Cawley and Finkelstein and

Strombotne agree that there is justification for intervening on behalf of children and adolescents, who cannot be presumed to be rational actors.

Proposing a sugar tax

Research on the increased consumption of added sugars, and the obesity-inducing effects of such choices, continues to mount. The government's *Dietary Guidelines* specifically recommend reducing consumption of foods with added sugars (US Department of Agriculture and US Department of Health and Human Services 2010). Numerous writers ascribe part of the rise in obesity to parallel increases in sugar-sweetened beverages (SSBs; Bray 2010; Hu and Malik 2010; Tappy and Le 2010; Vartanian, Schwartz, and Brownell 2007) consumed between meals as well as within meals, often in lieu of lower calorie choices (Sebastian et al. 2006; Vartanian, Schwartz, and Brownell 2007). "Amidst a growing pandemic of obesity, ample evidence exists to discourage consumption of these beverages in place of healthy alternatives" (Hu and Malik 2010, 53). SSBs accounted for 20% of calorie intake in the US in 2002 (up from 11.8% in 1965), and an even higher proportion for adolescents (Bray 2010). There is growing evidence that the body, physiologically and psychologically, treats beverages differently (Bray 2010; Popkin 2009; Tappy and Le 2010). In addition, recent tests of calorie information requirements found that calorie posting had substantial effects on food choices but almost no effect on purchases of beverage calories (Bollinger, Leslie, and Sorensen 2011). Meanwhile, interventions to remove carbonated beverages or all SSBs from schools have not had the intended effects because youth simply substitute other sources available within schools (e.g., sweetened fruit drinks or sports drinks) or off campus (Taber et al. 2011). Simply providing information or limiting a single source of SSBs does not appear effective, and broader initiatives are needed.

In October 2009, an all-star cast of experts published a paper in the *New England Journal of Medicine* (NEJM) advocating for taxing SSBs. This group included Kelly Brownell of Yale's Rudd Center for

Food Policy & Obesity, Thomas Farley of the New York City Department of Health and Mental Hygiene, Walter Willett of the Harvard School of Public Health, and Barry Popkin of the University of North Carolina Population Center. These authors had not previously been united—for example, Willett and Popkin have sparred over high fructose corn syrup—but put aside any differences to advocate one policy lever among many. Arguing that “a compelling case can be made for the need for reduced consumption of these beverages” (Brownell et al. 2009, 1599), the panel proposed a corrective tax to further the public health goal of reducing obesity and its associated external costs. They are not the first group to advocate such an intervention. In its report *Liquid Candy*, the Center for Science in the Public Interest (CSPI) recommended taxes on soft drinks (Jacobsen 2005). Brownell and Thomas Frieden, then New York City health commissioner and now director of the Centers for Disease Control and Prevention, had earlier published an editorial in *NEJM* advocating for a national tax on sugared beverages (Brownell and Frieden 2009). The Brownell, Farley, et al. piece, however, represents the strongest summary yet of the relevant research and argument for a national excise tax on added sugar in beverages of all kinds. As Brownell and colleagues argued, a national tax is preferable for a number of reasons, including the ability to levy the tax on producers and use resulting revenues to combat obesity-related costs to Medicaid and Medicare.

Would pricing strategies have an effect? Industry research found overall price increases of 6.8% were associated with a decrease in sales of 7.8%, while Coca-Cola price increases of 12% were associated with a sales decline of 14.6% (Brownell and Frieden 2009). These correspond to price elasticities of -1.15 for the whole market and -1.22 for Coke. A USDA report (Smith, Lin, and Lee 2010) estimated an elasticity of -1.26. State-level experimentation with sales taxes (as a percentage of product price), excise taxes (as an extra price per unit volume or weight), or removing exemptions to state sales taxes have shown small but statistically significant effects on body mass from these often small price increases (Fletcher, Frisvold, and Tefft 2010; Smith, Lin, and Lee 2010). The high consumption of SSBs

among children and adolescents (Jacobsen 2005) implies this tax would target minors, and research indicates children do respond to price signals (Powell 2009; Powell, Han, and Chaloupka 2010). Thus, there is evidence that consumers will reduce consumption in response to a tax on added sugars.

Agenda space

Obesity may be a unique social problem in the extent to which there are multiple plausible solutions and multiple interest groups that often cancel each other out rather than unite behind a single intervention (Ambinder 2010). A persuasive argument has been made within scientific communities to implement a tax on SSBs, put forth by researchers who have previously advocated for policies addressing such divergent causes as food marketing, saturated fats, carbohydrates, and vending machines. The research base appears strong, as does the logic of a national corrective tax, a policy lever that works within the market to reduce consumption rather than dictate price or quantity.

Consistent with the 2009 *NEJM* piece, I focused attention at the national level to pricing of added sugars. In order to assess the extent to which such a policy has reached the agenda of the macropolitical system, and the research base for arguments for or against the policy solution, I examined Congressional testimony (via ProQuest's Congressional Universe) using the following text search terms of all available documents over the last 10 years:

- sugar w/p obes!
- Brownell w/4 Kelly, tax!
- Willett w/4 Walter, tax!

These searches resulted in nearly 100 documents. I read through each to find those which were broadly referring to pricing of sugar, resulting in 12 documents from 2002 to 2011 (see Appendix),

including 3 written testimonies submitted to other hearings represented. In other words, over 10 years, I could find 9 specific discussions of modifying how sugar is priced in the marketplace.

The first hearing in this sample addressed childhood nutrition and physical activity (in reference to a bill that would have provided grants to local public health agencies). Kelly Brownell, citing research linking SSBs to obesity, summarized the logic for economic intervention into the food market: “The fact is that unhealthy food is easy to get, and it costs relatively little. Healthy food is harder to get, and it costs too much. And as long as the economics are set up like this, we’re bound to have a society that’s going to overeat the unhealthy foods.” Brownell specifically mentioned a follow-up study which concluded “Consumption of sugar-sweetened drinks is associated with obesity in children” (Ludwig, Peterson, and Gortmaker 2001, 505). In a 2003 hearing on the *Dietary Guidelines*, Michael Jacobsen of CSPI similarly urged Congress to “explore pricing mechanisms, taxes, subsidies and other means that would reduce the cost of the most healthful foods, such as fruits and vegetables, and increase the cost of the least healthful foods, such as meat and cheese.” Jacobsen offered no specific scientific evidence behind this advocacy. Less than a year later, CSPI continued to argue for pricing intervention, armed with the 2004 Global Strategy on Diet, Physical Activity and Health of the World Health Organization (World Health Organization 2004), which supported the use and evaluation of fiscal policies to influence prices and thus consumption of certain foods. Note that while pricing was offered as a likely cause of obesity or point of intervention, such a policy was not the focus of these hearings.

Discussion of taxation and pricing disappeared from Congress until debate over health care reform early in the term of Barack Obama. Douglas Elmendorf of the Congressional Budget Office summarized much of the thinking in obesity studies: The “relative costs of food over time...[are] an important factor in leading to more consumption of food. That suggests that raising the cost of certain kinds of food might reverse that.” This idea gained endorsement from Sen. Thomas Carper, D-Del, who referred to the

taxes and other policies credited with vastly reducing smoking and concluded, “What I’m getting at is I think...part of what we have to do is to...sort of train our society or encourage our society to regard overeating, owing to the fact that it makes us very large and unhealthy.” Dr. Andrew Weil of the University of Arizona testified that federal subsidies contribute to obesity by making sugar cheap and widely available. Michael Jacobsen joined Robert Greenstein, PhD, of the Center on Budget and Policy Priorities and Jonathan Gruber, PhD, economics professor at the Massachusetts Institute of Technology, in advocating for taxes to encourage better nutrition. Later in 2009, Dr. Sandra Hassink represented the American Academy of Pediatrics in advocating for “taxation of sugar-sweetened beverages as a method of both reducing consumption and raising revenue for other children’s health priorities.”

Such a tax was not implemented, despite the support of CSPI and the Yale Rudd Center. The next time pricing appeared as an issue in Congress was during testimony regarding farm policy. Cornell’s Per Pinstrup-Andersen argued for rational alignment of food system policies with health goals: “Interventions that lead to a more diversified and nutritious diet could play a major role in reducing overweight, obesity and related chronic diseases.... Policies that would increase the price of sugar and sweeteners and decrease the price of fruit and vegetables are examples of such interventions.”

Arguments against taxing sugar

In his testimony in May 2002, Kelly Brownell described the tactics of the food and beverage industry in avoiding taxes or other regulations:

First of all, they’re going to stall, say, ‘We need more research.’ Recommendations that come out of committee meetings... will be watered down and will end up looking like pabulum more than anything bold and decisive. Second, they have the opportunity to deny, distort and ignore both the science and common sense.... They will say that parents and families must do the job....

They will also make straw man arguments...like ‘We can’t blame the epidemic on one food,’ ‘We shouldn’t make demons of certain parts of the industry,’ and that things like a soft drink tax, which several states are considering now, won’t wipe away this problem. Well, of course they won’t wipe away the problem. It’s an enormous, complex problem, and no one thing is going to get the job done. But those are straw man arguments.

Arguments against a sugar tax or other price-based control have indeed revolved around arguing for more research and against singling out any one food source, spreading the blame by emphasizing the ‘calories out’ side of the energy balance, and selective use of research. In that same hearing, Lisa Katic, registered dietician representing the Grocery Manufacturers of America (GMA), illustrated Brownell’s straw man: “Restricting, taxing or prohibiting certain foods will almost certainly not work. In fact, a study published in the Journal of the American Dietetic Association states that overly restrictive diets may lead to enhanced food cravings, overindulgence, eating disorders or a preoccupation with food and eating.” Note that the study cited in this tactical use of research, even as summarized, does not support her argument—“overly restrictive diets” refer to attempts to consume less than 1200 to 1500 calories per day for weight loss, not to cutting out soft drinks. She further illustrated Brownell’s point about not letting the complexity of obesity stop policymakers from acting: “Punitive measures and quick fixes such as snack taxes, advertising and sales restrictions are unproductive and potentially dangerous. Such proposals lull people into thinking that these complex problems can be solved with one simple measure.”

The predicted emphasis on physical activity was illustrated by Dr. Kenneth Cooper, the “inventor” of aerobics: “We should identify the amount of excess calories in an individual’s diet rather than declaring that individual foods are ‘good’ or ‘bad’. Restricting, taxing or prohibiting certain foods will almost certainly not work as these policies will do little or nothing to help people choose the best foods for

their own needs.” While he did note the need to restrict calories, Cooper primarily directed the subcommittee to focus on physical activity.

The energy balance defense was illustrated by Susan Finn, PhD, RD, of the American Council for Fitness and Nutrition, who mimicked Lisa Katic’s argument in her submitted testimony:

It is important to note that the number of calories consumed - not the SOURCE of those calories - is what is important in this equation....It has been long recognized by the government, medical and nutrition organizations that a balanced approach to diet is the right approach, as opposed to one that characterizes certain foods as ‘good’ or ‘bad.’ In fact, a study published in the Journal of the American Dietetic Association states that overly restrictive diets may lead to enhanced food cravings, overindulgence, eating disorders or a preoccupation with food and eating.

Note the same tactical misuse of the same article. Finn argued instead for promoting physical activity and nutrition labeling to help consumers make informed choices. Finn’s Council did include a handful of health groups among its members, but was largely dominated by food producers and retailers, including Coca-Cola and McDonald’s, industry trade groups such as the American Beverage Association and the Corn Refiners Association, and advertising associations, including the American Advertising Federation and the International Advertising Association.

The complexity of obesity makes it easy to make some arguments against a tax on any particular food. While not specifically referenced in testimony, interest groups can cite studies that find small or insignificant effects of beverage consumption on weight or other health outcomes, often conducted or sponsored by the food and beverage industry (Vartanian, Schwartz, and Brownell 2007; Brownell and Frieden 2009). For example, a study published in *Food and Chemical Toxicology* that concluded that consumption of SSBs was not significantly associated with obesity risk (Sun and Empie 2007) was

published by scientists from Archer Daniels Midland, a major agribusiness supplier of processed food ingredients, including high fructose corn syrup. Their conclusion echoes common industry wisdom: “Obesity is a multi-factorial problem which is rooted in a positive balance between energy intake and expenditure. Lifestyle, behavior, and environment appear to have a more dominant role in obesity prevalence than do individual foods” (p. 1535). Further exploration of their analysis indicates why they might have come to this conclusion. While their description of their logistic regression predicting obesity status claims to use 10 variables, the authors entered a set of 5 dummy variables (excluding the reference category) for age, 6 dummy variables for total calories, and 2 dummy variables each for education, screen time, physical activity, and fat intake levels. In other words, for six variables other scientists might include in their continuous form or as single indicator variables, Sun and Empie chose to use multiple categories and thus increase estimated coefficient standard errors, decreasing the likelihood of finding statistical significance. SSB intake was entered as a dichotomous indicator of any consumption during the relevant survey period, combining those with one serving with those with three or five or 10. The results for SSB intake therefore indicate that those who consumed any amount of SSBs were not significantly more likely than those with no consumption to be obese *net of total calories consumed*.

Conclusions

Despite persuasive arguments by leading researchers in nutrition and other fields, and despite support from other interest groups, taxing added sugars in food or beverages has not emerged as a viable policy solution at the federal level. Congress has heard little testimony regarding such a proposal. A major reason for the lack of agenda space for a sugar tax, as highlighted by Kelly Brownell, is industry pressure. Opponents are readily able to split the blame for the broadening of America. They furthermore argue that, in the words of Mary Sophos of the GMA, they have committed “to [providing]

healthy—healthful products and to continuously improve the nutrition profile of our products.” Note the reframing from “healthy”—which no competent dietician would associate with SSBs or other snack foods—to “healthful”, industry-speak for products that have fewer calories, less sugar, or less fat than previous offerings. Such advocates deflect attention to physical activity and nutrition labeling, knowing the latter would have little effect on sales while the former would promote sales of sports drinks and other beverages. Most of this advocacy, of course, appears outside official hearings. In response to the linking of an SSB tax to health care reform, food industry groups spent \$24 million in lobbying in the first three quarters of 2009, according to a story in the Huffington Post (http://www.huffingtonpost.com/2009/11/04/soda-tax-mobilizes-food-l_n_345840.html) citing Senate lobbying reports. This lobbying limits the alternatives given serious consideration in the policy stream, closing off agenda space from science-backed interventions.

A sugar tax is but one of many possible choices policy makers could pursue to limit the economic and health effects of obesity. Multiple solutions are likely necessary, and the experts arguing in *NEJM* for a tax on sweetened beverages would not claim it alone would cure obesity in the US. This policy process analysis examined the extent to which the expertise represented in that article had entered Congressional deliberation. Despite the strength of the research and the arguers, there is no evidence of an instrumental, direct, rational application of the science, because obesity research must affect policy in a complex arena also populated by food and beverage industry, advertising and marketing, and retail groups. Put another way, solution met problem, but politics kept a sweetened beverage tax largely off the Congressional agenda.

Appendix: Congressional documents search results

Document title	Date	Purpose
CHILDHOOD OBESITY, SENATE HEALTH, EDUCATION, LABOR AND PENSIONS, LISA KATIC, RD, SENIOR FOOD & HEALTH POLICY ADVISOR, GROCERY MANUFACTURERS OF AMERICA	21-May-02	submitted testimony for hearing below
U.S. SENATOR EDWARD KENNEDY (D-MA) HOLDS HEARING ON CHILD OBESITY, LABOR, EDUCATION AND PENSIONS COMMITTEE	21-May-02	Improved Nutrition and Physical Activity Act
U.S. SENATOR PETER G. FITZGERALD (R-IL) HOLDS HEARING ON OBESITY AND DIETARY GUIDELINES, SCIENCE AND TRANSPORTATION COMMITTEE, SUBCOMMITTEE ON CONSUMER AFFAIRS	30-Sep-03	discussion of government's Dietary Guidelines
HEALTHY EATING AND CHILDREN, HOUSE EDUCATION AND THE WORKFORCE, KENNETH H. COOPER, M.D., M.P.H., COOPER AEROBICS CENTER/COOPER CLINIC	12-Feb-04	submitted testimony
GOVERNMENT ROLE IN COMBATING OBESITY, HOUSE GOVERNMENT REFORM, BRUCE SILVERGLADE, DIRECTOR, LEGAL AFFAIRS CENTER FOR SCIENCE IN THE PUBLIC INTEREST	3-Jun-04	submitted testimony regarding menu labeling & school lunches
GOVERNMENT ROLE IN COMBATING OBESITY, HOUSE GOVERNMENT REFORM, SUSAN FINN, PHD, RD, CHAIR, AMERICAN COUNCIL FOR FITNESS AND NUTRITION	3-Jun-04	submitted testimony
U.S. REPRESENTATIVE THOMAS M. DAVIS, III (R-VA) HOLDS HEARING ON OBESITY AND HEALTH, HOUSE GOVERNMENT REFORM COMMITTEE	3-Jun-04	government responses to obesity
HEARING OF THE SENATE FINANCE COMMITTEE; SUBJECT: "SCORING HEALTH CARE REFORM: CBO'S BUDGET OPTIONS"; CHAIRED BY: SENATOR MAX BAUCUS (D-MT); WITNESS: DOUGLAS ELMENDORF, DIRECTOR, CONGRESSIONAL BUDGET OFFICE (CBO)	25-Feb-09	health care reform

Document title	Date	Purpose
<p>HEARING OF THE SENATE HEALTH, EDUCATION, LABOR AND PENSIONS COMMITTEE; SUBJECT: INTEGRATIVE CARE; CHAIRED BY: SENATOR TOM HARKIN (D-IA); WITNESSES: DR. MEHMET C. OZ, DIRECTOR, COMPLEMENTARY MEDICINE PROGRAM, CARDIOVASCULAR INSTITUTE, NEW YORK-PRESBYTERIAN HOSPITAL; DR. MARK HYMAN, FOUNDER, MEDICAL DIRECTOR, THE ULTRAWELLNESS CENTER; DR. DEAN ORNISH, FOUNDER, PRESIDENT, PREVENTIVE MEDICINE RESEARCH INSTITUTE; DR. ANDREW WEIL, DIRECTOR, ARIZONA CENTER FOR INTEGRATIVE MEDICINE, UNIVERSITY OF ARIZONA</p>	26-Feb-09	integrative care and health care reform
<p>HEARING OF THE SENATE COMMITTEE ON FINANCE; CHAIRED BY: SENATOR MAX BAUCUS (D-MT); WITNESSES: STUART H. ALTMAN, PHD, SOL C., CHAIKIN PROFESSOR OF NATIONAL HEALTH POLICY, HELLERSCHOOL FOR SOCIAL POLICY AND MANAGEMENT, BRANDEIS UNIVERSITY, WALTHAM, MA; JOSEPH R. ANTOS, PHD, WILSON H. TAYLOR SCHOLAR IN HEALTH CARE AND RETIREMENT POLICY, AMERICAN ENTERPRISE INSTITUTE, WASHINGTON, DC; KATHERINE BAICKER, PHD, PROFESSOR OF HEALTH ECONOMICS, HARVARD SCHOOL OF PUBLIC HEALTH, CAMBRIDGE, MA; LEONARD BURMAN, PHD, DIRECTOR, TAX POLICY CENTER, URBAN INSTITUTE, WASHINGTON, DC; ROBERT GREENSTEIN, PHD, EXECUTIVE DIRECTOR, CENTER ON BUDGET AND POLICY PRIORITIES, WASHINGTON, DC; JONATHAN GRUBER, PHD, PROFESSOR OF ECONOMICS, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MA; MICHAEL F. JACOBSON, PHD, EXECUTIVE DIRECTOR, THE CENTER FOR SCIENCE IN THE PUBLIC INTEREST, WASHINGTON, DC; JAMES A. KLEIN, PRESIDENT, AMERICAN BENEFITS COUNCIL, WASHINGTON, DC; EDWARD KLEINBARD, CHIEF OF STAFF, JOINT COMMITTEE ON TAXATION, WASHINGTON, DC; GERALD M. SHEA, ASSISTANT TO THE PRESIDENT FOR GOVERNMENTAL AFFAIRS, AFL-CIO, WASHINGTON, DC; JOHN SHEILS, SENIOR VICE PRESIDENT, THE LEWIN GROUP, FALLS CHURCH, VA; GAIL WILENSKY, PHD, SENIOR FELLOW, PROJECT HOPE, BETHESDA, MD; STEVEN WOJCIK, VICE PRESIDENT OF PUBLIC POLICY, NATIONAL BUSINESS GROUP ON HEALTH, WASHINGTON, D.C.</p>	12-May-09	health care reform
<p>HEARING OF THE HEALTH SUBCOMMITTEE OF THE HOUSE ENERGY AND COMMERCE COMMITTEE; SUBJECT: "INNOVATIONS IN ADDRESSING CHILDHOOD OBESITY"; CHAIRED BY: REPRESENTATIVE FRANK PALLONE (D-NJ); WITNESSES: WILLIAM DIETZ, DIRECTOR, DIVISION OF NUTRITION, PHYSICAL ACTIVITY, AND OBESITY, CENTERS FOR DISEASE CONTROL (CDC); TERRY HUANG, DIRECTOR, OBESITY RESEARCH STRATEGIC CORE, EUNICE KENNEDY SHRIVER NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT, NATIONAL INSTITUTES OF HEALTH (NIH); RON JAWORSKI, CHAIRMAN,</p>	16-Dec-09	childhood obesity initiatives

Document title	Date	Purpose
JAWS YOUTH FUND, NATIONAL FOOTBALL LEAGUE PLAY 60; SANDRA HASSINK, CHAIR, OBESITY LEADERSHIP WORKGROUP, AMERICAN SOCIETY OF PEDIATRICS; JEREMY NOWAK, PRESIDENT AND CEO, THE REINVESTMENT FUND; MARY SOPHOS, SENIOR VICE PRESIDENT OF GOVERNMENT AFFAIRS, GROCERY MANUFACTURERS ASSOCIATION; RISA LAVIZZO-MOUREY, PRESIDENT AND CEO, ROBERT WOODS JOHNSON FOUNDATION		
OUTLOOK FOR FARM PROGRAMS; COMMITTEE: SENATE AGRICULTURE, NUTRITION AND FORESTRY	26-May-11	submitted testimony, hearing on farm policy

References

- Ambinder, Marc. 2010. Beating Obesity. (Cover story). *The Atlantic*, May, 72-83.
- Bollinger, Bryan, Phillip Leslie, and Alan Sorensen. 2011. "Calorie Posting in Chain Restaurants." *American Economic Journal: Economic Policy* no. 3 (1):91-128. doi: 10.1257/pol.3.1.91.
- Bray, G. A. 2010. "Soft drink consumption and obesity: It is all about fructose." *Current Opinions in Lipidology* no. 21:51-57.
- Brownell, Kelly D., Thomas Farley, Walter C. Willett, Barry M. Popkin, Frank J. Chaloupka, Joseph W. Thompson, and David S. Ludwig. 2009. "The Public Health and Economic Benefits of Taxing Sugar-Sweetened Beverages." *New England Journal of Medicine* no. 361 (16):1599-1605. doi: 10.1056/NEJMhpr0905723.
- Brownell, Kelly D., and Thomas R. Frieden. 2009. "Ounces of Prevention--The Public Policy Case for Taxes on Sugared Beverages." *New England Journal of Medicine*:1805-1808.
- Cawley, John. 2006. "Markets and Childhood Obesity Policy." *Future of Children* no. 16 (1):69-88.
- Cutler, David M., Edward L. Glaeser, and Jesse M. Shapiro. 2003. "Why have Americans become more obese?" *Journal of Economic Perspectives* no. 17 (3):93(118).
- Finkelstein, E. A., and K. L. Strombotne. 2010. "The economics of obesity." *American Journal of Clinical Nutrition* no. 91 (5):1520S-1524. doi: 10.3945/ajcn.2010.28701E.
- Fletcher, Jason M., David Frisvold, and Nathan Tefft. 2010. "CAN SOFT DRINK TAXES REDUCE POPULATION WEIGHT?" *Contemporary Economic Policy* no. 28:23-35. doi: 10.1111/j.1465-7287.2009.00182.x.
- Hu, F. B., and V. S. Malik. 2010. "Sugar-sweetened beverages and risk of obesity and type 2 diabetes: Epidemiologic evidence." *Physiology & Behavior* no. 100 (1):47-54. doi: 10.1016/j.physbeh.2010.01.036.
- Jacobsen, M.F. 2005. Liquid candy: How soft drinks are harming Americans' health. Washington DC: Center for Science in the Public Interest.
- Kingdon, John W. 2003. *Agendas, alternatives, and public policies*. New York: Longman.
- Ludwig, David S., Karen E. Peterson, and Steven L. Gortmaker. 2001. "Relation between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis." *Lancet* no. 357:505.
- Offer, Avner, Rachel Pechey, and Stanley Ulijaszek. 2010. "Obesity under Affluence Varies by Welfare Regimes: The Effect of Fast Food, Insecurity, and Inequality." *Economics and Human Biology* no. 8 (3):297-308. doi: http://www.elsevier.com/wps/find/journaldescription.cws_home/622964/description#description.
- Popkin, B.M. 2009. *The world is fat: The fads, trends, policies, and products that are fattening the human race*. New York: Penguin Group.
- Powell, Lisa M. 2009. "Fast food costs and adolescent body mass index: Evidence from panel data." *Journal of Health Economics* no. 28 (5):963-970. doi: 10.1016/j.jhealeco.2009.06.009.
- Powell, Lisa M., Euna Han, and Frank J. Chaloupka. 2010. "Economic Contextual Factors, Food Consumption, and Obesity among U.S. Adolescents." *Journal of Nutrition* no. 140 (6):1175-1180.
- Sebastian, Rhonda S., Linda E. Cleveland, Joseph D. Goldman, and Alanna J. Moshfegh. 2006. "Trends in the Food Intakes of Children 1977-2002 " *Consumer Interests Annual* no. 52:433-434.
- Smith, Travis A., Biing-Hwan Lin, and Jonq-Ying Lee. 2010. Taxing Caloric Sweetened Beverages: Potential Effects on Beverage Consumption, Calorie Intake, and Obesity. In *Economic Research Reports*. Washington DC: U.S. Department of Agriculture, Economic Research Service.

- Sun, Sam Z., and Mark W. Empie. 2007. "Lack of findings for the association between obesity risk and usual sugar-sweetened beverage consumption in adults--A primary analysis of databases of CSFII-1989-1991, CSFII-1994-1998, NHANES III, and combined NHANES 1999-2002." *Food and Chemical Toxicology* no. 45 (8):1523-1536.
- Taber, Daniel R., Jamie F. Chriqui, Lisa M. Powell, and Frank J. Chaloupka. 2011. Banning All Sugar-Sweetened Beverages in Middle Schools: Reduction of In-School Access and Purchasing but Not Overall Consumption. *Archives of Pediatrics & Adolescent Medicine*, <http://archpedi.ama-assn.org/cgi/content/abstract/archpediatrics.2011.200v1>.
- Tappy, L., and K. A. Le. 2010. "Metabolic Effects of Fructose and the Worldwide Increase in Obesity." *Physiological Reviews* no. 90 (1):23-46. doi: 10.1152/physrev.00019.2009.
- US Department of Agriculture, and US Department of Health and Human Services. 2010. Dietary Guidelines for Americans, 2010. edited by Department of Agriculture and Department of Health and Human Services. Washington DC: US Government Printing Office.
- Vartanian, L. R., M. B. Schwartz, and K. D. Brownell. 2007. "Effects of soft drink consumption on nutrition and health: A systematic review and meta-analysis." *American Journal of Public Health* no. 97 (4):667-675. doi: 10.2105/ajph.2005.083782.
- World Health Organization. 2004. Global strategy on diet, physical activity and health. Geneva, Switzerland: Author.