



An Old Debate Bubbles Up – Should Soft Drinks or Sugar Sweetened Beverages be Prohibited for Purchase with Federal Food Stamps?

Citation

Rebecca Lundin, An Old Debate Bubbles Up – Should Soft Drinks or Sugar Sweetened Beverages be Prohibited for Purchase with Federal Food Stamps? (August 2011).

Link

<http://nrs.harvard.edu/urn-3:HUL.InstRepos:9414581>

Terms of use

This article was downloaded from Harvard University's DASH repository, and is made available under the terms and conditions applicable to Other Posted Material (LAA), as set forth at

<https://harvardwiki.atlassian.net/wiki/external/NGY5NDE4ZjgzNTc5NDQzMGIzZWZhMGFIOWI2M2EwYTg>

Accessibility

<https://accessibility.huit.harvard.edu/digital-accessibility-policy>

Share Your Story

The Harvard community has made this article openly available. Please share how this access benefits you. [Submit a story](#)

**An old debate bubbles up – should soft drinks or sugar
sweetened beverages be prohibited for purchase with federal
food stamps?**

Rebecca Lundin

Class of 2012

August 2011

Course Paper: Food and Drug Law

Instructor: Professor Peter Barton Hutt

Abstract

Food stamps are a food relief program that provides subsidies to needy Americans for the purchase of foods to supplement their diets in the interest of improving nutrition levels. The program currently allows the purchase of sugar-sweetened beverages (SSB) despite scientific research that has implicated consumption of these items in the incidence of a host of negative health outcomes including obesity, type 2 diabetes, cardiovascular disease, and dental cavities. Recently, the governments of Minnesota and New York have proposed the prohibition of SSB purchase with food stamps in order to address the burgeoning obesity epidemic that has been linked with high consumption of SSB. While groups as diverse as anti-hunger organizations and beverage industry lobbyists have pushed back on these proposals, a compelling argument to continue allowing SSB purchase with food stamps has yet to be made. This paper lays out the history of the food stamp program to illuminate its current goals and trajectory, provides evidence of the health risks associated with SSB consumption, and deconstructs some of the most prevalent arguments against banning SSB purchase from the food stamp program. The proposal to ban SSB purchases with food stamps is in line with a growing body of empirical research and the clear aim of the food stamp program to improve nutrition and health, and opponents have yet to produce any clear and compelling arguments against its implementation. Pilot programs should be initiated and evaluated before this promising initiative goes flat.

Introduction

Food stamps¹ are an aid program providing income transfer from the federal and state governments for food purchases by needy Americans. This program has a long and circuitous history including, at times, competing goals. It began during the Great Depression with a focus on stimulating domestic purchase of surplus commodities, as earlier destruction of crops and livestock to bolster farm prices was met with public outcry. Addressing hunger and adequate nutrition among millions of needy Americans was a beneficial side effect rather than a primary goal of the program. After agricultural surpluses and unemployment dissipated during war time, making the program obsolete, the food stamp program re-emerged in the 1960s with more focus on improving nutrition. Pressure from the hunger lobby (that lobbied against, rather than for, hunger) affiliated with the civil rights movement led the food stamp program to further distance itself from support of the agricultural economy and focus more clearly on problems of hunger and malnutrition. Today, the program provides nutritional education along with food relief, and the Secretary of Agriculture has been called to design, implement, and test programs aimed at reducing overweight and obesity under its auspices. This reflects the continuing aim of the food stamp program to improve nutrition, whatever this might mean in the context of the times. As national nutritional concerns broadened to include the ever increasing epidemic of obesity, food stamps have changed to address it as well.

¹ The program formerly known as Food Stamps became the Supplemental Nutrition Assistance Program (SNAP) in the Food, Conservation, and Energy Act of 2008. As this paper refers to periods both before and after this change in terminology, the term food stamps will be used hereafter to refer to both incarnations of this program.

One strategy proposed by various academics and politicians to help food stamp policy better address current public health issues is the prohibition of sugar-sweetened beverage (SSB) purchase with food stamps. SSB, which include sugar sweetened sodas, fruit drinks, milk-based drinks, sports drinks, coffees, and teas, have been linked to a host of negative health outcomes including obesity, diabetes. Low income Americans who are eligible for food stamps are more likely to consume SSB and also face higher risks of experiencing associated negative health outcomes. When considering the impacts of SSB consumption on health, quality of life, productivity, health care utilization, and many other important factors, it seems natural for the government to try to reduce intake. The fact that there is no evidence on the impact of prohibiting SSB purchase with food stamps on consumption of these items is simply further impetus to allow the implementation of a pilot plan for evaluation.

Several groups have pushed back against this proposal, most notably the American Beverage Association (ABA) and anti-hunger advocates. Their arguments include complaints that the policy is too paternalistic, infringing on the choices available to the poor, assertions that the Department of Agriculture does not have the legal power to enforce such an intervention, and worries that the policy would widen existing social gaps. It is important to thoughtfully consider each of these concerns, and determine whether they hold water. Without compelling arguments to the contrary, institution of a pilot program could be undertaken to better understand both the merits and potential problems with the proposal.

This paper lays out the history of the food stamp program, contextualizing its shifting aims and establishing that it has definitely arrived on firm ground in support of improved nutrition and health for impoverished Americans. The risks to nutritional health posed by SSB consumption are then described, as well as current levels of consumption in the US. These sections serve to support the argument that food stamps should not be authorized for purchase of SSB, as these items do not further the goal of improved nutrition for needy recipients. The final section deconstructs several of the arguments often cited in resistance to this proposal.

While the prohibition of food stamp purchases of SSB is a nuanced and controversial issue that compounds the complexity of population-level nutritional research with long-standing philosophical issues around free will in the context of society, there is no excuse for inaction in the face of an obesity epidemic with wide-reaching implications for our economy and quality of life. The correct approach is still unclear, and so plausible ideas such as the pilot program banning SSB purchase with food stamps proposed by New York City must be approved for testing in order to gain clarity and make strides against SSB consumption and obesity.

Establishing the aims of the food stamp program

Roots in price supports and agricultural surplus

To understand the evolving purpose of food stamps, it is necessary to understand the evolving context of their development and continuing use. The roots of the program were in government action to reduce surplus farm production and increase or stabilize

commodities prices. During and even prior to the Great Depression, commodities prices in the United States were slumping. The Agricultural Marketing Act of 1929 established the Federal Farm Board to bolster prices and support farmers by reducing supplies of commodities. This led to withholding about 250 million bushels of wheat between 1929 and 1932, despite high unemployment and widespread hunger². Herbert Hoover's administration feared that distribution of these surpluses would further undermine commodities prices, and continued to rely on 'rugged individualism', leaving volunteers and local governments to care for the poor³. Public outcry eventually led to a 1932 congressional measure allowing distribution of surplus wheat to the poor by the Red Cross, linking for the first time agricultural price supports with food relief⁴.

'Back door' provision of food aid to the poor

Under the New Deal administration of Franklin D. Roosevelt, agricultural price supports remained a top priority and links to food aid were minimized. The Agricultural Adjustment Act of 1933 (AAA) sought to change the system of withholding or destroying commodities to protect prices, instead subsidizing farmers to reduce their production rates. Unfortunately, the legislation was passed well into the production season and the controversial decision was made to subsidize farmers to plow under crops and slaughter over six million sows and piglets that year⁵. Despite the fact that 100 million pounds of pork were processed for distribution to the needy in the same year, the

² J. POPPENDIECK, *Breadlines Knee-Deep in Wheat: Food Assistance in the Great Depression* (Rutgers University Press. 1986).

³ Id. at ;C. R. LAMBERT, *Want and Plenty: The Federal Surplus Relief Corporation and the AAA*, 46 *Agricultural History* (1972).

⁴ LAMBERT.

⁵ POPPENDIECK;LAMBERT.

administration fell under even heavier criticism. In response, the Federal Surplus Relief Corporation (FSRC) was established in 1933. This independent agency created an uneasy coalition between the administrator of the AAA, the Secretary of Agriculture, and the Federal Emergency Relief Administration (FERA), who were directed by President Roosevelt to ‘prepare a plan for purchase of surplus commodities... to meet relief needs’⁶. Again, the cause of hunger relief was added as an afterthought to the primary goal of protecting the agricultural economy.

Renewed focus on the agricultural economy

This awkward relationship between the support of farm prices pushed by the AAA and relief for the hungry supported by FERA lasted until 1935, when the FSRC was dissolved and replaced by the Federal Surplus Commodities Corporation (FSCC). The AAA administrator was placed in charge of the new agency, and its 1935 annual report clearly stated that “the controlling factor in the determination of policies became the removal of agricultural surpluses and the encouragement of domestic consumption rather than providing for the needs of the unemployed”⁷. That same year, 30% of gross customs duties were appropriated to encourage exportation and domestic consumption of agricultural commodities and finance adjustments in quantities produced or planted of such commodities⁸. In the Agricultural Adjustment Act of 1938, the Secretary of Agriculture was charged specifically with using these funds ‘to stimulate and widen the use of all farm commodities in the United States and to increase in every practical way

⁶ LAMBERT.

⁷ Id. at

⁸ Appropriation to encourage exportation and domestic consumption of agricultural products. Congress. 1935. § 612c (1935).

the flow of such commodities and the products thereof into the markets of the world'⁹. Although these programs promoted the distribution of agricultural surplus, they were clearly concerned with maintaining crop prices and supporting farmers rather than unemployed Americans. Indeed, for the first few years, the focus was on addressing critically low commodities prices by buying up surplus production. While the foods were distributed, there was no interest in the quality of diet provided to needy Americans¹⁰.

Food aid still important

Soon it became clear that these direct distribution programs were not large or balanced enough to ensure adequate nutrition for millions of eligible families, and that creating adequate programs might be the most effective way to also address the security of the agricultural economy. Throughout 1938 and 1939, the Department of Agriculture under Henry A. Wallace worked to develop several proposals giving equal billing to adequate nutrition for needy Americans and effective aid to American farmers¹¹. The Surplus Marketing Administration was created in February of 1939¹², bringing the food stamp program out from under the FSCC, which clearly prioritized the agricultural economy. This change in tack may have been driven by moral concerns or been in response to the sustained public pressure for the government to rethink the old value of 'rugged individualism'. Either way, surplus distribution as a way to address the nutritional needs of Americans on aid had again been made a priority.

⁹ Agricultural Adjustment Act: New uses and markets for commodities - Duty of Secretary. Congress. § 1292g (1938).

¹⁰ FREDERICK V. WAUGH, *The Food Distribution Programs of the Agricultural Marketing Administration*, 225 *Annals of the American Academy of Political and Social Science* (1943).

¹¹ SAMUEL HERMAN, *The Food Stamp Plan: A Study in Law and Economics*, 13 *The Journal of Business of the University of Chicago* (1940).

¹² WAUGH.

One idea proposed for eliminating agricultural surplus while improving nutrition for the poor was a “two-price system”, where eligible families would be charged a lower price for food items than non-eligible families¹³. Retailers pushed back on this proposal with fears that it would force them to change merchandising and pricing practices or that special government outlets for lower priced foods would provide unfair competition¹⁴. In response, an indirect two-price system was adopted for the food stamp pilot program of 1939, where eligible citizens purchased orange stamps at face value for purchase of any food items and received a proportionate number of free blue stamps for the purchase of surplus items identified by the Department of Agriculture on a monthly basis¹⁵. Food retailers did not have to change any pricing, marketing, or stocking of food – the stamps acted as an ‘order’ for surplus food to be purchased by the Secretary of Agriculture from the retailer¹⁶. No provision was made to dictate the nature of food stamp purchases beyond the use of blue stamps for surplus commodity items only, and no educational materials were provided regarding balanced nutrition to either retailers or individuals.

After reaching nearly 20 million Americans in almost half of the counties in the country, in 1943 the food stamp program was discontinued due to wartime demands leading to dropping food surpluses and rates of unemployment¹⁷. Although there had been evidence of misuse and trafficking of stamps, and the program did not move more surplus

¹³ Id. at

¹⁴ HERMAN.

¹⁵ H. A. WALLACE, Regulations and conditions governing issuance of food order stamps (Secretary of Agriculture ed., Division of the Federal Register 1939).

¹⁶ HERMAN.

¹⁷ POPPENDIECK.

commodities than direct distribution, the program had allowed recipients to purchase more varied foods¹⁸. The fact that studies were conducted to look at both quantities of commodities and varieties of food purchased reflects the sensitivity of the program's administrators to their dual goals of moving agricultural surplus and improving nutrition for poor Americans. In fact, a 1943 analysis by Frederick Waugh, assistant administrator of the Agricultural Marketing Administration that took over direct agricultural surplus distribution after the dissolution of the Surplus Marketing Administration and the food stamp program, pointed out the need to determine 'the extent to which we are concerned with a general food plan, or the extent to which we are concerned with moving specific products' in moving forward with domestic food distribution programs¹⁹.

Nutrition advocates rally to revive food stamps

In the years following the conclusion of the first food stamp program, Senator George Aiken introduced seven bills outlining a new food stamp program focused on providing needy American families sufficient aid to buy a nutritionally adequate diet²⁰.

Congresswoman Leonor Sullivan also introduced bill to re-enact food stamps in 1954, and again the public began to push for renewed post-war agricultural surplus to be used to improve the diets of needy Americans²¹. Although the Department of Agriculture was officially opposed to food stamps, the Agricultural Act of 1956 provided a mandate for the Secretary of Agriculture to evaluate the proposed food stamp plans²². Assessed only

¹⁸ FOOD STAMPS: 1932 –1977: From Provisional and Pilot Programs to Permanent Policy.

¹⁹ WAUGH.

²⁰ MAURICE MACDONALD, *Food Stamps: An Analytical History*, 51 *Social Service Review* (1977).

²¹ *Id.* at

²² MARJORIE L. DEVAULT & JAMES P. PITTS, *Surplus and Scarcity: Hunger and the Origins of the Food Stamp Program*, 31 *Social Problems* (1984).

on their merits in eliminating surpluses, the plans were all found less effective than direct distribution²³. Despite this, a food stamp amendment to the Agricultural Trade Development and Assistance Act of 1954 was passed in 1959 permitting the Secretary of Agriculture to set up pilot food stamp programs²⁴. Reminiscent of the Hoover administration, the Eisenhower administration preferred to rely on state and local governments for welfare programs in excess of those already provided, and decided not to test food stamps²⁵.

Post-war period, civil rights, and shifting priorities

With a change in administrations came a change in priorities. After the inauguration of John F. Kennedy in 1960, a Department of Agriculture task force was established to work on a pilot food stamp program proposal²⁶. A sobering campaign visit to West Virginia where Kennedy saw the direct commodity surplus distribution program in action may have influenced his interest in the program²⁷. Whatever the case, eight pilot food stamp programs were initiated in 1961 by executive order. While evaluations found that the programs did not effectively eliminate farm surpluses, they did provide diets fulfilling 100% of allowances for eight nutrients recommended by the National Research Council for substantially more participants than non-participants. Making clear that nutritional goals were now to supersede support of the agricultural economy, the pilot food stamp program was then extended to 31 new sites. While some politicians still objected to an agricultural program supporting primarily food relief goals, food stamp supporters

²³ MACDONALD.

²⁴ DEVAULT & PITTS.

²⁵ MACDONALD;DEVAULT & PITTS.

²⁶ DEVAULT & PITTS.

²⁷ K. SCHLOSSBERG, *Funny Money is Serious*, New York Times Magazine 1975.

teamed with those rallying for wheat and cotton price supports to logroll through the Food Stamp Act of 1964²⁸.

This legislation authorized a food stamp program with nutrition for the poor clearly taking top priority. While it was noted that the program would ‘tend to cause the distribution in a beneficial manner of our agricultural abundances and... strengthen our agricultural economy’, the Food Stamp Act was signed into law ‘in order to promote the general welfare..., safeguard the health and well-being of the Nation’s population, and raise levels of nutrition among low-income households’²⁹. Concessions were still made to congressmen and congresswomen with rural, agricultural constituencies who may not have supported food stamp programs over other actions that would more efficiently eliminate surplus farm products, of course. The program was subject to state and local approval and as such was not mandatory, and could not be run in conjunction with direct surplus distribution programs³⁰. This and other aspects of the food stamps program were criticized in the following years by The Citizens’ Crusade Against Poverty, a core member of the hunger lobby that sprang up to address nutritional issues among impoverished minorities and others during the civil rights era. In the organization’s 1968 Hunger U.S.A. board report authors argued that food assistance was being used as a political weapon. In addition to citing the conflicts inherent in the Secretary of Agriculture administering a food assistance program that had secondary aims of supporting the agricultural economy, the report noted specific instances of surplus food being withheld to break labor strikes and food relief programs not being implemented in

²⁸ MACDONALD.

²⁹ Food Stamp Act of 1964. 88th Congress. 2nd. (1964).

³⁰ MACDONALD.

order to drive poor blacks out of an area. This report was followed by the government sponsored National Nutrition Study released in 1969, which found high prevalence of diseases associated with malnutrition among a random sample of low income Americans from several states³¹. Clearly, the Food Stamp Act of 1964 was not making much headway in improving the nutrition of needy Americans.

The Nixon administration responded first with the 1969 White House Conference on Nutrition, which brought together 26 panels to draft recommendations on the issues of hunger and nutrition³². A report on federal actions to address these recommendations released the following year indicated that while hunger remained a contentious issue, measures were being taken to improve the food stamp program and bring it more in line with the goal of improving nutrition for poor Americans. Administration of the program was to be handed over to the Department of Health, Education, and Welfare, a more natural fit given the shift in program goals to prioritize food relief. In the meantime, the Department of Agriculture had reportedly addressed two thirds of the conference recommendations by increasing the benefits and the spread of the food stamp program and simplifying the enrollment process³³.

Clarity of purpose, at last

While the Department of Agriculture maintained control of the program, subsequent policy changes were indeed enacted to expand coverage, increase benefits, and improve nutrition levels of participants. The program has been reauthorized continuously since its

³¹ DEVAULT & PITTS.

³² Id. at

³³ White House Conference on Food, Nutrition, and Health: Final Report. (1969).

inception, and has continued to stress nutrition as its primary goal. Of note, the Food and Agriculture Act of 1977 eliminated any purchase requirement for participation in the food stamp program and stressed targeting the most needy, simplifying administration, and tightening controls. This act also required distribution of nutrition education materials in conjunction with the food stamp program, an action clearly related to improving the diets of participants. More recently, the food stamp program was renamed the Supplemental Nutrition Assistance Program (SNAP) and the Food Stamp Act of 1977 was renamed the Food and Nutrition Act of 2008³⁴. In this Food and Nutrition Act of 2008, the goals of SNAP have not changed from the original language, to ‘promote the general welfare..., safeguard the health and well-being of the Nation’s population, and raise levels of nutrition among low-income households’³⁵.

Through decades of debate and change, the food stamp program has survived and has increasingly focused on improving nutrition levels of needy Americans. While this has always meant combating hunger and malnutrition, it has recently incorporated more contemporary public health nutrition issues as well. In the 2008 Food and Nutrition Act, the Secretary of Agriculture has been asked ‘to carry out... pilot projects to develop and test methods of using SNAP to improve the dietary and health status of households eligible for or participating in the supplemental nutrition assistance program and to reduce overweight, obesity (including childhood obesity), and associated co-morbidities in the United States’³⁶. After weathering the duality of agricultural price supports and

³⁴ FNS, *From Food Stamps to the Supplemental Nutrition Assistance Program: Legislative Timeline*, USDA(2011), [at](http://www.fns.usda.gov/snap/rules/Legislation/timeline.pdf) www.fns.usda.gov/snap/rules/Legislation/timeline.pdf.

³⁵ Food and Nutrition Act of 2008 (2008).

³⁶ *Id.* at

improved nutrition, the food stamp program enters a new era of contrasting goals, addressing hunger and malnutrition while investigating how it can also be used to address overweight and obesity.

The case against sugar-sweetened beverages

SSB and health impacts

Researchers have recently noted strong temporal ecological correlations between SSB consumption and rates of obesity³⁷ and possible correlations with diabetes³⁸. While correlation does not equate with causation, these trends warranted further investigation, especially considering alarming increases in rates of SSB consumption³⁹ and both obesity⁴⁰ and diabetes over time. The overwhelming majority of subsequently conducted cross-sectional, observational, and randomized studies support links between SSB consumption and negative health indicators and outcomes such as weight gain⁴¹,

³⁷ G. A. BRAY, et al., *Consumption of high-fructose corn syrup in beverages may play a role in the epidemic of obesity*, 79 Am J Clin Nutr (2004).

³⁸ L. S. GROSS, et al., *Increased consumption of refined carbohydrates and the epidemic of type 2 diabetes in the United States: an ecologic assessment*, see id. at

³⁹ KIYAH J. DUFFEY & BARRY M. POPKIN, *Shifts in Patterns and Consumption of Beverages Between 1965 and 2002*[ast][ast], 15 Obesity (2007).

⁴⁰ CYNTHIA L. OGDEN, et al., *Prevalence of Overweight and Obesity in the United States, 1999-2004*, 295 JAMA: The Journal of the American Medical Association (2006).

⁴¹ V. S. MALIK, et al., *Intake of sugar-sweetened beverages and weight gain: a systematic review*, 84 Am J Clin Nutr (2006); L. R. VARTANIAN, et al., *Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis*, 97 Am J Public Health (2007); M. B. SCHULZE, et al., *Sugar-sweetened beverages, weight gain, and incidence of type 2 diabetes in young and middle-aged women*, 292 JAMA (2004); J. R. PALMER, et al., *Sugar-sweetened beverages and incidence of type 2 diabetes mellitus in African American women*, 168 Arch Intern Med (2008); V. S. MALIK, et al., *Sugar-sweetened beverages and BMI in children and adolescents: reanalyses of a meta-analysis*, 89 Am J Clin Nutr (2009); J. JAMES, et al., *Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomised controlled trial*, 328 BMJ (2004); C. B. EBBELING, et al., *Effects of decreasing sugar-sweetened beverage consumption on body weight in adolescents: a randomized, controlled pilot study*, 117 Pediatrics (2006); N. J. OLSEN & B. L. HEITMANN, *Intake of calorically sweetened beverages and obesity*, 10 Obes Rev (2009); L. DUBOIS, et al., *Regular sugar-sweetened beverage consumption between meals increases risk of overweight among preschool-aged children*, 107 J Am Diet Assoc (2007); K. NISSINEN, et al., *Sweets and sugar-sweetened soft drink intake in childhood in relation to adult BMI and overweight. The Cardiovascular Risk in Young Finns Study*, 12 Public Health Nutr (2009); R. M. VINER & T. J. COLE, *Who*

obesity⁴², type 2 diabetes⁴³, heart disease⁴⁴, high blood pressure⁴⁵, negative lipid profiles⁴⁶, increased serum uric acid⁴⁷, gout⁴⁸, and dental caries⁴⁹.

Some publications dispute these associations between SSB intake and health outcomes⁵⁰.

This may reflect industry sponsorship of some authors⁵¹, which has been linked to biased reporting of results in the literature⁵². In other studies that did not find associations

between SSB and negative health outcomes, populations were small or demographically limited⁵³. The weight of epidemiologic evidence still supports these associations.

changes body mass between adolescence and adulthood? Factors predicting change in BMI between 16 year and 30 years in the 1970 British Birth Cohort, 30 Int J Obes (Lond) (2006); R. SICHERI, et al., *Prospective assessment of exclusive breastfeeding in relation to weight change in women*, 27 Int J Obes Relat Metab Disord (2003); J. JAMES, et al., *Preventing childhood obesity: two year follow-up results from the Christchurch obesity prevention programme in schools (CHOPPS)*, 335 BMJ (2007); M. BES-RASTROLLO, et al., *Predictors of weight gain in a Mediterranean cohort: the Seguimiento Universidad de Navarra Study I*, 83 Am J Clin Nutr (2006); R. DHINGRA, et al., *Soft drink consumption and risk of developing cardiometabolic risk factors and the metabolic syndrome in middle-aged adults in the community*, 116 Circulation (2007).

⁴² MALIK, et al., *Intake of sugar-sweetened beverages and weight gain: a systematic review*; VARTANIAN, et al.

⁴³ VARTANIAN, et al.

⁴⁴ T. T. FUNG, et al., *Sweetened beverage consumption and risk of coronary heart disease in women*, 89 Am J Clin Nutr (2009).

⁴⁵ STEPHANIE NGUYEN, et al., *Sugar-Sweetened Beverages, Serum Uric Acid, and Blood Pressure in Adolescents*, 154 The Journal of Pediatrics (2009).

⁴⁶ DHINGRA, et al.

⁴⁷ NGUYEN, et al.; J. W. J. CHOI, et al., *Sugar-sweetened soft drinks, diet soft drinks, and serum uric acid level: The third national health and nutrition examination survey*, 59 Arthritis Care & Research (2008); X. GAO, et al., *Intake of added sugar and sugar-sweetened drink and serum uric acid concentration in US men and women*, 50 Hypertension (2007).

⁴⁸ HYON K. CHOI & GARY CURHAN, *Soft drinks, fructose consumption, and the risk of gout in men: prospective cohort study*, 336 BMJ (2008).

⁴⁹ J. J. WARREN, et al., *A longitudinal study of dental caries risk among very young low SES children*, 37 Community Dent Oral Epidemiol (2009).

⁵⁰ C. H. RUXTON, et al., *Is sugar consumption detrimental to health? A review of the evidence 1995-2006*, 50 Crit Rev Food Sci Nutr (2010); L. JOHNSON, et al., *Is sugar-sweetened beverage consumption associated with increased fatness in children?*, 23 Nutrition (2007); RICHARD A. FORSHEE, et al., *A Critical Examination of the Evidence Relating High Fructose Corn Syrup and Weight Gain*, 47 Critical Reviews in Food Science and Nutrition (2007); N. P. PAYNTER, et al., *Coffee and sweetened beverage consumption and the risk of type 2 diabetes mellitus: the atherosclerosis risk in communities study*, 164 Am J Epidemiol (2006).

⁵¹ RUXTON, et al.; FORSHEE, et al.

⁵² LENARD I. LESSER, et al., *Relationship between Funding Source and Conclusion among Nutrition-Related Scientific Articles*, 4 PLoS Med (2007).

⁵³ JOHNSON, et al.; PAYNTER, et al.

Biological mechanisms linking SSB consumption to negative health outcomes are the necessary final step in establishing causation. Several plausible pathways have been proposed between SSB consumption and increased obesity, metabolic syndrome, changes in metabolic markers like lipids and blood glucose, and type 2 diabetes⁵⁴. While further research is necessary, it is clear that SSB are negatively impacting population health.

SSB and economic impacts

In addition to the toll these negative health outcomes take on quality of life, there are serious economic consequences associated with SSB consumption and its associated risks. In 1995, the estimated cost of obesity in the US was \$99.2 billion. This estimate reflects 39.2 million days of lost work, 239 million restricted activity days, 89.5 million bed-days, and 62.6 million physician visits⁵⁵. In 2007 the estimated cost of diabetes in the US was even greater, at \$174 billion⁵⁶. In 2010, total direct medical costs of cardiovascular disease were estimated to be \$273 billion, with indirect costs amounting to \$172 billion. Projections for 2030 direct and indirect costs of cardiovascular disease are an unbelievable \$818 billion and \$276 billion, respectively⁵⁷. Even dental services were estimated to cost \$53.8 billion in 1998⁵⁸. These costs may be partially attributable to SSB consumption, providing further support for measures to reduce its intake.

Burden of SSB consumption in the US

⁵⁴ F. B. HU & V. S. MALIK, *Sugar-sweetened beverages and risk of obesity and type 2 diabetes: Epidemiologic evidence*, 100 *Physiol Behav* (2010).

⁵⁵ A. M. WOLF & G. A. COLDITZ, *Current estimates of the economic cost of obesity in the United States*, 6 *Obes Res* (1998).

⁵⁶ *Economic costs of diabetes in the U.S. In 2007*, 31 *Diabetes Care* (2008).

⁵⁷ PAUL A. HEIDENREICH, et al., *Forecasting the Future of Cardiovascular Disease in the United States: A Policy Statement From the American Heart Association*, 123 *Circ* (2011).

⁵⁸ *Oral Health in America: A Report of the Surgeon General*. (2000).

Negative sequelae of SSB consumption are of particular concern in the United States, where these beverages are the primary source of added dietary sugar and constitute the most commonly consumed caloric beverages among adults and children⁵⁹. Between 1999 and 2003, an estimated 63% of adults consumed an SSB on a given survey day, and mean per capita consumption equaled 10.1% of the recommended daily caloric intake according to the National Health and Nutrition Examination Survey (NHANES)⁶⁰.

Evidence suggests that Americans with lower incomes, such as those eligible for food stamps, are at higher risk for many SSB- related negative health outcomes⁶¹ and are also more likely to consume SSB⁶². Interventions to reduce SSB intake should be targeted at just these high risk segments of the possibility in order to maximize potential effect.

Addressing SSB consumption and its consequences

One method that has been proposed in several states to address excessive SSB consumption among needy Americans is the restriction of purchase of these beverages with food stamps⁶³, although little is known about how participation in or eligibility for

⁵⁹ BRAY, et al; J. REEDY & S. M. KREBS-SMITH, *Dietary sources of energy, solid fats, and added sugars among children and adolescents in the United States*, 110 J Am Diet Assoc (2010).

⁶⁰ S. N. BLEICH, et al., *Increasing consumption of sugar-sweetened beverages among US adults: 1988-1994 to 1999-2004*, 89 Am J Clin Nutr (2009).

⁶¹ L. AKIL & H. A. AHMAD, *Effects of socioeconomic factors on obesity rates in four southern states and Colorado*, 21 Ethn Dis (2011); Y. WANG & Q. ZHANG, *Are American children and adolescents of low socioeconomic status at increased risk of obesity? Changes in the association between overweight and family income between 1971 and 2002*, 84 Am J Clin Nutr (2006); G. A. MENSAH, et al., *State of disparities in cardiovascular health in the United States*, 111 Circulation (2005).

⁶² P. M. RISICA, et al., *Self-report of sugar-sweetened beverage and fast food consumption by annual household income*, 92 Med Health R I (2009); C. D. REHM, et al., *Demographic and behavioral factors associated with daily sugar-sweetened soda consumption in New York City adults*, 85 J Urban Health (2008).

⁶³ ROBERT PEAR, *Soft drink industry fights proposed food stamp ban*, The New York Times 2011; M.R. BLOOMBERG, et al., *Removing SNAP subsidy for sugar-sweetened beverages* (Human Resources Administration Department of Health and Mental Hygiene ed., 2010).

Food Stamps impacts SSB consumption. One analysis of phone interview data from California found that soda consumption was significantly higher among self-identified SNAP participants after adjustment for sociodemographic factors and food security⁶⁴. Other studies have linked participation in food stamps and other federal feeding programs to SSB-related health outcomes, like obesity⁶⁵. If a pilot program prohibiting SSB purchase with food stamps is implemented, these more distal health outcomes could also be assessed, potentially providing further support for permanent legislation. Plausible interventions such as this are needed to address SSB consumption in a high risk groups.

Arguments against prohibiting SSB purchase with food stamps

The first documented argument against prohibiting SSB purchase with food stamps proved quite successful. While the House of Representatives had passed a bill in 1964 prohibiting purchase of ‘soft drinks’ among other items with food stamps, the Senate struck this particular prohibition. Their rationale was that “exclusion of soft drinks, according to the dictionary definition, would exclude such important foods as milk and orange juice or other juices”⁶⁶. Rather than striking the clause, the definition of soft drink could have simply been refined to include only SSB that do not present nutritional benefits, like milk or fruit juice. The important point is that SSB were considered unsuitable for food stamp purchase at the inception of the program by at least one federal entity. Contrary to modern assertions that banning SSB from food stamp purchase is

⁶⁴ C. W. LEUNG & E. VILLAMOR, *Is participation in food and income assistance programmes associated with obesity in California adults? Results from a state-wide survey*, 14 *Public Health Nutr* (2011).

⁶⁵ *Id.* at ;M. VER PLOEG & K. RALSTON, *Food Stamps and Obesity: What Do We Know?*, 34 *Economic Information Bulletin* (2008).

⁶⁶ *Congressional Record - Senate*. pt. 15433 (1964).

“patronizing and mean spirited”⁶⁷, this omission points to the concern from the very beginning with improved nutrition for food stamp recipients. It is also important to remember that banning certain items from purchase with food stamps does not reduce the amount of benefits in any way. Recipients would also not be banned from purchasing SSB, which could still be purchased with their own funds. There does not seem to be room to argue that this initiative would take anything away from food stamp beneficiaries, as individuals and families would still have their benefits and would still have the choice to consume SSB.

In rejecting a 2004 proposal by Minnesota to ban SSB from food stamp purchases, the Department of Agriculture argued that such measures would perpetuate the myth that food stamp users make poor shopping choices⁶⁸. While this may or may not be true, it is unclear how existing bans on food stamp purchases of alcohol, tobacco, and prepared foods do not also perpetuate this myth. While stigmatization of the poor through the administration of aid is a very real and serious concern, consistency is necessary in the government’s approach to dealing with this problem. If the Department of Agriculture in fact feels strongly that limiting food stamp purchases increases stigma, they should reconsider current bans on purchases in addition to newly proposed items for prohibition, like SSB. Setting aside the inconsistency of this argument when made by the Department of Agriculture, it is still important to address the ethical crux of this argument that has been echoed by more impartial critics, such as the Center for Science in the Public Interest (CSPI). While CSPI supports working to reduce SSB consumption, the

⁶⁷ M. MCGOUGH, *No-food-stamps-for-soda policy would only widen the social gap*, LA Times October 7, 2010. 2010.

⁶⁸ L. RHOADES, *Will food stamp plan to ban soda fizzle?*, Queens Chronicle October 14, 2010. 2010.

organization feels that it may be more equitable to use educational campaigns dissuading use⁶⁹. However, targeted educational programs can also be stigmatizing, implying that the poor make worse decisions than the non-poor, and thus require re-education. In addition, educational programs have been shown to be ineffective in reducing SSB consumption⁷⁰. Is it ethical to sink taxpayer funds into a program that has been proven not to work, when one that may be more effective could be tested?

Response from the American Beverage Association (ABA) to the proposal to ban SSB purchase with food stamps was negative, as could be expected. In their official statement on the measure, they first claim that SSB calories are no different than other calories⁷¹. This may not be true, as research has shown that solid calories are more likely to be compensated for (i.e. after consuming solid calories, people consume less additional calories to account for those already consumed) than liquid calories⁷². There are also important differences in the way calories from different sources are processed by the body. Refined carbohydrates like the sugars in SSB are absorbed quickly and cause blood sugar levels to increase rapidly, increasing the levels of insulin, which accelerates the conversion of calories into fat⁷³.

⁶⁹A. HARTOCOLLIS, *New York Asks to Bar Use of Food Stamps to Buy Sodas*, New York Times October 6, 2010. 2010.

⁷⁰JASON P. BLOCK, et al., *Point-of-Purchase Price and Education Intervention to Reduce Consumption of Sugary Soft Drinks*, Am J Public Health (2010).

⁷¹ American Beverage Association Statement on Food Stamp Purchases. (2010).

⁷² D. P. DIMIGLIO & R. D. MATTES, *Liquid versus solid carbohydrate: effects on food intake and body weight*, 24 Int J Obes (Lond) (2000).

⁷³ D. ORNISH, *All Calories are Not the Same!*, Huffington Post 2009.

The ABA also argues that New York City is being paternalistic, and proposes other methods for reducing obesity⁷⁴. Obesity is a multi-faceted problem that does require a multitude of approaches. There is no disputing this part of the ABA's argument. What the group does not mention - the economic impact to the companies they represent if food stamp purchase of SSB is prohibited – is more compelling than what they do. While concerns over paternalism must be taken seriously and multiple approaches to the obesity epidemic should be considered, care should also be taken in evaluating criticism from such a potentially biased source.

More surprising have been negative responses from some anti-hunger groups. An opinion piece on the website for The New York Coalition Against Hunger makes some of the same arguments – a ban would stigmatize food stamp participants and limit their choices – but also introduces new criticisms to be considered. One is that banning one 'unhealthy' food will lead to unending arguments over other unhealthy foods. Why not ban candy apples or chocolate milk next⁷⁵? While this situation would indeed be intractable, it is not unavoidable. The unique characteristic of SSB is that they have no nutritional value – chocolate milk and candy apples still provide some calcium, protein, vitamins, or minerals, despite their high sugar content. SSB are a low hanging fruit that do not have any such redeemable qualities.

Another argument posed by anti-hunger activists is that the Department of Agriculture does not have the authority to implement a ban on purchasing SSB with food stamps.

⁷⁴ American Beverage Association Statement on Food Stamp Purchases.

⁷⁵ J. BERG, *Food Stamps Soda Ban: The Wrong Way to Fight Obesity*, New York City Coalition Against Hunger(2010), at <http://www.nyccah.org/node/1182>.

“The Department has no authority to unilaterally ban foods, including soda, that are allowed in SNAP under laws previously enacted by Congress”⁷⁶. However, a pilot program designed to address obesity is well within the jurisdiction and even the mandate of the Secretary of Agriculture in the most recent legislation on food stamps, as mentioned previously⁷⁷. If the program is found effective, Congress would then have the power to change SNAP legislation to make prohibition of SSB purchases permanent. While this particular anti-hunger advocate may not agree that an SSB ban from food stamps is the best approach to combating obesity, they do not provide a strong reason not to at least test the program for inclusion in portfolio of varied strategies.

While these arguments highlight important areas of concern in implementing an intervention prohibiting SSB purchase with food stamps, they do not make strong arguments against testing of the intervention. Care must always be taken to provide aid to needy Americans with dignity and respect. Personal freedoms should not be infringed and indeed, aid policies should not be used as a weapon as they allegedly were in the era of the hunger lobby. With careful implementation and thorough evaluation, a pilot program testing the impact of eliminating SSB from food stamp purchases can address these concerns while striving to fulfill the mandate of the food stamp program to improve the nutritional level of low-income Americans.

Conclusion

⁷⁶ Id. at

⁷⁷ Food and Nutrition Act of 2008.

The prohibition of food stamp purchases of SSB could provide substantial health benefits to the US population. SSB have been associated with some of the most prevalent health concerns of modern times, and have yet to be linked to any health benefits. One would be hard pressed to argue against reducing their consumption. The food stamp program, with its mandate to improve the health of some of the most vulnerable Americans, is an ideal channel for interventions aimed at improving nutrition and reducing obesity. However, it is important to proceed with caution in promoting, developing, implementing, and evaluating this sort of intervention. Care must be taken to preserve the dignity and free will of all Americans, and to continue to provide food stamps in a spirit of caring and national solidarity. SSB should be demonized, not the people who purchase and consume them. It took decades to unravel this program from the interests of the agricultural economy. Testing a pilot program prohibiting SSB purchase with food stamps provides an opportunity to disentangle the program from another wealthy interest, the producers of SSB. While the critics may be right and there may be many other more effective ways to address obesity in America, there is no reason not to give this intervention a fighting chance. The Department of Agriculture should step up to their Congressional mandate and stare down the beverage industry, approving pilot testing of the prohibition of SSB purchase with food stamps in New York City.

References

- J. POPPENDIECK, *Breadlines Knee-Deep in Wheat: Food Assistance in the Great Depression* (Rutgers University Press. 1986).
- C. R. LAMBERT, *Want and Plenty: The Federal Surplus Relief Corporation and the AAA*, 46 *Agricultural History* (1972).
- Appropriation to encourage exportation and domestic consumption of agricultural products. Congress. 1935. § 612c (1935).
- Agricultural Adjustment Act: New uses and markets for commodities - Duty of Secretary. Congress. § 1292g (1938).
- FREDERICK V. WAUGH, *The Food Distribution Programs of the Agricultural Marketing Administration*, 225 *Annals of the American Academy of Political and Social Science* (1943).
- SAMUEL HERMAN, *The Food Stamp Plan: A Study in Law and Economics*, 13 *The Journal of Business of the University of Chicago* (1940).
- H. A. WALLACE, Regulations and conditions governing issuance of food order stamps (Secretary of Agriculture ed., Division of the Federal Register 1939).
- FOOD STAMPS: 1932 –1977: From Provisional and Pilot Programs to Permanent Policy.
- MAURICE MACDONALD, *Food Stamps: An Analytical History*, 51 *Social Service Review* (1977).
- MARJORIE L. DEVAULT & JAMES P. PITTS, *Surplus and Scarcity: Hunger and the Origins of the Food Stamp Program*, 31 *Social Problems* (1984).
- K. SCHLOSSBERG, *Funny Money is Serious*, *New York Times Magazine* 1975.
- Food Stamp Act of 1964. 88th Congress. 2nd. (1964).
- White House Conference on Food, Nutrition, and Health: Final Report. (1969).
- FNS, *From Food Stamps to the Supplemental Nutrition Assistance Program: Legislative Timeline*, USDA(2011), at www.fns.usda.gov/snap/rules/Legislation/timeline.pdf.
- Food and Nutrition Act of 2008 (2008).
- G. A. BRAY, et al., *Consumption of high-fructose corn syrup in beverages may play a role in the epidemic of obesity*, 79 *Am J Clin Nutr* (2004).
- L. S. GROSS, et al., *Increased consumption of refined carbohydrates and the epidemic of type 2 diabetes in the United States: an ecologic assessment*, 79 *Am J Clin Nutr* (2004).
- KIYAH J. DUFFEY & BARRY M. POPKIN, *Shifts in Patterns and Consumption of Beverages Between 1965 and 2002*, 15 *Obesity* (2007).
- CYNTHIA L. OGDEN, et al., *Prevalence of Overweight and Obesity in the United States, 1999-2004*, 295 *JAMA: The Journal of the American Medical Association* (2006).
- V. S. MALIK, et al., *Intake of sugar-sweetened beverages and weight gain: a systematic review*, 84 *Am J Clin Nutr* (2006).
- L. R. VARTANIAN, et al., *Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis*, 97 *Am J Public Health* (2007).
- M. B. SCHULZE, et al., *Sugar-sweetened beverages, weight gain, and incidence of type 2 diabetes in young and middle-aged women*, 292 *JAMA* (2004).
- J. R. PALMER, et al., *Sugar-sweetened beverages and incidence of type 2 diabetes mellitus in African American women*, 168 *Arch Intern Med* (2008).

- V. S. MALIK, et al., *Sugar-sweetened beverages and BMI in children and adolescents: reanalyses of a meta-analysis*, 89 *Am J Clin Nutr* (2009).
- J. JAMES, et al., *Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomised controlled trial*, 328 *BMJ* (2004).
- C. B. EBBELING, et al., *Effects of decreasing sugar-sweetened beverage consumption on body weight in adolescents: a randomized, controlled pilot study*, 117 *Pediatrics* (2006).
- N. J. OLSEN & B. L. HEITMANN, *Intake of calorically sweetened beverages and obesity*, 10 *Obes Rev* (2009).
- L. DUBOIS, et al., *Regular sugar-sweetened beverage consumption between meals increases risk of overweight among preschool-aged children*, 107 *J Am Diet Assoc* (2007).
- K. NISSINEN, et al., *Sweets and sugar-sweetened soft drink intake in childhood in relation to adult BMI and overweight. The Cardiovascular Risk in Young Finns Study*, 12 *Public Health Nutr* (2009).
- R. M. VINER & T. J. COLE, *Who changes body mass between adolescence and adulthood? Factors predicting change in BMI between 16 year and 30 years in the 1970 British Birth Cohort*, 30 *Int J Obes (Lond)* (2006).
- R. SICHIERI, et al., *Prospective assessment of exclusive breastfeeding in relation to weight change in women*, 27 *Int J Obes Relat Metab Disord* (2003).
- J. JAMES, et al., *Preventing childhood obesity: two year follow-up results from the Christchurch obesity prevention programme in schools (CHOPPS)*, 335 *BMJ* (2007).
- M. BES-RASTROLLO, et al., *Predictors of weight gain in a Mediterranean cohort: the Seguimiento Universidad de Navarra Study 1*, 83 *Am J Clin Nutr* (2006).
- R. DHINGRA, et al., *Soft drink consumption and risk of developing cardiometabolic risk factors and the metabolic syndrome in middle-aged adults in the community*, 116 *Circulation* (2007).
- T. T. FUNG, et al., *Sweetened beverage consumption and risk of coronary heart disease in women*, 89 *Am J Clin Nutr* (2009).
- STEPHANIE NGUYEN, et al., *Sugar-Sweetened Beverages, Serum Uric Acid, and Blood Pressure in Adolescents*, 154 *The Journal of Pediatrics* (2009).
- J.W.J. CHOI, et al., *Sugar-sweetened soft drinks, diet soft drinks, and serum uric acid level: The third national health and nutrition examination survey*, 59 *Arthritis Care & Research* (2008).
- X. GAO, et al., *Intake of added sugar and sugar-sweetened drink and serum uric acid concentration in US men and women*, 50 *Hypertension* (2007).
- HYON K. CHOI & GARY CURHAN, *Soft drinks, fructose consumption, and the risk of gout in men: prospective cohort study*, 336 *BMJ* (2008).
- J. J. WARREN, et al., *A longitudinal study of dental caries risk among very young low SES children*, 37 *Community Dent Oral Epidemiol* (2009).
- C. H. RUXTON, et al., *Is sugar consumption detrimental to health? A review of the evidence 1995-2006*, 50 *Crit Rev Food Sci Nutr* (2010).
- L. JOHNSON, et al., *Is sugar-sweetened beverage consumption associated with increased fatness in children?*, 23 *Nutrition* (2007).
- RICHARD A. FORSHEE, et al., *A Critical Examination of the Evidence Relating High Fructose Corn Syrup and Weight Gain*, 47 *Critical Reviews in Food Science and Nutrition* (2007).

- N. P. PAYNTER, et al., *Coffee and sweetened beverage consumption and the risk of type 2 diabetes mellitus: the atherosclerosis risk in communities study*, 164 *Am J Epidemiol* (2006).
- LENARD I. LESSER, et al., *Relationship between Funding Source and Conclusion among Nutrition-Related Scientific Articles*, 4 *PLoS Med* (2007).
- F. B. HU & V. S. MALIK, *Sugar-sweetened beverages and risk of obesity and type 2 diabetes: Epidemiologic evidence*, 100 *Physiol Behav* (2010).
- A. M. WOLF & G. A. COLDITZ, *Current estimates of the economic cost of obesity in the United States*, 6 *Obes Res* (1998).
- Economic costs of diabetes in the U.S. In 2007*, 31 *Diabetes Care* (2008).
- PAUL A. HEIDENREICH, et al., *Forecasting the Future of Cardiovascular Disease in the United States: A Policy Statement From the American Heart Association*, 123 *Circ* (2011).
- Oral Health in America: A Report of the Surgeon General. (2000).
- G. A. BRAY, et al., *Consumption of high-fructose corn syrup in beverages may play a role in the epidemic of obesity*, 79 *Am J Clin Nutr* (2004).
- J. REEDY & S. M. KREBS-SMITH, *Dietary sources of energy, solid fats, and added sugars among children and adolescents in the United States*, 110 *J Am Diet Assoc* (2010).
- S. N. BLEICH, et al., *Increasing consumption of sugar-sweetened beverages among US adults: 1988-1994 to 1999-2004*, 89 *Am J Clin Nutr* (2009).
- L. AKIL & H. A. AHMAD, *Effects of socioeconomic factors on obesity rates in four southern states and Colorado*, 21 *Ethn Dis* (2011).
- Y. WANG & Q. ZHANG, *Are American children and adolescents of low socioeconomic status at increased risk of obesity? Changes in the association between overweight and family income between 1971 and 2002*, 84 *Am J Clin Nutr* (2006).
- G. A. MENSAH, et al., *State of disparities in cardiovascular health in the United States*, 111 *Circulation* (2005).
- P. M. RISICA, et al., *Self-report of sugar-sweetened beverage and fast food consumption by annual household income*, 92 *Med Health R I* (2009).
- C. D. REHM, et al., *Demographic and behavioral factors associated with daily sugar-sweetened soda consumption in New York City adults*, 85 *J Urban Health* (2008).
- ROBERT PEAR, *Soft drink industry fights proposed food stamp ban*, *The New York Times* 2011.
- M.R. BLOOMBERG, et al., *Removing SNAP subsidy for sugar-sweetened beverages* (Human Resources Administration Department of Health and Mental Hygiene ed., 2010).
- C. W. LEUNG & E. VILLAMOR, *Is participation in food and income assistance programmes associated with obesity in California adults? Results from a state-wide survey*, 14 *Public Health Nutr* (2011).
- M. VER PLOEG & K. RALSTON, *Food Stamps and Obesity: What Do We Know?*, 34 *Economic Information Bulletin* (2008).
- Congressional Record - Senate. pt. 15433 (1964).
- M. MCGOUGH, *No-food-stamps-for-soda policy would only widen the social gap*, *LA Times* October 7, 2010. 2010.
- L. RHOADES, *Will food stamp plan to ban soda fizzle?*, *Queens Chronicle* October 14, 2010. 2010.

- A. HARTOCOLLIS, *New York Asks to Bar Use of Food Stamps to Buy Sodas*, New York Times October 6, 2010. 2010.
- JASON P. BLOCK, et al., *Point-of-Purchase Price and Education Intervention to Reduce Consumption of Sugary Soft Drinks*, Am J Public Health (2010).
- American Beverage Association Statement on Food Stamp Purchases. (2010).
- D. P. DiMEGLIO & R. D. MATTES, *Liquid versus solid carbohydrate: effects on food intake and body weight*, 24 Int J Obes (Lond) (2000).
- D. ORNISH, *All Calories are Not the Same!*, Huffington Post 2009.
- J. BERG, *Food Stamps Soda Ban: The Wrong Way to Fight Obesity*, New York City Coalition Against Hunger(2010), at <http://www.nyccah.org/node/1182>.