Childhood Obesity: The Rapid Growing Epidemic

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Abstract

This paper examines the problem of childhood obesity in America. It explains the cause and effects of childhood obesity and it also gives valuable prevention techniques for people who are suffering from obesity. This paper also explains how to characterize someone as being overweight and the 3 stages: overweight, obese, morbidly obese, and super morbidly obese. This paper examines the possible causes of childhood obesity and discusses whether nature or nurture are the most significant factors. It also provides specific examples of court cases where mothers are being charged for letting their children become obese.

Childhood Obesity: The Rapid Growing Epidemic

**What is Obesity?**

In America, there is a rapidly growing epidemic that children seem to be eating into, literally. This epidemic is known as childhood obesity. The percentage of overweight children in the United States is growing at an alarming rate. Every 1 out of 3 kids is now considered overweight or obese (Kids Health, 2012). Childhood obesity is derived from both genetics and the environment, but genetics can only have so much impact on their health without childhood obesity becoming an issue of neglect and abuse. In extreme cases where the child is morbidly obese or super morbidly obese, it is not just his/her genes playing against them; it is also that child’s mother and/or father. Childhood obesity is a serious medical condition that affects children and adolescents. So what classifies kids as being obese? It occurs when a child is well above the normal weight for his or her age and height (Mayo Clinic Staff).

Body mass index (BMI), weight, height, age, and gender are all contributing factors to childhood obesity. BMI is a number calculated from a child’s weight and height that provides a reliable indicator of body fatness for most children and teens. It is used to screen for weight categories that may lead to health problems, such as childhood obesity (CDC, 2013). For children and teens, BMI is age and gender specific. After the BMI is calculated for children and teens, the BMI number is plotted on the CDC BMI-for-age growth charts (for either girls or boys) to obtain a percentile ranking (CDC, 2011). The purpose of percentile ranking is to see the growth patterns of children in the United States, and to indicate the BMI of children that are within the same age bracket and gender. Percentile ranking is broken up into 4 categories: underweight, healthy weight, overweight, and obese (CDC, 2011). Underweight is categorized by being less than the 5th percentile. A healthy weight is considered to be from the 5th percentile to less than the 85th percentile. Overweight is classified as being from the 85th percentile to less than the 95th and obese is considered anything from the 95th percentile and above (CDC, 2011). This is how you measure BMI for children and teens.

There are four grades of obesity: overweight, obese, morbidly obese, and super morbidly obese. To be classified as being overweight, a person would have to have a BMI between 25 and 29.9 kg/m2. This would mean that they are carrying a little bit more of body fat that is considered to be normal. On the other hand, to be classified as being obese, a person would have to have a BMI between 30 and 39.9 kg/m2. This would mean that they have exceeded their healthy weight excessively. They are carrying way more than a little bit of extra pounds. Morbid Obesity is classified by a BMI of more or equal to 40 kg/m2. A person that is morbidly obese would have 100 pounds or more above their ideal body weight (URMC, n.d.). The last grade of obesity is super morbidly obese. To be super morbidly obese, a person would have a BMI of 50 or greater (CDC, 2011). In order for a person to actually be super morbidly obese, other than examining their BMI, they would have to exceed their weight by 225%, or ± 198-220 pounds (E-medicine).

**What is the main cause of childhood obesity?**

Genes as well as other factors, such as the environment, family income, and community, all affect a child’s heath (CCOR, n.d.). Genetics that are inherited from the child’s parents could make a child “big boned”, which means that they carry more fat. However, genetics only play so much of a part in childhood obesity. For this reason, childhood obesity is derived both from nature (the child’s genetics and family history), as well as nurture (how the child is raised).

**Nature**

Research suggests that weight gain is influenced by genetic components (CDC, 2010).

“A commonly quoted genetic explanation for the rapid rise in obesity is the mismatch between today’s environment and ‘energy-thrifty genes’ that multiplied in the past under different environmental conditions when food sources were rather unpredictable. In other words, according to the ‘thrifty genotype’ hypothesis, the same genes that helped our ancestors survive occasional famines are now being challenged by environments in which food is plentiful year round” (CDC, 2010).

Family studies have shown that children with obese siblings or parents are five times more likely to be obese themselves (Bouchard, 2009). Twin and adoption studies look at the influence of genetics on weight and consistently report that 40-70% of the variation between children and their weight could be attributed to their genes (Willer, 2009). “One twin study that consisted of comparing monozygotic and dizygotic twins showed that 90% of variance in weight was associated with genetic factors” (Dubois, Girard, Girard, Tremblay, Boivin, & Perusse, 2007). Although twin studies do not rule out effects that the environment has on them, they do imply that the environment does not influence weight independently of genetic influences (Dubois, Girard, Girard, Tremblay, Boivin, & Perusse, 2007). “A study investigating the weight of Danish children who were adopted 23 years ago showed a greater correlation between the adoptees and their birth parents, rather than the adoptees and their adoptive parents” (Sorensen, Holst & Stunkard, 1998). This reinforces the idea of genes being associated with obesity, but since the correlations are so minute, there must be another cause to obesity, such as the environment.

**Nurture**

A lot of different factors contribute to childhood obesity besides just a child’s genetics. The type of food that the child eats, how much the child eats, how often they eat, and how much physical activity the child gets on a certain basis all contribute to weight problems (AJCN, n.d.). However, looking at a broader spectrum, environmental aspects also affect a child’s weight and health condition. These include the community the child lives in and the ethnicity of the child (Flemming, n.d.).

**Food Intake and Quality**

The amount of food that a child eats and what the child is eating can cause the child to become obese (Flemming, n.d.). The role of parents in food intake and quality is crucial. “Studies have shown that overweight mothers tend to serve their children larger portions and more fatty foods than mothers who aren’t overweight. This contributes to the child’s weight gain” (Nguyen, Larson, Johnson & Goran, 1996). Bandura’s social learning theory suggests that children learn from the actions of their parents or significant others (Boeree, D.). By having a child be exposed to this environment, this can, and most likely will, cause the child to become obese or overweight in their later years. According to Harvard School of Public Health, other studies have shown that obese children eat more fatty foods and fewer foods with the right carbohydrates than children who are average weight (HSPH). Foods with the right carbohydrates include foods that provide dietary fiber and whole grains, as well as those without added sugars (CDC, 2010).

Fast food can also contribute to obesity. Now-a-days, people are becoming busier and busier, creating less time to sit down and cook a healthy meal. The solution to the need for fast dinners on the go is fast food. Frequent consumption of fast food and other types of food such as soft drinks, could lead to an elevated energy intake and a lesser amount of more nutritious food consumption, such as fruits and vegetables. “Children fail to reduce solid food consumption to compensate for the extra calories ingested from soft drinks, leading to weight gain” (Moreno, 2007).

**Eating Patterns**

Eating patterns are another cause for childhood obesity. “An uneven energy distribution throughout the day, where there is less eaten at breakfast and lunch, and more is eaten at dinner may influence weight gain. Children are more likely to be inactive in the evening, usually watching TV or studying; therefore, excess energy is not burned off” (Maffeis, Proveral, Filippi, Sidoti, Schena, Pinelli, & Tato, 2000).

Children who generally eat larger portions are at a greater risk at becoming obese. This is where parental influence is important because, as stated before, obese parents tend to serve larger portions to their children (Nguyen, Larson, Johnson & Goran, 1996). Some children overeat trying to cope with their emotions. This overeating behavior is “associated with a gene that encodes peroxisome proliferator activated receptor. This receptor is mainly found in adipose tissue and is involved in leptin action, which influences eating and appetite (Steinle, Hsueh, Snitker, and Sakul, 2002).

**Physical Activity**

Many factors affect children’s participation in physical activities, such as gender, physical abilities, availability of parks and recreational centers, video games, and the amount of T.V. that they watch. Children might not get the correct amount of physical activity that is needed of them due to their access to an outdoor play area (CDC, 2009).

Video game and T.V. usage decreases the amount of time spent outside, which also contribute to weight gain (Warner, 2004).

“Kids younger than 6 years old spend an average of 2 hours a day in front of a screen, mostly watching TV, DVDs, or videos. Older kids and teens average 4.5 hours a day watching TV, DVDs, or videos. When computer use and video games are included, time spent in front of a screen increases to over 7 hours a day! Kids who watch more than 4 hours a day are more likely to be overweight compared with kids who watch 2 hours or less”.

For many kids, most, if not all, of their free time is spent in front of one screen or another (Kids Health, 2012).

**Laws Relating to Childhood Obesity**

“Every school day in the 2011-2012 school year, nearly 34 million children participated in the National School Lunch Program. More than 12 million children also ate school breakfasts nationwide through school meals programs operated as a state-federal partnership. In addition to the full meals offered through the school meals program, ‘competitive foods’ are also sold in schools. These foods are also sometimes referred to as à la carte foods or snacks and may be sold in school stores, canteens, snack shops or the like, or in vending machines” (NCSL, 2012).

There are several policies for preventing childhood obesity which are up for debate. The problem isn't if they are available for the states to put into effect; it’s if whether or not the state wants to mandate the policies as laws. There are many laws in the United States that try to modify childhood obesity: School Nutrition Legislation, Body Mass Index (BMI) Legislation, Diabetes Screening and Management, Insurance Coverage for Obesity Prevention and Treatment, Joint Use Agreements for School Facilities, Nutrition Education, Physical Activity or Physical Education in Schools and Recess Legislation, School Wellness Policies, Other links for NCSL resources on legislative and policy options to address obesity, Taxes and Tax Credits, and Task Forces, Commissions, or Studies. Virginia, on the other hand, has only mandated the School Nutrition Policy (NCSL, 2010)

One of Virginia’s School Nutrition Policies is referred to as VA HB 1607, VA SB 414 and was enacted in 2010. This policy “requires the State Board of Education, in cooperation with the Department of Health, to create and periodically update regulations setting nutritional guidelines for all competitive foods sold or served to students during regular school hours. Initial statewide standards for competitive foods must be adopted from either the Alliance for a Healthier Generation's guidelines or those of the Institute of Medicine” (NCSL, 2010). The other School Nutrition Policy that was enacted in Virginia in 2012, is referred to as VA HB 1300. This policy is “subject to implementation by the state’s Superintendent of Public Instruction, disallows fiscal disbursements out of the state’s appropriation for school nutrition to any locality in which the schools permit the sale of competitive foods in food service facilities or areas during the time of service of food funded by the state’s appropriation for full school meals” (NCSL, 2012).

**Who’s To Blame?**

**Genetics and the Environment**

As stated above, genes, and as well as other factors such as the environment, family income, and community, all affect a child’s heath. Mothers are being charged with abuse to their sons and/or daughters for their children being obese. In extreme cases, it is the mother’s (or father’s) fault, but if the child is classified as overweight or obese, then it isn’t.

**Case Example**

Genetics only play so much of a part in childhood obesity. The parents of these morbidly obese or super morbidly obese children are part of the problem. If they know their child is at risk for childhood obesity, they should get help immediately and seek to change things in their child’s diet and amount of physical activity.

A [recent case](http://blog.cleveland.com/metro/2011/11/obese_cleveland_heights_child.html) from Cleveland, Ohio, illustrates the debate over if childhood obesity is entirely the mother’s fault. In October 2011, an 8-yearold boy was removed from his mother’s home due to his severe obesity and risks for serious health problems. Officials worked with the child’s mother for over a year before deciding that her failure to control her son’s weight contributed to medical neglect and removing the boy from the home. The boy was sent to live with his uncle, and while living with him, the boy’s weight decreased from 218 to 166 pounds. In March, he was [returned](http://www.cleveland.com/metro/index.ssf/2012/05/juvenile_court_judge_releases.html) to his mother, but officials continued to monitor the home and offer nutrition and health counseling (Orenstein, 2012).

Dan Orenstein, a deputy director of the network for public health law, a Fellow in the College of Law’s Public Health Law and Policy Program, and also a Lincoln Fellow for Ethics and Health Policy for the Lincoln Center for Applied Ethics at ASU, says:

“Legal precedents for removing children from their homes or prosecuting parents for neglect based on their child’s severe obesity exist in several states, including [California](http://articles.latimes.com/1997/dec/26/news/mn-2357), Indiana, Iowa, New Mexico, Pennsylvania, South Carolina, and Texas. As few of these cases have ever reached an appellate court, there is limited substantive judicial analysis of whether removal strategies are legally supportable interventions or an encroachment on parents’ [fundamental right](http://www.law.cornell.edu/supct/html/historics/USSC_CR_0268_0510_ZS.html) under the Fourteenth Amendment to control the upbringing of their children. Some advocate strongly for the support of removal-based interventions in select cases of severe pediatric obesity, arguing that where less severe interventions prove ineffective, removal from the home is preferable to surgical alternatives. Others point to [cultural dimensions](http://www.msnbc.msn.com/id/43727876/ns/health-health_care/t/obesity-alone-no-reason-remove-kids-their-homes/#.T77EZ5mXTud) of the obesity epidemic and argue that efforts focused on parents of individual children have limited impact. The burden of removal of children from homes may also fall disproportionately on families with the fewest resources. Associations between severe childhood obesity and both race and poverty are particularly troubling and may implicate legal concerns grounded in the Equal Protection Clause” (Orenstein, 2012).

**Shocking Cases**

Other cases weren’t as moderate. One court case involved a 555 lbs 14 year old boy. His mother was convicted of neglect for letting him reach his profound weight and was charged with custodial reference in the first degree. Custodial reference in the first degree is when,

“a parent of a child is guilty of custodial interference in the first degree if the parent takes, entices, retains, detains, or conceals the child, with the intent to deny access, from the other parent having the lawful right to time with the child pursuant to a court-ordered parenting plan, and: 1) Intends to hold the child permanently or for a protracted period; or 2)Exposes the child to a substantial risk of illness or physical injury; or 3)Causes the child to be removed from the state of usual residence” (RCW 9A.40.060, n.d.).

A California case, decided in 1998, involved a 13-yearold girl named Christina Ann Corrigan who weighed more than 680 pounds. An Indiana case, decided in the late 1990s, involved a 4-year-old boy named Cory Andis who weighed 111 pounds. A New Mexico case, decided in 2000, involved a 3-year-old girl named Anamarie Martinez-Regino who weighed 131 pounds. A Pennsylvania case decided in 2002, involved a 16-year-old boy named D.K. who was just over five feet tall but weighed in excess of 451 pounds, and finally, a Texas case, decided in 2002, involved a 4-year-old boy named G.C. who weighed more than 136 pounds. All of these courts, except the California court, decided that the children were neglected. They reached this conclusion by expanding their states' statutory definition of medical neglect to encompass morbid obesity. In the California case, the child died before the case was heard, but the court did, however, ultimately charge her mother with a misdemeanor of child abuse through inaction (CWLA, n.d.).

**Psychological Aspects of Childhood Obesity**

Obesity is associated with many physical and psychological consequences. “A great number of studies indicate that obese children have an impaired psychological well-being (e.g., depression, self-esteem, and quality of life) compared to their non-overweight peers” (De Niet, Naiman, 2011). Bullying is major psychological aspect of childhood obesity. Children who are overweight tend to face bullying and harassment more often than their peers who are at average weight. Those overweight children will eventually suffer from the major and minor effects of being a person who is bullied.

**Preventing Childhood Obesity**

**School Wide Solutions**

Schools are ideal environments in which to make changes that will help children form lifelong, healthful habits (WHO, n.d.). w

“Unfortunately, in many districts, less time is spent in physical education in order to allow more time for academic studies, in an effort to meet the federal testing requirements in the No Child Left Behind Act of 2001. Time for active recess, in which children get unstructured physical activity, is also being lost to academic studies. The result is a sedentary day for most school children. Policies can create the optimal environment by requiring children to attend daily physical education classes taught by credentialed teachers, in which all the children are active for the majority of the class period” (Friedman, Schwartz, 2008).

**Prevention**  
 Preventing obesity can be done by watching what you eat, limiting the amount of food that you eat and how often you eat it, and by getting at least 60 minutes or more a day of physical activity (Birch, L. L., & Ventura, A. K., 2009). If a child is already obese, there are special clinics set up to help the child lose weight and live a healthy lifestyle. There are also family clinics set up for families to go to and learn about how to live a healthy lifestyle cost efficiently (NCCOR, n.d.)

**Conclusion**

Obesity is derived from both genetics and the toxic environment. In extreme cases where the child is morbidly obese, it is not just his/her genes playing against them; it is the mother’s responsibility to not let their child get to that level of no return. Laws should be implemented towards mothers who are neglecting their child by not providing the correct, and necessary, help that their child needs. Mothers need to look at how much food they are feeding their children, what kind of food they are feeding them, and how often their child is being fed. They also need to make sure their child gets at least 60 minutes of physical activity a day and they need to monitor their child’s T.V. and video game time per day. School boards need to provide more healthy food options, rather than providing fatty snacks, in schools around the nation. School boards also need to place specific acts that are already created into effect regarding childhood obesity, to help slowly decrease the rapid epidemic of childhood obesity. (Green, G., Hargrove, B., & Riley, C, 2012).

Childhood obesity is an internationally wide problem that needs to be recognized and dealt with. Obese children may experience immediate health consequences which can lead to weight-related health problems in adulthood. Obese children and teens have been found to have risk factors for cardiovascular disease (CVD), including high cholesterol levels, high blood pressure, and abnormal glucose tolerance (Let’s Move, n.d.). As overweight children become overweight or obese adults, the diseases associated with obesity and health care costs are likely to increase even more (Children’s Health, n.d.).

“I am not asking anyone to take the fun out of childhood. As we all know, treats are one of the best parts of being a kid. Instead, the goal here is to empower parents instead of undermining them as they try to make healthier choices for their families” (Michele Obama, 2013).

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