Switching away from soda cut more than 60 trillion calories from the American diet from 2000 to 2015

June 22 2016, by Jason Kornwitz

Credit: AI-generated image (disclaimer)

Soda is making news these days, the subject of new legislation and unfavorable reports highlighting its decline in popularity. Philadelphia recently became the first major U.S. city to pass a soft drink tax, and a new report from Beverage Marketing Corp. found that bottled water will

soon surpass soda as the nation's most popular beverage.

Both the soda tax and the drop in soda consumption seem to coincide with the nation's collective focus on health and wellness, but the bad news is that more than one-third of Americans are still obese. According to the Centers for Disease Control and Prevention, obesity-related conditions include heart disease, stroke, Type 2 diabetes, and certain types of cancer, some of the leading causes of preventable death.

How might a soda tax affect dietary habits? And what kind of long-term impact will the consumer shift from soft drinks to bottled water have on the nation's obesity epidemic? We asked Janice Maras, research manager in the Department of Health Sciences, who specializes in dietary data analysis and oversees the Dietary Assessment Center.

The American Beverage Association, which works on behalf of industry giants like Coca-Cola and Pepsi, has spent millions of dollars to defeat 45 soda tax measures nationwide since 2008. But the lobbying group lost last week, when Philadelphia became the first major U.S. city to pass a soda tax, which would add 18 cents to the cost of a can of soda, $1.02 for a two-liter bottle, or $1.08 for a six-pack. What impact do you think taxing one type of food—in this case, sugary beverages—might have on reducing the incidence of diet-related health problems like Type 2 diabetes and obesity?

I do not think putting a tax on soda will solve the problem. However, the publicity and media attention from cities implementing a tax—or trying

to implement a tax—has grabbed a lot of people's attention. Therefore, I think more public promotion of the health benefits of healthier beverages would be effective, as would letting people know that water is a healthier option than sweetened beverages like sport drinks. Sports drinks have sugar and are not necessary for the average person who works out for one hour or less per session. Most people who work out at the gym just need to replace the sweat they have lost with water.

The recommended daily water intake is between 8 and 12 cups. A quick way to figure out how many ounces of water you should be drinking every day is to calculate your weight in pounds and then divide that number by two. For example, if you weigh 180 pounds, you should be drinking 90 ounces per day.

According to a 2015 *New York Times* feature story on the decline of the soft drink industry, "the drop in soda consumption represents the single largest change in the American diet in the last decade." And yet cutting down on soda has not seemed to improve the nation's collective health. A new study published in the *Journal of the American Medical Association* found that the obesity rate among American women rose from 35 percent in 2005-06 to 40 percent in 2013-14 while the obesity rate among men held at 35 percent over the same time period. How do you reconcile the study's findings with the consumer shift from high-calorie soft drinks to water?

A likely cause of the increase in obesity among female adults is an increase in wine consumption. Although the U.S. population has significantly decreased its consumption of soda and sugar sweetened beverages, it has increased its consumption in alcoholic beverages. Recent studies have shown that the consumption of alcohol has continuously increased among Americans from the 1990s up until at least 2012.

The National Epidemiologic Survey on Alcohol and Related Conditions III conducted on alcohol intake and associated health risks found that the average daily portion of alcohol intake among adults in the U.S. increased by 34 percent from 2001 to 2013 and that the overall frequency of drinking increased by 13 percent. The study determined that the overall drinking frequency was twice as high for women than men. It also concluded that the average amount of alcohol consumed was significantly greater for people between the ages of 25 and 44 as compared to those between the ages of 18 and 24.

Another possible reason for the increase in obesity in women is lack of physical activity. It is well known that eating a healthful, balanced diet while being physically active is essential for achieving a healthy weight and feeling well. Yet, a recent study published in the *American Journal of Medicine* found that women in the U.S. from 1988 to 2010 did not meet the minimum daily recommendations of time spent performing physical activity. In particular, younger women had declined the most in leisure-time activity and had increased in body mass index without increasing caloric intake.

This could be related to working, according to a study published in *Preventive Medicine*, which found that women in more sedentary occupations that do not involve much physical activity are significantly less likely to perform physical activity in their leisure time. Therefore, women will need to find creative ways to incorporate physical fitness into their daily lives, such as taking walks at lunch time or going to the gym before work.

The BMC report estimated that the switch from soda to bottled water cut more than 60 trillion calories from the American diet from 2000 to 2015. But in her latest book, Soda Politics: Taking on Big Soda (and

Winning), nutrition scholar Marion Nestle points out that soda consumption is divided across racial and economic lines, with the highest consumption among African and Hispanic Americans. What factors have made it difficult for some people in minority communities to reduce their soda intake, and how might public health advocates work with people in these communities to help them improve their dietary habits?

When it is cheaper to buy a can of soda in a convenience store or gas station than a healthier option, many low-income people will purchase it. Many people in the South lack the resources to obtain healthier options due to lack of available supermarkets and consequently seek out the local gas station for soft drinks high in sugar that not only cause weight gain but are a major contributor to heart disease and diabetes.

Health professionals who work with minority communities need to educate people about how much sugar is in one soda bottle. They need to get the message out that a 20-ounce bottle of soda has 17 teaspoons of sugar and is nothing more than liquid candy. This is not a proper source for quenching your thirst. Water is the best choice—as well as the cheapest and the healthiest. Try to buy a steel beverage container and fill it up with water. Tap water is considered safe in many areas, so check out your local water report to see if you can drink tap water instead of buying bottled water.

More information: Christine C. Ekenga et al. Leisure-time physical activity in relation to occupational physical activity among women, *Preventive Medicine* (2015). DOI: 10.1016/j.ypmed.2015.03.003

Uri Ladabaum et al. Obesity, Abdominal Obesity, Physical Activity, and Caloric Intake in US Adults: 1988 to 2010, *The American Journal of Medicine* (2014). DOI: 10.1016/j.amjmed.2014.02.026