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FACT SHEET

As Director of the Atkins Center for Weight and Health and Cooperative Extension Nutrition Specialist at UC Berkeley and as a longtime researcher in obesity prevention, I am very familiar with the extensive research investigating the negative effects of sugar-sweetened beverages. Based on overwhelming evidence of our unfortunate impact on the health of both children and adults in the U.S., I strongly support strong public health measures to reverse high rates of sugar-sweetened beverage consumption and chronic disease. Berkeley is in a position to play a valuable leadership role in this important area and to contribute to the goal of preventing obesity and the associated increase in diabetes, heart disease, cancer, dental caries, and other serious medical problems. In this statement I shall briefly summarize some of the evidence that supports action to reduce soda consumption.

Among adults in 2009-2010, 69.2% were either overweight or obese (1), with increased sugar consumption identified as a major cause of the problem. Between 1977 and 2002, Americans on average increased their energy intake from soft drinks by 228% (2). For all age groups, sugar-sweetened beverages are by far the single largest source of added sugar in the American diet, accounting for 37.1% of the added sugar consumed nationally (3,4).

Among our youth, overweight has more than quadrupled among 6-11 year olds since the early 1970s and more than tripled among 12-19 year olds (7,8). Evidence relating 28 different dietary factors to childhood obesity was examined in a comprehensive review of the evidence linking dietary factors to adiposity and the single high-risk dietary practice that emerged as being linked to overweight in children was intake of sweetened beverages (soft drinks, sports drinks, fruit drinks, and other sugar-sweetened beverages) (9). These are beverages that contain added caloric sweeteners such as sucrose, high-fructose corn syrup, or fruit-juice concentrates, all of which have similar metabolic effects (10).

Percent of total energy (calories) consumed from sweetened beverages more than doubled among children between 1977 and 2001, as portion sizes have increased significantly, accounting for more than half of the increased caloric intake among children during this period (7,8). A study of school-age children showed that those who drank 9 oz. or more of sugar-sweetened beverages per day consumed nearly 200 more calories per day than those who did not drink sugar-sweetened beverages (11). Sugar-sweetened beverages are also the largest source of added sugar in American adults’ diets (12). Between 1977 and 1996, the average soda portion size nearly doubled, from 13 ounces to nearly 20 ounces. For all age groups, sweetened beverages (regular soda and energy, sports, and fruit drinks) are the largest contributor of added sugar to the diet (4).

Randomized clinical trials and epidemiologic studies that met high methodological research standards have shown that individuals who consume higher amounts of added sugar, especially sugar-sweetened beverages, tend to gain more weight, and have a higher risk not just of
obesity, but also of type 2 diabetes, dental cavities, hypertension, and cardiovascular disease (CVD) (12, 14-19). Regular consumption of sugar-sweetened beverages (7 or more servings/week) is associated with increased risk of CVD mortality, type 2 diabetes, and hypertension even after adjusting for conventional CVD risk factors such as blood pressure and total serum cholesterol, and even when adjusting for overall diet quality (12, 17, 20-21). In fact, studies reported this month (February, 2014) provide new and convincing evidence that over-consumption of sugar is not just associated with obesity and tooth decay, but also is an independent risk factor in cardiovascular disease, diabetes, liver cirrhosis, and dementia. Even one 12-ounce soda a day increases the risk of cardiovascular mortality by almost one-third, independent of total calories (12). In other words, sugar has serious adverse health effects beyond being empty calories and promoting obesity. A large study of 91,249 women in the Nurses’ Health Study who were followed for 8 years found that the risk of diabetes among women who consumed one or more servings of sugar-sweetened beverages per day was nearly double the risk among women who consumed less than one serving of sugar-sweetened per month. Risk of coronary heart disease increased by 23% among women who consumed one serving of sugar sweetened beverages per day and by 35% among those who consumed 2 or more servings per day. And not all of this association was explained by increased body weight (22).

The economic consequences of obesity are also significant. Because of the contribution of sugar-sweetened beverages to obesity and the variety of medical consequences of obesity and sugar ingestion, the consumption of sugar-sweetened beverages generates enormous health care costs. Medical costs for overweight and obesity alone are estimated to be $147 billion—9.1% of U.S. health care expenditures (23). It is anticipated that this figure will increase as today's children reach adulthood. If current trends continue, 1 of 3 children born in the U.S. in the year 2000 will develop type 2 diabetes in their lifetime; the increase in the incidence of diabetes is directly proportional to the increasing rate of obesity (1).

Sugar intake from sugar-sweetened beverages approaches 15% of the daily caloric intake in several population groups (5,6). Of particular concern is the higher intake of sweetened beverages by population groups most at risk for obesity: African Americans, Latinos, Native Americans, and lower income groups (3, 7-8). According to the U.S. Department of Health and Human Services, all minorities, except Alaska natives, have a prevalence of type 2 diabetes that is two to six times greater than that of the White population. Yet, the prevalence of heavy sugar consumption is disproportionately high among African-Americans, and marketing of sugar-sweetened beverages is targeted toward minority communities (24). Sweetened beverages are heavily promoted on television, websites, games and product placement agreements (3).

Unlike other food items that have at least some small nutritional value, sugar-sweetened beverages do not have any true nutritional value. A soft drink contains only sugar and water (13). In fact, sweetened beverages not only provide empty calories, but also displace healthier and/or more nutrient-dense beverages like milk, 100% fruit juice and water (3). Principal sources of energy should be core foods (grains, meat, fruits, vegetables, dairy) that provide beneficial and necessary nutrients. Therefore, the Dietary Guidelines for Americans limit discretionary (non-core food) calories for children. To meet the guidelines, all children’s (not just overweight children’s) consumption of sweetened beverages, which contain empty calories, should be limited.
In conclusion, sugar-sweetened beverages are by far the single largest source of added sugar in the American diet, accounting for 37.1% of the added sugar consumed nationally. Since soda and sweetened fruit drinks are currently among the least expensive sources of calories (3), research suggests that a tax on sugar-sweetened beverages would have a strong positive effect on reducing sugar consumption (25) and by so doing would protect our population, including vulnerable children, against future personally devastating and economically overwhelming health problems. Just as smoking rates have been reduced by strong public health measures, despite the denial and opposition of cigarette manufacturers, so too public action to discourage sugar-sweetened soda consumption can resist the powerful soda lobby and can support the health of our residents and be a model for other states.

References: