

Role of fast food in increasing childhood obesity

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The pandemic of childhood obesity is something that should be concerning to the individuals of our country as it is something that can be prevented. Within the last 3 decades, child obesity has more than doubled in children and quadrupled in adolescents. In 1980, only about 7% of US children between the ages of 6 and 11 were obese, while in 2012 about 18% of them were. Similar results were seen in US children aged 12 to 19 years old, jumping from 5% to 21% during that same time. A person is considered overweight when they have excess body weight from fat, muscle, bone, or water for a certain height. A person who is considered obese has excess body fat (“ Adolescent and School Health”, 2014). Caloric imbalance, which is when more calories are consumed than expended, contributes to obesity and can be affected by an assortment of behavioral, genetic, and environmental factors.

Considered both an environmental and behavioral factor, the consumption of fast-food and convenience food contributes to higher obesity rates among children. The pace of the fast-food industry has only sped up in the past 30 years, as fast-food chains are rapidly multiplying and popping up faster than ever before on every street corner. They are known to serve calorie-dense foods which are high in salt and fat, and low in micronutrients (Fraser, Clarke, Cade, & Edwards, 2012). These extra calories consumed in addition to the sedentary lifestyles of many children create an “ obesogenic environment.” Extra calories get stored as adipose fat and contribute greatly to obesity (Fraser et al., 2012). Today, over 50 million customers are served each and every day from more than 3, 000 different fast-food restaurants across the country. Promotional activities sponsored by these fast-food

restaurants often target vulnerable populations including families with children or of low socioeconomic status, and stress that their products are quick and inexpensive meal replacements (Newman, Howlett, & Burton, 2014). Like fast-food outlets, convenience stores are viewed as unhealthy since most of the products on their shelves are non-perishable and can last for long periods of time. The majority of the shelves in these types of stores are stocked with snacks and junk food. Seeing that portion sizes are significantly larger at fast-food and sit-down restaurants, they contain more calories and fat than meals prepared in the home would have (Lee, 2012). Many families opt for these alternatives because they do not have the time to cook a meal in the home or they are trying to save money and this is the only way they know how to.

Consuming fast-food and convenience food is unhealthy for people, especially children since their bodies are still growing and need essential nutrients for proper development. An additional 150 calories a day has been associated with children who choose to eat fast-food for one of their meals throughout the day (Lee, 2012). Extra calories get stored as adipose fat, which can lead to being overweight and becoming obese if not monitored closely. The negative effects are numerous and can last a lifetime.

Immediate effects of childhood obesity include greater risk for cardiovascular disease, insulin resistance, and developing asthma. Children can also develop sleep apnea and trigger the onset of early puberty by simply being overweight. This can cause a child to become self-conscious about their body image because they are developing faster than their peers. If not monitored before a child reaches adulthood, they have a greater risk of becoming

obese as an adult, which can then lead to problems such as stroke, hypertension, type 2 diabetes, arthritis and a variety of different cancers (“Adolescent and School Health”, 2014).

The rate of childhood obesity is climbing in every country with rates around 10% for school-aged children from all over the world. This is concerning since it is known that obesity can stay with a child through adulthood and cause disease. The more accessible grocery stores and farmers markets are, the smaller the risk a person has at becoming obese. While on the opposite end, the more one is surrounded by fast-food and convenience stores the higher their weight status usually is. In 2009, a study performed on 1, 669 children indicated that 23% of them were overweight or obese. Additional findings included body weight to be 1. 3 kg lower, BMI 0. 5 kg/m² lower, and body fat 1. 1% lower in children who had access to supermarkets and food options than those who did not have this advantage (Jennings et al., 2011). Similar results were seen in another study that compared 72, 900 children, from 17 different countries aged 6 to 7 years old. Twenty-three percent of the children said that they consumed fast food, while 4% of them said that they consume fast-food on a daily basis. The children who rarely came in contact with fast-food had an average BMI of 16. 35, those who consumed fast-food once or twice a week had an average BMI of 16. 5, and those who consumed fast-food daily had an average BMI of 16. 57 (Braithwaite et al., 2014).

Consumption of fast food only increases as a child gets older into their teen years. The more frequent fast-food is consumed, the higher a child’s BMI will be. Children are in a vulnerable state during their childhood, but also have an opportunity for extraordinary growth. It is important to nip these bad

habits now, so they do not become the norm in the future. A study of 13 to 15 year olds in the United Kingdom showed associations between eating fast-food and the increase of body fat. Persons who ate fast-food typically had 2% more body fat and increased their odds of becoming obese by 23% (Fraser et al., 2012). Due to its expanding franchises, calorie dense products and large portion sizes, fast-food chains have become a major concern in several countries.

Another thing to consider is the location of fast-food restaurants and convenience stores in relation to the school and the home. At least one fast-food chain has been found within walking distance of about 37% of all schools around the country (Newman, Howlett, & Burton, 2014). Fewer servings of fruits and vegetables and increased servings of soda were seen in students who walked one half mile or less to a fast-food chain from school. The population of students who attended schools close to fast-food chains were more likely to be seen as overweight or obese than students who were not considered to be in that type of environment. In this study, the average BMI was 21.7 kg/m² for students aged at least 12.5 years old. According to the Center for Disease Control (CDC), this is considered to be in the healthy weight range. With only 55% of children attending a school within walking distance of a fast-food restaurant, 27.7% of the total sample was overweight and 12% were considered obese. A 0.10 unit increase in BMI was also seen in children who attended schools with a fast-food restaurant nearby (Davis & Carpenter, 2009). Almost the same results were seen in a Leeds, UK population of 33,594 children ages 3 to 14. Of those living within the

metropolitan boundaries, 27. 1% of the population was overweight with 12.6% being obese (Fraser & Edwards, 2010).

Not only does fast-food cause an increase in BMI, but also increases a child's risk of becoming obese. The odds of being overweight increases 1.06 times and the odds of being obese increases 1.07 times for children who attend schools that are in close proximity to a fast-food chain (Davis & Carpenter, 2009). In a California-based study, the occurrences of obesity in high schools were significantly higher for students that could walk to fast-food outlets during or after school (Lee, 2012). Another survey conducted at a medium-sized public school district in Virginia showed that students within one-tenth of a mile of any fast-food place were 3.9 times more likely to be obese and have an increase of 2.32 units in BMI. BMI increased another 0.40 units if there was another restaurant within one quarter of a mile (Mellor, Dolan, & Rapoport, 2011). It is all about location; children are more tempted to grab a bite to eat from a fast-food restaurant if it is on their way to and from school.

Convenience food is another factor that contributes greatly to childhood obesity. In a national study, 9,760 children were tracked from kindergarten until the spring of their eighth grade on fast-food, snack, and soda consumption. Fifth-graders showed that they ate an average of 0.46 fast-food/snacks per day, while 12% of them consumed fast-food daily. The average soft drink consumption was 0.91 servings daily with 19% reporting that they had more than twice the daily recommended serving (Andreyeya, Kelly, & Harris, 2011). Another national survey states that an extra soft drink serving for children is associated with a 15% increase in the probability of

obesity, while an additional serving of fast-food causes a 25% increase. Also, an extra serving of juice a day is associated with a 10% increase (Mandal & Powell, 2014). An additional study of 350 kindergarteners in south-eastern Poland reported that 14.6% of all children were overweight. After reviewing their diets, it was found that most of the foods were calorie dense and loaded in added sugar. Snacking was seen between all meals and the consumption of sugary drinks was high. At least once a week, fruit juice high in sugar was drunk by 66% of children and sweetened sodas by 44.6% of them. Furthermore, 58% of children ate only one serving of sweets per day, while roughly one third ate these treats multiple times per week. Research indicates that young children with a BMI above the 80th percentile are at three times the risk to experience obesity during the ages from 24 to 29. The risk even increases to four times for adolescents who are overweight (Kostecka, 2014).

Even though more and more children these days are eating convenience food and fast-food, there are several ways parents, schools, and communities can help to prevent this from happening. Prevention programs must have an approach that aims to boost energy expenditure and reduce intake. Individually, caregivers would need to be targeted since most children are too young to understand. Caregivers should have nutrition education and be able to prepare healthy meals. At home, parents should be encouraged to serve proper food portions, support physical activity, and minimize or eliminate sedentary behaviors. They should also prepare meals in the home versus grabbing fast-food on the run. A good idea might be to make leftovers so that they can be heated up when in a time crunch. That

way, the children are still getting a healthy and satisfying meal that gives them plenty of energy for whatever activities they might be doing. At school, school lunches can be altered to lower the caloric content and vending machines can be removed. That will eliminate any energy dense snack foods and sugary drinks, although children may still bring these kinds of snacks from home. Another idea for schools is to design their buildings so that students expend more energy throughout the day. This can be done by designing a multistory building where each succeeding class is on a different level which promotes significant stair stepping during the day. In the community, public policies and mass media campaigns can aim to promote healthy eating and an active lifestyle. The community can also place taxes on sugary items and fast-food in the hopes that the extra cost will deter people from purchasing these items. An example of a public policy that helps prevent child obesity can be seen in Arkansas. It called for mandatory BMI testing of children in public schools starting in 2003 (Han, Lawlor, & Kimm, 2010). This type of testing has been used in 13 other states and should be considered in states currently lacking this screening. This way, children's weight can be monitored from an early age and preventative measures can be taken before it is too late.

As one can see, the rate of childhood obesity has been growing rapidly all over the world. Rates are only going to keep increasing if nothing is done to prevent it. All the studies have shown that there is a positive association between BMI and fast-food intake, and BMI and convenience food intake. A higher BMI than the norm indicates that the child is either overweight or obese. Positive associations were also seen between BMI, obesity, and

distance between fast-food/convenience stores and the home/school. It is our job as a community to reduce the prevalence of obesity in children. There will always be a continued need for nutritional education concerning fast-food and its health consequences. Of the United States total gross domestic product, about 12.7% is spent on health care annually. Seeing that obesity is one of the most expensive medical conditions, the need for intervention is clear (Davis & Carpenter, 2009).