Childhood Obesity Must be Addressed through Comprehensive Public Policy

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Many people reminisce about their younger years, recalling all the trouble they caused running around the neighborhood playing with friends. For many, this was complemented by three home-cooked meals a day and the occasional afternoon snack. Today's generation, especially those born in the 90's and early 2000's, may tell a different tale, one of playing video games and eating a quick microwave meal as mom or dad struggle to fit cooking into the daily routine. For many, this is when their lifelong weight-related health problems begin, illustrated by the rampant numbers of children with obesity in today's busy world where meals are no longer prepared, but served up at fast food restaurants or heated in microwaves by the masses. Due to the high rate of childhood obesity and its effect on long-term health and weight-related health care costs, the US government must implement a comprehensive program to address the issue including a tax on unhealthy food ingredients, restructuring of our farm subsidies and abandoning corn subsidies, and funding for education and counter-marketing programs, all of which will substantially reduce childhood obesity in America. The low cost of quick, easy, unhealthy, and highly marketed foods makes life easy and puts a tasty meal at anyone's fingertips, but also enlists many into a life with little regard for nutrition, leading to negative health consequences.

A Growing Problem

Childhood obesity, which is when a child weighs more than normal for his or her age and height (Mayo Clinic, 2012), is a problem that is not only widespread, but is growing at a rapid pace. The numbers are actually quite staggering, as lecturer on nursing Ellen Ben-Sefer explains: between 1988 and 2002, the number of children from 6 to 19 that were overweight
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grew by 45% in the United States (Ben-Sefer, Ben-Natan, & Ehrenfeld, 2009). While there is a clear pattern of growth in the number of overweight children, the magnitude of the obesity problem proves to be much more significant. The Centers for Disease Control and Prevention [CDC] (2012) claim that roughly 17% of children are obese, amounting to 12.5 million children, which is triple that since 1980. These numbers illustrate how rampant childhood obesity has become, and a clear need to address the epidemic growth rates of the number of children faced with obesity.

**Contributing Factors**

There is no easy answer to the cause of childhood obesity, as a number of factors contribute to weight gain in children. Nutrition intake is often highlighted as the biggest culprit, though other factors such as corporate advertising, limited exercise, and health disorders also contribute.

When it comes to nutrition, the most problematic ingredients are sweeteners, including sugar, high fructose corn syrup, and others, calorie-packed and commonly found in beverages and sweets. Sweeteners add extra calories to the diet without adding the amount of food consumed. Director of the Ingestive Behavior Research Center at Purdue, Richard Mattes, was cited explaining that the body does not register the calories in drinks and drinks do not make the body feel full, which means that people are consuming a significant amount of calories without realizing it (as cited in Neubert, 2012). Contrast this with calories from food, where people feel full after eating a meal, reducing the amount they continue to eat immediately. With beverages, some people can drink soda after soda with no feeling of fullness, despite consuming 140 calories per can of Coke (Coca-Cola, 2009). Each can of soda represents 7% of a 2000 calorie
adult diet, and an even greater percentage of the lower recommended calorie intake for children. Registered dietitian and renowned nutrition author Susan Dopart (2010) notes that many sweetened beverages also include 100 to 150 grams of carbohydrates, equivalent to the carbohydrates in 7 to 10 slices of bread. Certainly a reasonable person would not conclude he is drinking the equivalent of 10 slices of bread when drinking his favorite soda, as his body is not even realizing that it is full after consumption.

It is clear that sweetened beverages and their calories are significant contributors to our dietary intake, but the amount consumed by children is on the rise. Director of the Rudd Center for Food Policy and Obesity at Yale Kelly Brownell asserts that in the last decade sugar sweetened beverages account for a 30% rise in the calorie intake of children, representing the most significant contributor to childhood obesity (Brownell & Frieden, 2009). Compare these findings to the rise in the number of children with obesity and there is a striking correlation. While other nutrition ingredients play a role in a child’s nutrition and weight, it is clear that sweeteners are the most significant and provide a clear target if childhood obesity is to be addressed.

The Economics of Food

A very common sweetener used today is high fructose corn syrup, which is found in many foods. High fructose corn syrup is a highly processed ingredient that is made from corn, as its name implies. One primary reason it is used in excess in manufacturing may be due in part to its low cost. Eric Pianin (2012) of the Fiscal Times reports that The Department of Agriculture currently subsidizes farmers with $1.28 billion per year, the majority of which goes to corn producers. In the 1970’s, the US government began subsidizing corn to reduce the price of
ethanol fuels, thanks in part to the oil and gas shortages of the era. While the government may have good intentions with the corn subsidies, Bruce Watson (2012) of Daily Finance explains that the net effect of the subsidies is to lower the cost of highly processed sweeteners and additives that make junk foods cost less to produce. Subsidies promote a production of corn regardless of the demand or market price, which increases the supply, bringing market prices down for all corn derivatives and byproducts. Although the ethanol influenced corn subsidies have just technically expired (Watson, 2012), Congress has yet to ratify the new farm bill to replace them, and billions of dollars in subsidies hang in the balance (Pianin, 2012). It is critical that we ensure that a new farm bill does not continue these subsidies for corn.

In addition to lowering the price of junk food and soda, the subsidies make traditional vegetables such as tomatoes, broccoli, cauliflower, carrots, spinach, and cucumbers more expensive. Most farmers focus on growing corn to capture some of those subsidies and ignore producing these staple vegetables. The economic principles of supply and demand can explain the rest, as there is a low supply of vegetables, with a seasonal harvest and limited shelf life, prices naturally go up. With a high supply of corn and limited demand for ethanol, prices tend to go down as corn producers need to offload their supply. With an enormous supply of corn-supplied ingredients and stiff competition from numerous manufacturers, junk food and soda prices are very low, certainly when compared to the price of vegetables and other staple foods such as grains, rice, and potatoes.

While price sensitivity may be of major concern to many consumers, nearly every consumer is subject to the barrage of advertising and promotion that is commonplace today. Unlike fruits, vegetables, and other staple foods, manufactured food products are distinguished by branding and product differentiation and as a result, product promotion is critical to capture a
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Registered dietitian Susan Dopart explains that children are marketed to heavily and as a result, children tend to drive the decision making at the grocery store (S. Dopart, personal communication, 2012). Children want all of the delicious looking foods that are packaged in bright colors and repeatedly seen in advertisements. Parents tend to give in to children’s constant demands for the foods they see during a shopping trip. Even parents with the best intentions of feeding their children healthy foods have some difficult decisions to make. Ms. Dopart goes on to explain that parents may not know they are purchasing unhealthy foods. The marketing of highly processed foods as nutritional or healthy requires some education to overcome and most parents do not know what to buy for their children (S. Dopart, personal communication, 2012). Unhealthy foods are usually branded deceptively, under the guise of a ‘100 calorie pack’ or a ‘heart healthy’ badge. For example, the nutritional content of 100 calories worth of french fries or ice cream is significantly different than 100 calories of broccoli. These foods may not be nutritional in the slightest but are merely served in smaller portions or are only low in cholesterol but contain other unhealthy ingredients.

Unfortunately, vegetables are commodity items and are not manufactured and as a result there is limited promotion or marketing on their behalf. A tomato sold in a local grocery store may come from a number of different vendors, suppliers, and farms and may all be mixed in the same bin, so there are no brands to develop or market. Farms that sell their vegetables are typically too small to brand and market their products, and have little need to as they sell to a distributor or wholesaler that bundles their crops with other farmers’ products. The distributors have little motivation to market and promote a common vegetable such as a tomato since there is little to differentiate one tomato from another, and thus it is difficult to capture market share. This combination of extreme marketing for unhealthy, highly sweetened, and highly processed
foods in conjunction with a lack of advertising for fruits, vegetables, and other staple foods seal the fate for many families who may lack the education of which foods to purchase.

**Persistence of Childhood Obesity**

Childhood obesity is not easily remedied and typically persists through adulthood causing problems throughout life. Director of the CDC, Thomas Frieden indicates that a six-year-old with obesity has a 50% chance of being obese as an adult, and the probability increases to 80% if the child is obese during adolescence (Frieden, Dietz, & Collins, 2010). Some reasons for this include the persistence of the same eating habits learned during childhood, different rates of metabolism and activity, and other genetic issues. Children tend to adopt many habits early in life, and the foods they eat are not exempt. In fact, Ms. Ben-Sefer explains that children eat what their parents eat, and carry those habits through life (Ben-Sefer, Ben-Natan, & Ehrenfeld, 2009). Because children carry their eating habits throughout life, it is critical to foster good eating habits at a young age.

Childhood obesity also persists because it is difficult to change the balance of activity and food intake. A child with obesity and low levels of activity is likely to maintain their activity levels and eating habits through adulthood. The Center for Childhood Obesity (2012) explains that even a small imbalance between the amount of calories consumed and energy used can add up and slowly cause weight gain over time. Unfortunately, this means that obesity will persist until the balance shifts to consuming fewer calories than the amount of calories used as energy. It is very difficult to lose weight once it has been gained, which justifies a focus on prevention of obesity over treatment.
Disastrous Health Effects

It should come as no surprise that childhood obesity has some pretty serious health effects, both in the short-term during childhood and the long-term as a result of prolonged exposure. Throughout their younger years, children with obesity commonly face psychological issues that they carry throughout life such as low self-esteem. Ms. Ben-Sefur suggests that these self-esteem issues foster the indulgence of other risk-taking behavior, such as smoking or drinking (Ben-Sefer, Ben-Natan, & Ehrenfeld, 2009). The self-esteem issues that come with childhood obesity can be very traumatic and last throughout life. Children have a strong desire to fit in and make friends and weight offers a reason for peers to tease, poke fun, and torture an obese child.

In addition to psychological effects, there are a number of health risks associated with being overweight in childhood. Ms. Ben-Sefur argues that there is also a much higher risk of several diseases, including asthma, diabetes, and reduced mobility (Ben-Sefer, Ben-Natan, & Ehrenfeld, 2009). The added weight carried by a child can place undue stress on the lungs and heart, promoting asthma. That weight also restricts mobility, further limiting activity pursued by overweight children. Diabetes can be caused by an intake of more calories than the body’s cells can handle. As a temporary response, the cells stop responding to insulin so they can catch up and process sugars. An isolated occurrence of this is not an issue, as cells will again produce insulin after they have finished processing their sugars. Unfortunately, long-term repetition of this event trains the body to become desensitized to insulin, which is crucial for the body’s cells to capture sugars from the bloodstream, and without it the body will starve regardless of food
intake. In addition, the more fat the body stores, the less sensitive it becomes to insulin, perpetuating the problem. While diabetes is typically an adult disease, it is becoming more prominent in children. Mr. Frieden notes that children are accounting for nearly half of the new cases of type 2 diabetes (Frieden, Dietz, & Collins, 2010). This is a significant issue, as the long-term health risks and health-related costs are enormous.

In adulthood, prolonged obesity can cause a number of health issues, including premature death attributed to a host of health risks. Professor JJ Reilly of Glasgow University explains that the most significant long-term effect of childhood obesity is a significantly higher risk of early mortality caused by diabetes, stroke, heart disease, or hypertension (Reilly & Kelly, 2011). Obesity is a major cause of heart problems for a three reasons. First, the more body mass a person has, the harder the heart must work to move blood throughout the body. Second, the more body fat a person has, the more fatty molecules they have floating in the blood stream, confining blood vessels and raising blood pressure, eventually overworking the heart. Third, a clogged blood vessel can prevent blood flow, causing a heart attack from a lack of oxygen to the heart. Prolonged overworking of the heart is a likely cause of premature death, shortening a valuable life. It is critical to address the weight issue early, as most of the heart-related causes of premature death are the result of long-term exposure to obesity.

**Societal Implications**

While corn subsidies cost the American public billions of dollars, obesity bears a much larger strain on society in the form of inflated health care costs. With public health care on the horizon and health insurance premiums in the public spotlight, obesity is a significant contributor to the total cost of health care. The CDC (2012) reports that obesity resulted in $147 billion in
associated health care costs in 2008. Mark Bittman (2011) of the New York Times argues that this is likely to rise to $344 billion in 2018. Clearly this is a significant expense, much of it paid for by health insurance. Since actual costs to insurance companies are spread among all of the customers, insurance premiums for everyone rise as costs rise. Making matters worse, the number of those with obesity is continuously rising, adding to the long-term health implications. To offer some perspective, the CDC (2012) notes that smoking accounts for only $96 billion in health care costs. The health care costs associated with obesity are astounding, and it should be clear that this is a much larger issue than smoking and tobacco. The health care costs alone justify a call for public action to address the issue of childhood obesity.

A Call to Action

Putting the issue of childhood obesity to rest will take more than a single solution. This complex issue will require a comprehensive policy change involving a tax on unhealthy foods such as sugars, sweeteners like high fructose corn syrup, and trans fats, adjusting our farm subsidies, and providing counter-advertising and education programs. A tax is the most crucial aspect of a needed policy change as price is a major determining factor in a consumer’s decision making process. This multifaceted approach intends to use tax revenue to fund marketing campaigns, while shifting our farm subsidies to promote a healthier diet starting at the farm. Much of this strategy mirrors the approach taken with the tobacco industry, and the success of that initiative offers a perfect starting point to tackle the obesity problem.

History can certainly teach us that a tax on unhealthy foods and beverages would be very successful. Mr. Frieden notes that taxes on tobacco have been very successful in reducing consumption and the same theory could be applied to food (Frieden, Dietz, & Collins, 2010).
These taxes are effective because they significantly raise the price of the good, making them much more expensive to consumers. This makes many consumers take pause and think twice before purchasing. Ms. Brownell explains that for every 10% increase in the price of a sugar-sweetened beverage, consumption drops 7.8% (Brownell & Frieden, 2009). Professor at the University of North Carolina at Chapel Hill, Kiyah Duffey (2010) revealed that in a 20-year study, a rise in the price of soda and pizza caused a significant decrease in the amount of consumption. This indicates a very strong link between the price of unhealthy food items and their consumption. The higher the price of any item, the less people can afford to purchase it and the less likely they want to spend their money on it. A tax on junk food would definitely decrease the amount consumed and cause a shift to eating healthier foods.

In order for a tax to be effective, it is necessary to define exactly what should be taxed and how. The difficulty in taxing junk foods is quantifying what a junk food is in an objective way so that a tax can be applied. A tax should be placed on sugar, sweeteners such as high fructose corn syrup, trans fats, and cholesterol and should be implemented by the weight of each item. These are the items that contribute to the obesity epidemic the most, and are prime candidates for taxation. Taxes must also be implemented as an excise tax, which is a tax paid by the producer or supplier which is incorporated into the item’s displayed sale price, not a sales tax which is added after the sale at the register. This is how sin taxes are typically applied as in the case of tobacco, alcohol, and fuel. Brownell explains that an excise tax is necessary to increase the perceived price of an item at the shelf where consumers make their purchasing decisions (Brownell & Frieden, 2009). This allows consumers to see what the price of an item will be when purchased and allows consumers to see how expensive an item is compared to the healthier counterpart. The tax also needs to be significant, as Mr. Frieden argues, a penny per ounce tax
on soda, amounting to a roughly 10% price increase, would reduce average consumption by an average of 8,000 calories per year, amounting to reduced weight gains of 2.3 pounds per person annually (Frieden, Dietz, & Collins, 2010). A few pounds does not sound like much, but over 10 years, this amounts to 23 pounds of extra weight and over 30-40 years into adulthood, this amounts to 69-92 pounds of weight. This is clearly a significant reduction in weight gain and a serious solution to the problem. The revenue from taxes can be used as subsidies for healthy foods, food marketing programs, and counter-advertising.

Some argue that such sin taxes would place an undue strain on low-income families and the poor because they are more sensitive to price increases. Actually, the opposite is currently true as Mr. Bittman (2011) explains: low income families currently suffer disproportionately as healthy foods are expensive and out of reach. The question is would it be more fair to make healthy foods available and obtainable to the poor, or unhealthy foods? As we raise the price of unhealthy foods, the price of healthier foods will come down as demand grows due to the economics law of demand and cross price elasticity. Shifting our subsidies and using tax revenues to subsidize healthier foods and staple vegetables will also bring healthier foods within reach of low-income families. Thus taxes can actually be beneficial to the poor, rather than a burden.

Others argue that sin taxes are unethical because individuals should have autonomy and be responsible for their own decision making, and a sin tax infringes upon this. This objection carries some weight, but only when the autonomy to make a decision bears no consequences on others. Rebecca Green (2010) of Kennesaw State University notes that because individual health behaviors affect the group, sin taxes are ethical. Consider that the health of one individual affects everyone through public health care programs such as Medicare and rising private
insurance premiums. Green (2010) goes on to explain that sin taxes do not criminalize a behavior or prevent consumption, thus they do not infringe on autonomy. Sin taxes aim to reduce consumption, not bar anyone from purchasing a soda. The government has an obligation to be paternalistic when an individual behavior affects everyone.

The next measure to address the obesity epidemic is to stop subsidizing unhealthy foods. Our current farm subsidies for corn must be changed as they only serve to make junk foods more affordable. Instead, subsidies should be diverted to other vegetables such as tomatoes, broccoli, cauliflower, carrots, spinach, and cucumbers to make them more available to everyone. These vegetables contribute to good health much more than corn and should be the target of public funding. Ms. Dopart explains that ending our corn subsidies and subsidizing other vegetables is critical to addressing the obesity problem (S. Dopart, personal communication, 2012). Vegetables are currently more expensive than junk food, and shifting our subsidies would make them more affordable while simultaneously increasing the price of foods containing high fructose corn syrup and other corn derivatives.

The final measure to tackling childhood obesity is to use tax revenues to fund counter advertising and education programs. Since parents may not know what foods are healthy, education is critical to inform the public what foods are healthy and unhealthy. Education can also help inform people what to look for in foods beyond just a calorie count or focusing on a single ingredient or nutrition fact. Many parents want to do the right thing for their children; they just simply do not know what foods to buy. Others feel they do not have time to prepare a proper meal and resort to a microwave dinner instead. People should be educated on quick and healthy alternatives to accommodate today’s busy lifestyles. Tackling the barrage of advertising from the food industry will require a major promotional campaign, much like the tobacco
industry. According to Daryl Nelson (2012) of the *McAlester News-Capital*, cereal manufacturers spend $156 million per year targeting children with advertising for sugary cereals. For every commercial promoting a sugary cereal, there needs to be another showing how good healthy food can taste to encourage youngsters to eat right. There are many ways to simultaneously combat the flood of advertising from the food industry and educate the public including televised public service announcements, viral videos, social media campaigns, radio ads, sponsored TV shows or movies, and magazine ads. Any action taken to reduce obesity will fail if it does not address the education and marketing barriers.

**Conclusion**

The widespread childhood obesity problem truly is an epidemic, and the health concerns are long lasting and fatal. There can be no question that obesity affects us all in some way, it is tough to turn a blind eye to the billions of dollars in health care costs we all incur by lazy diets, bad habits, quick and affordable food, and a lack of fundamental nutrition education. By allowing the problem to persist, we are burdening future generations with massive health care debt that will continue to grow. A tax on unhealthy foods and beverages is necessary to reduce consumption, and fund promotion for vegetables and other healthy foods, along with education programs to teach everyone the proper way to feed their children. Shifting our farm subsidies away from corn will limit the amount of processed foods being sold and lower the price of other vegetables. It will be a great day when children grow up reminiscing about eating apples and oranges rather than Pop-Tarts and Pizza Rolls, and soda once again becomes a special occasion drink, just as it was when Coca-Cola was first introduced. The key to it all is pricing and education: currently healthy foods are more expensive than junk food, and the marketing departments are left responsible for educating us all on what foods to purchase for our children.
References


