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Missing the Ball: The Link Between Poverty and Obesity and How American Policy Makers Have Neglected It

In America today, there is probably no public health issue that gets greater attention than obesity. The American "Obesity Epidemic" and how to address it has been the top story of nearly every American publication at some point or another in the past few years. Almost every arena of public life has been scrutinized as a cause. American politicians engage in fierce debate over how to address it, and physicians across the country are trying to find ways to combat the health problems obesity causes. The epidemic has been the focus of the Food and Drug Administration's widespread campaign to educate people about living a healthy lifestyle. The question is: Why isn't it working? Why is obesity still on the rise? What is the true main cause? Many experts today think that we need a change of focus. They are looking at the possibility that we are addressing the wrong causes, talking to the wrong audiences. Maybe by decreasing another widespread American problem, we can address obesity at its roots. That problem is poverty. In this paper, I will address several subjects relating to obesity for the American working poor: what obesity is, its risks, and influencing factors; who the mean obese family is and the trends associated with their characteristics, the connection between obesity and poverty specific to income; the policies the government is using to combat obesity and its trends, and the policy options that the U.S. Federal government and international organizations have to decrease obesity.

First, for an adult, obesity is defined as having a body mass index (BMI) that is greater than thirty. A BMI is a person's height divided by their weight, then squared. For a person to be considered at a healthy or average weight, they must have a BMI between 19 and 25 for adult women and 20 and 25 for adult men. An adult is considered overweight but not obese if their BMI is between 25 and 30, regardless of gender. A person is considered obese from 30 to 40 and morbidly obese anywhere above 40. For children and adolescents, weight status is determined by comparing the child's height and weight with the standard for their age group. A child is considered obese if they are above the 95th percentile for their age group. Since 1976, in the United States, the average adult BMI has increased every five years, and continues to increase. The proportion of the adult population that is considered obese has risen 15 percent over the past twenty-five years, from 15 to 30 percent of the entire population. The percent of the American adolescents that are obese has risen from six percent to 16 percent. The rate of children who are obese aged six to eleven has tripled, and aged two to five has doubled. Obesity presents a powerful and unique risk to America because it hurts us on so many levels. First, it hurts the economy. In 2003, obesity cost the U.S. 75 billion dollars, and 68 billion of those were for healthcare costs alone. These numbers do not even include the costs to the economy from decreased labor and production. If these issues are included the cost jumps to 117 billion. Every year, every taxpayer pays at least 175 dollars for obesity related issues, such as heart disease, cancer, diabetes, and gallbladder disease. The mean expenditure on health costs for an obese person is 25 percent higher than the person of a healthy weight and 44 percent higher than normal for the morbidly obese. These numbers are always on the rise. Secondly, obesity itself poses a great threat to the health of the American public. Obesity leads to an increased risk of glucose intolerance and both types of diabetes. Obesity often leads to limited mobility, and respiratory restrictions, which exacerbates a person's risk for chronic respiratory diseases and cancers. Obesity increases a person's risk for cardiovascular disease and it raises cholesterol, which increases the chances of a stroke. It can cause sleep apnea, hypertension, and orthopedic problems. Obesity also has "psychosocial consequences", such as insecurity, low self-esteem, and discrimination. These conditions sometimes lead to more serious psychological consequences, including eating disorders, depression, suicidal thoughts and attempts, and anxiety. The "mortality rate of

obesity is similar to that of smoking and problem drinking”. The obese person will most likely die five years earlier than the person of an average weight because of obesity related issues. Just twenty extra pounds multiplies an American’s chance of dying of a weight-related disease by six times. In 2000, obesity and obesity-related diseases claimed 400,000 American lives, second in mortality rate only to smoking. In fact, out of all the world’s industrialized countries, the United States has the highest rate of obesity and obesity-related health issues. Thirty-seven percent of the combined American population are overweight or obese, compared to 20 percent in Europe and 14.8 percent in Canada. Globally, obesity is recognized as one of the “Top Ten Global Health Problems”.

Thirdly, obesity most often has an inverse affect on nutrition. Commonly, people believe that if a person is obese, they must be well-nourished. However, this is just not the case. There are two different types of malnutrition: macromalnutrition and micromalnutrition. Macromalnutrition is a result of a person simply not having enough food to keep their body healthy. Micromalnutrition is caused by a person not getting enough nutrients; often, the person is consuming enough or even more than enough overall food, but they are not eating foods with any nutritional value. The majority of the foods and drinks they consume are “empty calories”, like soda pop or potato chips, with no nutrients. The micromalnutrition associated with obesity poses a major risk to a person's health, especially children's. Micromalnutrition results in stunted growth, restricted brain development, reduced immune function, which greatly increases the risk for disease, iron deficiency, which inhibits a person's ability to concentrate, calcium deficiency, which causes a high risk for many chronic diseases, and reduced cognitive development. These problems are large and widespread where obesity occurs. Children who are obese also have a much higher chance of becoming obese adults.

Though obesity has hit every single subgroup of the United States population, the American family who struggles the greatest with obesity in the United States has several defining characteristics. The family has a single female parent between the age of 18 and 25. This family head of the household has less than twelve years, or a high school degree, of schooling. They have more than one child. They are considered to be “low-income”, or twice the federal poverty level. They qualify for welfare. This average family either lives in a government low-income housing unit or they live in an urban low-income area. There are many trends for these factors. The obesity rates for single women households are growing, and the prevalence of obesity is higher in females than in males. Obesity is growing the fastest in the younger adult population. This group of 18-to-25-year-olds has shown “the greatest increases in both body mass index and probabilities of being obese” of any adult group. Obesity is highest in families with children, and each child increases the distance the family’s food budget must stretch. Educational levels, though its trends are examined in connection to obesity for many reasons, is most often connected to the factor I will examine: poverty. Low education levels are one of the most powerful reasons that a family has a low-income. Twenty-six percent of low-income families have parents without a twelve-year education. Income is probably the fastest growing factor connected with obesity.

There are many factors that influence obesity levels in the United States, but most, if not all, are either caused by or linked to poverty and income. The driving issue in whether a person will be obese is socioeconomic status. This status is determined by the following variables: education, occupation, income and consumption, assets and wealth, social capital, social context, and access to resources, including access to physical activity. Probably the best measure of the link between poverty and obesity is education and income. Generally, the greater the level of education, the greater the income. When people have higher incomes, they don't suffer from food insecurity, which is an important connection between poverty and obesity.

At first glance, one would intuitively think that obesity and poverty couldn't be linked. One assumes that if a person is obese, they must have enough to eat. But this is simply not true. In the U.S. today, poverty is the leading cause of obesity. The main reason I will examine for this connection is income and its characteristics and effects.

First of all, food security status as a result of a low income links poverty and obesity. The USDA defines food insecurity as "limited or uncertain availability of nutritionally accepted or safe foods". This is the status of about 11.9% of Americans today, and most frequently is associated with low-income single parent families or households where the adults did not get a high school degree. Often, when a household becomes food-insecure, families try to cut food costs without reducing the amount of food. The energy density of foods is "a function of their water content". Energy dense foods, like starches, sugars, and fats, are the cheapest option for the consumer, because of developments in manufacturing, and their low water content means they have a stable shelf life. When these families try to limit diet costs, they "will first select the less expensive but more energy dense to maintain dietary energy". Cutting food costs by increasing the energy density of the food consumed actually most often leads to a greater overall energy intake. In the average low-income diet, about half the calories come from added sugars and fats. Energy dense foods are associated with decreased satiety. Foods like fruits and vegetables that have a high water content allow a person to feel full pretty quickly. However, because energy dense foods have compacted calories with very little water, a person has to consume a lot more calories for the same feeling of fullness. Energy dense foods provide more calories per weight unit as well as more empty calories. Also, energy dense foods have a much higher palatability, which often leads to over consumption. The foods taste better so the families eat more of it. Healthful meals are more expensive, less tasty, more time consuming, and less convenient. Energy- dense foods are highly processed, "facilitating consumption"; in other words, making it easier to access high calorie food and causing less energy expenditure on food preparation.

Income links poverty to obesity in other ways as well. In the U.S., food is generally inexpensive. The struggle of the working poor comes from the rise in the cost of other necessities. Even though food is cheap, low-income families end up expending at least 50% of their budget on food. It is possible to prepare inexpensive but healthful meals. However, people in poverty have to work long hours to make ends meet. They often do not have the time to prepare healthful meals, nor do they have the education about what a healthful meal is. Also, child and parent relationships link poverty to obesity. First, when a family has very little money, food is one of the few indulgences they can afford. Parents often feel guilty that they have little or no money for treats and presents to offer their children, so going to McDonald's is one of very few options. This is often addictive. Because of its palatability, familiarity, and the prevalence of advertising, fast food is often called "the tobacco of the 21st century". The average fast food or even restaurant meal has many more calories than the average home meal, and its paradox is that it often leaves you much less full. Restaurant and fast food meals often have much higher portion sizes, so people often do not realize how much more they have consumed. Secondly, when food becomes scarce, a parent will often cut his or her own food intake before that of their children. This "yo-yo"-ing of consumption causes the body to kick into starvation mode and hoard calories, which can cause a person to become overweight.

The last connections between poverty and obesity I will discuss are environment and exercise. The environment in which a family lives affects their obesity on two levels: in the home and in the neighborhood. One of the biggest factors in the appeal of energy dense foods is familiarity. If a child grows up in a home where unhealthy food choices and eating habits are modeled to them, those food types will be associated with comfort and family. This can cause bad eating habits to develop for the rest of the child's life, leading to lifelong obesity and health risks. On the neighborhood level, there are often many more fast food chains in low-income neighborhoods, making them an even more appealing choice for poor families because of the close proximity. Also, exercise as a factor ties into the environment of a family. In low-income neighborhoods, especially government housing districts, the neighborhood is often too dangerous and crime-ridden for children to be allowed outside to play. This means they get little exercise and often even boredom-eat. For the low-income family, television is often the main and cheapest available entertainment option for children. Television is an extremely sedentary activity and is associated with very low activity levels. Also, when watching a program aimed at children, a child will

see an average of one commercial for junk-food every five minutes, totaling an average of 30,000 commercials for unhealthful foods annually. This bombardment with unhealthy food messages further cements bad diet choices and the appeal of high-calorie foods. For adults, working the long hours required to support their families often means that they have little or no time or energy left for "leisure exercise" or exercise on their own time. For all these reasons, eating becomes something the family associates with community, comfort, relaxation, and luxuries, meaning they often over-indulge to try and fill other spaces in their lives.

Now we come to the greatest question of all: Now that we have this information, what do we do? How do these new discoveries about obesity change the way we target it? What are we doing wrong in the status quo?

The reason federal health programs aren't working against the obesity epidemic isn't because they are ineffective programs; it is because they are targeted at the wrong *audience*. The Food and Drug Administration has put out many dietary guides in the past few years. This is the right idea, but these guidelines are targeted at the well-educated, middle to upper middle class. They advise to eat more lean meats, fruits, and vegetables, which is of course the right idea. But for the working poor, this is not an option. So if we want to build public education on dietary health issues, we need to create a set of dietary guidelines and resources that are accessible, comprehensive, and take into account the resource restrictions for the working poor. We also need to create easy-to-use food purchase plans that fit within many different budgets and provide all needed nutrients as well as lower overall dietary energy density.

Federal food assistance programs are excellent ways to target the obesity epidemic through its root in poverty. Food stamps are a good example of this; we just need them to be more accessible and widespread. Food stamp programs are particularly effective because they provide an excellent opportunity for families to increase the quality of the food they buy without expending any more of their budget; this means food insecurity and hunger are decreased and diet quality and nutrition increase. In order to maximize this program, however, we need to take away its barriers. Many low-income families can't access the benefits of this program because of the intense application process. We need to decrease barriers in the access to this program. Because all income-restricted households have a higher risk for obesity, we should lower the income requirements to include all families with a restricted income. We also need to spread awareness of this program, its uses, and benefits. We should provide all families applying for healthcare with comprehensive information on the Food Stamp Program. Also, we should promise increased benefits for all families who are willing to buy food using federal dietary guidelines. We should offer healthy lifestyle classes to every family who applies and we should greatly increase benefits for families who attend.

Another way that the government can target the obesity epidemic is through schools. School meal programs provide excellent opportunities for the government to improve low-income children's nutrition and dietary quality. These programs also help to teach children about healthy food choices and provide good examples of healthful meals. In fact, just by eating in school cafeterias, regardless of if food is brought from home, dietary quality increases substantially for low-income children. To improve the effectiveness of this program, we should do several things. We need to put the federal school meal program in every school in the country. We should increase funding for this program so that we can make free and reduced lunch programs available for more low-income families. We need to eliminate competitive foods in the school cafeteria because this will encourage more students to eat federally approved meals. Competitive foods often do not meet nutrition requirements and when they are in school cafeterias we lose much of our opportunity to instill healthy dietary habits in low-income children. These foods have high palatability and energy density, so they only proliferate the obesity problem. In places like high schools where the sale of competitive foods is an important funding mechanism, we should install strict nutritional standards on these foods and only open them for free or reduced lunch prices if the child chooses a balanced meal. We should advise states to create statewide policies that ensure that

schoolchildren get at least 20 minutes to eat lunch. We should also provide more federal funding to upgrade preparation facilities to ensure the preparation of fresh meals with fresh fruits and vegetables. We should put in place a federal standard so that all school meals provide one-half or more of a student's daily nutrients. The federal government also needs to expand the breakfast program in schools. School breakfasts greatly assist in low-income children's school performances, but we need to make this program available in all schools and we need to increase resources for low-income children to access it. We also need to increase the standards placed on this meal so we are not wasting a valuable opportunity to increase public health by serving cinnamon rolls.

The school lunch program is often the main way that low-income children meet their nutritional needs. However in the summer, these children often have trouble meeting their nutritional needs. The United States should dramatically increase the number of summer food centers. These centers should be widespread and free to all children who live in low-income areas and want access to them. Information about these centers should be given to every student in public schools so awareness can increase. Along with this information, we should provide every student with information about dietary guidelines and healthy eating choices. Dietary education classes should be mandatory in all public elementary schools, and provided in all secondary schools. Teachers should be provided with education sessions on how to provide healthy lifestyles in their classrooms and classroom snacks should be subject to guidelines as well.

In conclusion, by carefully examining the trends and characteristics of obesity in America, we can discover surprising things about its roots and nature. By finding the links between national problems we can find ways to create program that address societal well-being as a whole. In this paper, I have discussed many important issues. I am examined what obesity is. I have talked about the major threat it poses to America; obesity drains our healthcare budget and hurts the economy; it increases yearly tax costs for every single American citizen; obesity increases the risk for many chronic diseases and is second in magnitude of causalities only to smoking, and all these implications are on the rise. I have examined the obesity epidemic's unusual tie to poverty: I have discussed the tendency of food insecure families to increase their dietary energy density when they cut food costs, I have looked at how lack of education and a poor environment also play into the connection. Finally, I have explained the steps I believe the government should take to combat obesity using our knowledge about its connection to poverty. I believe that to defeat our enemy, we must know our enemy. I also believe that the knowledge that we have now about obesity can shape policies that defeat it at its roots and improve the quality of life of the American people once and for all.

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