POSITION STATEMENT ON SUGAR-SWEETENED BEVERAGES

Executive summary

Sugar-sweetened beverages have been implicated in the development of many diseases including diabetes, obesity, heart disease, gout, abnormal cholesterol levels, dental caries and osteoporosis.

The Philippine Center for Diabetes Education Foundation supports the passage of taxes on sugar-sweetened beverages (SSBs) such as soda or soft drinks especially those sweetened with high fructose corn syrup.

However, this tax scheme should be part of a more comprehensive program against non-communicable diseases such as diabetes and obesity or it is bound to fail.

The program should include education regarding proper nutrition and a healthy lifestyle, clearer food labeling, reducing cost and increasing availability and accessibility of healthy food such as fruits and vegetables, as well as potable water and limiting availability of SSBs in our school systems.

Background

Diabetes ranks eighth among the leading causes of death in the Philippines. In 2015, there were over 3.5 million Filipino adults diagnosed with diabetes and about an equal number who remain undiagnosed. And its prevalence keeps rising, having increased by 60% from 2003 to 2013.

Parallel to soaring rates of diabetes are those of overweight and obesity. Three out of 10 adults are overweight and obese, outnumbering the undernourished (one of every 10 adults).

The price of sweetened drinks could more than double if the senate concurs with the House of Representatives. This could serve as a deterrent for many to purchase sugary drinks.

Part of House Bill 5636 seeks to impose an excise tax of PhP10 per liter of sugar-sweetened beverages, specifically, non-alcoholic drinks with added sugar or artificial sweetener such as soft drinks, soda, fruit drinks, sports drinks, sweetened tea or coffee and energy drinks.
Excluded from the proposed tax are 100% natural fruit juice, 100% vegetable juice, yogurt, milk, meal replacements, weight loss and oral nutrition therapy products.

Why single out sugar-sweetened beverages?

The World Health Organization (WHO) advocates for a tax on sugary drinks for a number of reasons. Sugar over-consumption is a key contributor to obesity, diabetes and tooth decay. SSBs are major sources of dietary sugar and are gulped down increasingly in many countries especially by children.

Sugary drinks make it very easy to ingest excess sugar. On average, one can of soft drink contains about 40 grams or 10 teaspoons of sugar.

To prevent obesity and tooth decay, WHO guidelines recommend limiting free sugars to less than 10% of one’s total daily calorie intake (amounting to around 12 teaspoons of sugar a day for adults). For added health benefits, the WHO suggests cutting sugar further to below 5% of daily energy intake (about 6 teaspoons of sugar for adults).

Free sugars are those added to foods and drinks by the manufacturer, cook or consumer such as glucose, fructose and sucrose or table sugar and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates. Many SSBs are sweetened with high-fructose corn syrup which has been shown in excess to be harmful to cells resulting in increased uric acid production, blood vessel injury, fat cell expansion and deposition leading to impairment of insulin action and its consequences such as high blood pressure and diabetes.

Do sugary drinks cause diabetes?

Critics of the SSB tax claim there is no direct link between SSBs and diabetes. Studies, they say, only prove correlation but not causation.

Harvard School of Public Health Professors Malik and Hu have established that evidence for sugary beverage consumption and diabetes risk have already fulfilled the Bradford Hill criteria for causality as follows:

1) **Strength of association** – Strong evidence from studies involving 310,819 participants showed 26% greater risk of diabetes for those taking 1 to 2 SSB servings a day compared to those who drank none to less than 1 serving per month.
2) **Consistency** – The Nurses’ Health Study followed over 90,000 women for eight years and found that those who had 1 or more SSB servings a day were twice as likely to have developed diabetes than those who rarely drank SSBs.\(^9\) Several other large studies have come to a similar conclusion.

3) **Specificity** – Besides raising blood sugars, SSBs have also been found to raise the risk for diabetes-related conditions such as high blood pressure, abnormal blood cholesterol levels, lower bone mass, bulging waistlines, high uric acid levels, inflammation and heart disease.

4) **Temporality** – Prospective studies like the Health Professionals Follow-up Study that tracked 40,000 men over 20 years have found a 24% higher risk of diabetes with higher SSB intake.\(^10\)

5) **Dose-response** – Each SSB serving per day is tied to a 15% greater risk of diabetes.\(^7\)

6) **Biological plausibility** – Liquid calories generally don’t curb hunger as well as solid foods. Liquid sugars are also rapidly absorbed and acutely cause spikes in blood sugar. Excess sugar, particularly fructose, has the propensity to turn into fat and get deposited in various organs in the body, leading to poor insulin action and heart disease risk.

7) **Experimental evidence** – Randomized controlled trials are logistically challenging to do but evidence looking at biomarkers for diabetes and heart disease risk reinforce the SSB-diabetes link.

**Have soda taxes worked?**

The tax on sugary drinks passed in Mexico generated $1.4 billion in its first year; in Denmark, their saturated sugar tax raised €134 million from November 2011 to August 2012.\(^11\)

Tax revenues could be used to fund programs to promote health and education, as well as availability and accessibility of potable water and nutritious food like fruits and vegetables.

One year after the tax was imposed on SSBs in Mexico, the lowest income households slashed their sugary drink purchases by 17%, while the general population cut theirs by 12%.
Would that make the SSB tax anti-poor?

On the contrary, the tax may actually be pro-poor. The economically disadvantaged would be most vulnerable to the health threats of SSBs like diabetes since they would have the least resources to afford or access care.

The Harvard School of Public Health researchers project that SSB taxes will prevent 115,000 cases of obesity in 15 U.S. cities by the year 2025, avert new cases of diabetes, increase healthy life years and save on future health care costs.  

As for the tax structure, slapping a tax on all sweetened drinks without regard for sugar content may be unfair as it would penalize those with lower and higher sugar content equally. A tiered scheme may encourage manufacturers to lower the sugar content of their drinks and consumers to choose drinks with less sugar.

Even before the sugar sweetened beverage levy has been implemented in the U.K., manufacturers have already vowed to reformulate sugar out of their drinks.

We propose that a lower tax be imposed on drinks with sugar content of <5 g/100 mL, a moderate tax on drinks with sugar content of 5 to 8 g/100 mL and a higher tax on drinks >8 g/100 mL.

Cancer in a can?

Most sugary drinks are nothing more than empty calories. They are usually devoid of nutrients like vitamins, minerals, fiber, antioxidants or other ingredients of health value. Some may even contain chemicals implicated to cause cancer.

The caramel color used in cola soft drinks may contain harmful chemicals such as 4-methylimidazole (4-MEI) and advanced glycation-end products (AGEs). 4-MEI has been found to cause cancer in animal studies and is connected with excess cancer risk in humans.

Furthermore, AGEs interfere with many cell functions leading to damage of various organs like the brain, liver, heart and skeletal muscle.

Think before you drink.

What about drinks artificially sweetened with non-caloric sweeteners like aspartame, sucralose and stevia? Research findings have been inconsistent.
Because artificially sweetened beverages (ASBs) like diet sodas contain little to no calories, they have been found in short-term studies to aid weight loss when substituted for SSBs.\textsuperscript{16, 17,18}

However, a recent pooled analysis of studies of almost 13,000 patients saw a 1.59-fold higher risk of overweight and obesity in those who drank artificially sweetened soda compared to those who did not.\textsuperscript{19}

Many posit that the reason why ASBs are tied to weight gain and diabetes risk is due to reverse causation -- overweight people who are already at higher risk for obesity and diabetes are just more likely to turn to diet soda than normal-weight ones.

On the contrary, some evidence suggests the intense sweetness of artificial sweeteners may boost craving for sweets and enhance appetite.\textsuperscript{20}

So, what makes for a healthy drink?

The best thirst quencher would still be clean water. You can also try infusing your water with slices of citrus fruit, cucumber, crushed berries and mint for a little flavor.

Other healthier alternatives to SSBs include unsweetened tea or coffee and unflavored low-fat or skim milk.

Furthermore, we agree with the exemption of milk and milk products, cereal and yogurt drinks as some data suggest that dairy consumption may even reduce the risk for type 2 diabetes,\textsuperscript{21, 22} high blood pressure\textsuperscript{23} and heart disease\textsuperscript{24} especially low-fat dairy products.

Milk, cereal and yogurt drinks may also contain other nutrients like calcium, vitamin D, fiber and protein, and thus, can form part of a healthy meal plan. However, people must still pay attention to the sugar content in these drinks and try to keep within the recommended limits.
The SSB tax is not a panacea.

Done in isolation, imposing tax on sugary drinks to reduce diabetes and obesity rates is bound to fail.

The SSB tax needs to be part of a comprehensive program to promote health.

Alongside the tax must be initiatives to educate the masses about healthy lifestyle habits; improve food labeling; increase access to healthy food and drinks while limiting access to SSBs in schools and workplaces; add warning labels on the health effects of SSBs; and restrict marketing of SSBs to children.

A tax on liquid candy may be bitter for business but certainly sweet for our nation’s health. So, let’s pass the SSB tax today for a healthier Philippines tomorrow.

After all, soda is sweet, but diabetes isn’t.

For the Philippine Center for Diabetes Education Foundation, Inc. or Diabetes Center (September 6, 2017)

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3. Food and Nutrition Research Institute, Department of Science and Technology. 8th National Nutrition Survey. 2013.


