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A Spoonful of Sugar

A popular song in the musical *Mary Poppins* states that “a spoonful of sugar helps the medicine go down” (Sherman). Examining the United States’ sugar consumption, one might venture to state that Miss Poppins was correct in her statement, but for an entirely different reason than originally intended. Miss Poppins really should have said that “a spoonful of sugar helps increase the amount of medicine one takes”; however, it was probably not catchy enough to place it into the song. It is known that the more sugar a person consumes, the more likely he or she is susceptible to different diseases, which leads to additional medicine consumption—or more medicine to “go down”. Today, it is common knowledge that the United States is currently facing an obesity epidemic, which is also associated with many other diseases such as cardiovascular diseases and diabetes. Many focus on fat consumption as the main perpetrator of the rise in these health issues, but sugar plays a large role as well. Sugar—fructose, sucrose, high fructose corn syrup—is found in almost everything Americans eat, and it is rare to find any processed food that does not contain some sort of sugar. Thus, to improve the health of all Americans, it is imperative for the government to enact some form of sugar regulation.

Sugar has always been a part of the human diet, but its presence and use in diets has changed dramatically over the last few hundred years. Originally, the only source of pure sugar came from nectar and bees—honey. By examining several cave paintings, it has been found that people have been gathering honey for more than 10,000 years (McGee 647). Of course, the

difficulty to obtain honey from a hive made it a rarity. In Europe, sugar was originally used for medicinal purposes (McGee 649). It was not until the eighteenth century that sugar became popular and widespread in European nations. For example, in 1700, England's sugar consumption was four pounds per year per person; this increased to twelve pounds per year per person in 1780 (McGee 650). The United States' sugar consumption in 2009 was 132 pounds per year per person—which is the weight of an adult human being (United States Dept. of Agriculture, “Sugar and Sweeteners” 1).

To further emphasize the exponential rise in sugar consumption, one can compare the world's sugar production through time. In 1964, the world sugar production was seven times of what it was in 1900 (McGee 652). There have also been technological advances and discoveries in sugar as well. In recent history—the early 1970s—a new sugar was invented: high fructose corn syrup (HFCS). Compared to cane sugar, HFCS is six times sweeter and notably more inexpensive (Greenblatt). Although it seems more economical, it has greater negative health effects than sucrose, which will soon be discussed in further detail.

Sugar, especially the overconsumption of sugar, can lead to many serious health complications. Most Americans are aware that an excess consumption of fat and sodium lead to many health problems, but few are aware that sugar can cause these health problems as well. The excessive intake of sugar is linked to the large population suffering from obesity, hypertension, heart disease, type 2 diabetes, and insulin resistance (Johnson et al. 1013). To further demonstrate the relationship between sugar consumption and health complications, health policy investigator Gary Taubes explains that “by the early 2000s, when sugar consumption peaked, one in every three Americans was obese, and 14 million were diabetic.” Further evidence reveals that sugar intake and metabolic syndrome are also related. Metabolic syndrome is a

condition where the body becomes insulin-resistant—due to fat gathering in the liver—which can be a result of sugar consumption (Taubes). High fructose corn syrup also has distinct health effects compared to table sugar—sugar from beets or sugar cane. HFCS does not digest in the equivalent manner as common sugar, which leads to the overproduction of an enzyme that causes the body to collect fat instead of expend it (Greenblatt).

Today, there seems to be a struggle between who can dictate what and how much sugar an individual can consume. The opponents in this battle for power are the food industries and the government. Currently, the food industries maintain the overt power, while the government possesses the covert power. Food companies have very few obstacles that block them from putting as much sugar into foods as they desire. Since sugar is on the USDA's Generally Regarded as Safe list, there are scarcely any rules or regulations limiting its prevalence in food items (Lustig 29). Not only do food industries create sugar-laden foods, but they also “[spend] about \$11 billion annually on advertising and another \$22 billion or so on trade shows, supermarket ‘slotting fees,’ incentives, and other consumer promotions” (Nestle and Jacobson 108). Food companies are openly utilizing their resources to gain power within the population.

On the other hand, the U.S government holds the less influential, covert power in this situation. For example, the government's covert power is seen in its attempt to encourage citizens to eat healthy by using the food pyramid, but they have not implanted any strategies to directly address the sugar problem. Another aspect of the battle that is easily forgotten is the consumer's role. Consumers also possess covert power, because they decide what to purchase and influence what food companies create and sell through the supply and demand principle. I believe that this power structure only produces negative consequences, and it is necessary to alter the currently twisted balance of power.

In order for the existing power structure to change, the government should help its citizens lead healthier lifestyles through sugar regulation. In the current population, it is evident that diseases linked to sugar consumption, such as obesity, type 2 diabetes, and metabolic syndrome are too relevant and persistent. This alone should be enough for the government to take action and acquire overt power. Yet, the amount of money spent in lost productivity provides further justification for the government's ability to regulate sugar. According to Dr. Robert H. Lustig, Professor of Clinical Pediatrics at the University of California, "the United States spends \$65 billion in lost productivity and \$150 billion on health-care resources annually for morbidities associated with metabolic syndrome" (28). All the evidence points towards the necessity of sugar regulation, and there are a variety of methods to do this. Several researchers, like Dr. Robert Lustig, propose a tax, while other ideas include implementing school and age regulations or regulation of food companies. I believe that the most effective way of changing the power structure and creating a healthier population is to implement all three strategies; there needs to be a tax on sugar, school and age restrictions, and increased regulation of food industries.

One of the most frequently discussed techniques for sugar regulation is to impose a tax on sugar. At first glance, this might seem like an unrealistic option, but it has been successfully implemented on other substances, such as alcohol and tobacco, here in the United States. In the beginning, the taxation of these products was also viewed as unrealistic and difficult to impose, but citizens eventually accepted them. Although people might argue that a tax on alcohol and tobacco is much more acceptable because it has a greater effect on an individual's health, they do not realize that sugar is also a major concern to a person's wellbeing. According to Dr. Robert Lustig, a recent announcement by the UN "targets tobacco, alcohol, and diet as the central risk

factors in non-communicable disease...[T]obacco and alcohol are regulated by governments...leaving one of the primary culprits...unchecked” (27). Knowing this information, it is surprising that sugar has not obtained significant attention from the government as tobacco or alcohol has received.

If such a tax is to be implemented, it needs to be specific as to what types of foods will be considered for taxation. I propose that either the federal government taxes all foods containing added sugars or that the tax is applied to foods that exceed a certain percentage of an item’s total weight in sugar, such as ten percent. With these defined boundaries, foods with natural sugars, such as fruits, will not be charged. The issue of how expensive to make the tax is also a major factor in its effectiveness. A charge that is too low, such as a recently proposed penny-per-ounce tax for soft drinks, will not catalyze a change in eating habits. On the other hand, a tax cannot be so high that it creates great anger and rebellion in the majority of the population. It may be effective to gradually increase the tax, instead of shocking the nation in one instant. At first, a ten percent tax can be initiated, which will then be raised to fifteen percent, and finally to twenty percent. Along with reducing the amount of sugar the United States consumes, the tax can further benefit the health of the people by utilizing the tax money to fund the Supplemental Nutrition Assistance Program (SNAP), more commonly known as the food stamps program. Since sugary, processed foods are usually the cheapest, people in low-income situations and those who receive food stamps purchase the foods that are high in sugar. The money collected from the sugar tax can be distributed among the SNAP recipients in order for them to afford healthier foods.

Aside from taxation, the government can also impose limits on the availability of sugary foods to children. A large part of a child’s day is spent in government-funded schools—a place

for learning and improvement. This makes it an ideal location for the government to impose certain limits on sugar consumption in an effort to improve children's health. To limit the amount of sweetened foods in schools, precise limits should be placed on items available in vending machines and on the foods the school lunch programs serve. In 2006, Illinois passed a law pertaining to vending machines in elementary and middle schools. It stated that the amount of sugar in foods could not be greater than 35% of the food item's weight (Illinois State Board of Education). Although this is a step towards improvement, the regulation does not limit the amount of sugars in the vending machines' beverages, which usually have extremely large quantities of added sugar—such as sodas and juices. In addition, the rule only focuses on elementary and middle schools, and completely ignores regulation in high schools.

Reform also needs to be applied to the school lunch programs. In the 2011 school year, the National School Lunch Program nourished 31.8 million children (United States Dept. of Agriculture, "National School Lunch Program"). To improve the health of this large population of students, more specific and healthier guidelines should be followed concerning added sugar. For example, if a school wants to serve canned fruit, which usually comes in a sugary syrup, the school should ensure that the syrup that preserves the fruit does not contain any sugar. Schools can also serve juices without any added sugar. In the Code of Federal Regulations regarding school lunch programs, the regulations do discuss the need to limit the amounts of fats, cholesterol, and sodium provided in a meal, but they fail to mention any guidelines for a meal's sugar content ("National School Lunch Program" 22). A person's lifestyle and long-term habits form in their childhood, and once created, they are a challenge to alter. Therefore, it is necessary for the school environment to reduce the amount of added sugars it permits children to consume, which will create a healthier population.

To limit the overconsumption of added sugar, the government can also impose restrictions and regulations on the food industries. Currently, the food industries have an abundance of advertising power, and many of their advertisements concern sugary, unhealthy foods geared towards children. For example, the famous—or infamous—“silly rabbit” used to advertise Trix cereals and yogurts, specifically targets children with its slogan “Silly rabbit, Trix are for kids.” Food industries know that children’s cognitive abilities are still developing, thus it is easier to influence a child than an adult. One study discovered that out of the food commercials that children watch, their favorite food commercial advertises an unhealthy product, such as sugar-laden, processed foods (Dalton et al. 443). The influence of advertisements can lead children to desire unhealthy products, which contributes to the rising health complications in children. Therefore, the government should place restrictions on food advertisements targeted to children, especially through television. This can be imposed by limiting the number of sugary food commercials permitted in a given hour or by only allowing the advertisement of foods with added sugar below a certain percentage of its mass. In another effort to reduce the overconsumption of sugar, food companies can be required to clearly identify how much added sugar is in a food item. Clearly labeling this on the package will make it easier for the consumer to find information about the sugar content of the food item. Hopefully, this will cause consumers to evaluate their choices of food, and compel them to change their eating habits.

It probably comes as no surprise that there are citizens who oppose the bold proposal to tax sugar. There are several justifications for people’s opposition to sugar taxation. First of all, as Nadeem Esmail, former director of Health System Performance Studies at the Fraser Institute, points out, “lower socioeconomic classes are typically more dependent on fast foods” and other inexpensive, processed foods (25). Yet, as mentioned previously, if the tax revenue goes towards

funding the SNAP program, it will give low-income individuals the ability to afford fresh foods without added sugar. Another frequently voiced opinion opposing a sugar tax is the belief that it is an individual's own decision to eat what they choose without the government's interference. What many do not realize is that the amount of sugar a person eats is a concern for the government and the public. The amount of sugar a person consumes and its health consequences are the government and taxpayers' concern, because they run and fund the Medicare/Medicaid program. Imposing a sugar tax will help pay for the tremendous medical costs associated with the numerous negative health effects from sugar overconsumption.

To continue, some people propose that the only method necessary to create a healthier population is to educate them on the effects of the overconsumption of sugar. Although these individuals, such as Dr. Robert Kaestner, Professor in the Institute of Government and Public Affairs, may state that the key is "both general and specific education to make people more aware of...how they can be healthier", it is simply not enough to bring about noticeable change. Classes, instructional videos, pamphlets, and websites all trying to teach people to eat healthy will not be completely successful unless they are paired with a change in the environment. As Dr. Lustig points out, "evidence shows that...interventions that teach children about diet and exercise demonstrate little efficacy" (28). Although education is essential, education alone will not create the desired change. If education is the only focus, the toxic environment of unhealthy sugary products will continue to exist. Education might inform an individual, but this knowledge will not be retained if an individual's surroundings are teaching the opposite. Therefore, for a more effective strategy, the education of the public should be coupled with other forms of regulation as well. Regulations such as the proposed sugar tax, the regulations at school, and the increased regulation of food industries all help create a healthier environment for the public.

The college experience is notoriously known for packing on the “freshman 15” and for a decline in healthy eating habits. As discussed previously, the consumption of sugar is associated with the onset of metabolic syndrome, and in a recent study, it has been found that college students are at risk of attaining metabolic syndrome due to their poor nutritional choices (Fernandes 319). Although the study does not specify which nutritional choices lead college students to obtain metabolic syndrome, it would not be surprising to see sugar as one of the top contributors. Not only are more college students diagnosed with metabolic syndrome, but the majority of them are also gaining a significant amount of weight. In a study conducted at Washington University in St. Louis, researchers found that 70% of college students gained an average of 9 pounds in their first two years of college (Deusinger 249).

The problem of excessive sugar consumption is present on virtually every college campus, and Augustana College is no exception. For example, the two C-Stores on campus are filled with processed foods containing added sugars—half of the store’s merchandise consists of candy. Furthermore, it seems as if the dining service is encouraging its students to eat the inexpensive, sugary foods. A bowl of sugary cereal, such as Cinnamon Toast Crunch, costs 0.59 meal points, while an equivalent bowl of fruit costs 0.99 meal points. College campuses need to be aware of the damaging effects of sugar and should encourage its students to limit their sugar consumption.

Using the ideas of sugar regulation explained above, it is possible to create solutions for college campuses, including Augustana College. First of all, the campus food service can “tax” the foods high in added sugars and decrease the cost of the healthier foods. Even though it might be more costly for the college to buy unprocessed foods such as fresh fruits and vegetables, raising the prices of the processed, inexpensive foods will balance the expenses. For example,

the bowl of Cinnamon Toast Crunch would cost 0.99 points while the bowl of fruit would cost only 0.59 points. Using this strategy, the college food service would encourage students to eat foods low in added sugar without losing any money or going into debt. Another idea to consider for Augustana College is to rearrange the setup of the C-Stores. I propose that the C-Stores create a visible and prominent area for healthy foods low in added sugar. For those students who are not very health-conscious, having a clearly labeled area for healthier snack options will make them more aware of their food choices. If the first thing a student sees when walking into the C-Store is a shelf labeled as a healthy shelf, they will be more drawn to purchase something healthy compared to if the healthy foods are dispersed among all the unhealthy, sugary foods.

Campuses can also provide more nutritional information about the foods served in the cafeteria. In the Augustana dining halls, the food service provides daily menus listing the meals offered for the day. In addition to listing the meal options, the dining service can also provide information about how much added sugar is present in the food. This will give students the opportunity to make informed dietary decisions. If these environmental dietary changes were implemented on college campuses, a nutrition course would have a greater chance of success. Currently, Augustana requires its students to take two Health & Physical Education classes. If one of these classes is a nutrition course and the suggested changes in the food service practices are introduced, students will be more inclined to apply the knowledge they obtain from the class to their daily lives.

With any proposed change, whether it is in a national policy or on a college campus, there are always challenges to overcome. First of all, many students require extra energy boosts—especially when studying late at night or pulling an all-nighter. The source of this energy is usually in a sugar-loaded energy drink or candy. It is understandable that on occasion,

an individual will require a sugar boost, but the proposed ideas would not interfere or prohibit the occasionally needed sugar rush. Another point to consider is that college students, after living their whole lives under the rules of their parents, crave and expect to have the freedom to eat whatever they desire while in college. Although there may be higher costs associated with sugary food items, this does not signify that there will be reduced choices in food. Another challenge facing the suggested changes is that some students may not find it necessary. Students may not consider the long-term effects of their diet choices, and thus view these adjustments as facetious. Therefore, the hope is that with the nutrition course, students will comprehend how important their dietary choices are for their current and future health.

When people think of dietary health complications, they frequently think of diets high in fat; they do not immediately realize that the excess consumption of sugar leads to many health issues as well. With the high rates of obesity and other metabolic syndrome-related diseases in the United States, the government needs to promote and protect the health of its citizens through sugar regulation. It must decrease the food companies' power by considering a tax on sugar, sugar regulations for children, and being more involved with the actions of food companies. To succeed in this goal, it is necessary to conduct further research to distinguish the most effective method for taxing sugar. For long-term improvement, it is also essential for the citizens to be well educated on this subject, so that they have the power to make the healthy decision.

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