Malnutrition in the U.S. and its Effects on the Nation's Health

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Author's Note

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Abstract

This paper focuses on malnutrition in the U.S., its roots in reliance on junk food, and its effects on the population. The exposition goes over the American population's reliance on junk foods and their lack of nutritional value, what common deficiencies and excesses can do to the human body, and how that affects the population at large through lowered life expectancy and raised prevalence of chronic diseases. It also goes over some of the agencies that are trying to reverse the problem and what they do. The analysis section talks about possible reasons the dilemma exists and what can be done about it. The conclusion talks about my motivations for writing this paper and what can be done about the world's problems in general.

Malnutrition in the U.S. and its Effects on the Nation's Health

Malnutrition is a condition of nutrient deficiencies and excesses. Symptoms can range from fatigue and dizziness to cancer and other serious conditions. **Because of reliance on junk foods, malnutrition is rampant in the U.S. This leads to preventable diseases which contribute to lower life expectancy and affect many people.** Though the problem persists there are efforts being made to prevent and reverse it.

Exposition

Cause

There is a pattern in the U.S. of frequent dining experiences at fast food restaurants (Seche, 2017, see appendix A). These junk foods are usually high in saturated fats, sodium, and sugar and are a significant contributor to the fact that more than a third of the U.S. population is obese (Fyer and Ervin, 2013). According to Catharine Paddock (2013), 11.3% of the calories consumed in the U.S. are from fast foods. The trend of eating "Western" or junk foods leads to obesity, but is also a large contributor to other forms of malnutrition: "Foods high in calories, like fast food meals, are void of crucial vitamins, minerals, and other vital nutrients, leading to deficiencies and diseases" (Ettinger, 2013). Vitamin A, vitamin C, vitamin D, vitamin E, calcium, fiber, and potassium are good examples of nutrients of which there are common deficiencies. (Rogers, 2015).

Effect

The high calorie and low nutrient diet of many U.S. citizens has caused malnutrition and obesity in much of the population (Seche, 2017, appendix A). Obesity can lead to health

problems and diseases such as heart disease, cancers, hypertension, and type 2 diabetes (Sizer and Whitney, 2012, p.326). Type 2 diabetes is the only type of diabetes linked to obesity (NIDDK, 2016). Hypertension is high blood-pressure, a condition that can damage blood vessels and the heart and lead to heart disease (Mayo Clinic Staff, 2016).

Deficiencies in the diet also lead to adverse health effects. Calcium, vitamin D, fiber, and potassium are classified as dangerously low because their underconsumption in the U.S. is related to health problems (Rogers, 2015). Vitamin D deficiency may cause muscle pain, skeletal conditions and, in severe cases, bone deformation (Tangpricha, 2017, overview). Potassium deficiency can cause constipation, fatigue, and muscle cramps (Mayo Clinic Staff, 2014). Fiber deficiency results in constipation, but can also cause diarrhea, bloating, and gas. Eating fiber is linked to lower incidence of some chronic diseases, so it follows that fiber deficiency would increase risk of these diseases (Anderson, 2017). Iron is also one of the most common deficiencies in the U.S. (Seche, 2017, Appendix A). It can cause fatigue, weakness, and dizziness amongst other things. These are symptoms of anemia or lowered red blood cell levels (Cafasso and Nall, 2015). The aforementioned deficiencies along with obesity lead to widespread, chronic, and preventable conditions.

Impact

The malnutrition dilemma in the U.S. isn't a trivial one:

> "About half of all American adults—117 million individuals—have one or more preventable, chronic diseases that are related to poor quality dietary patterns and

> physical inactivity, including cardiovascular disease, hypertension, type 2 diabetes and diet related cancers" (Dietary Guidelines Advisory Committee, 2015).

The two most common diet-related cancers in the U.S. are breast cancer, the leading lethal cancer for women in the U.S., and colon cancer, the leading lethal cancer for all U.S. Americans. (Diet Related Diseases, 2002)

In 2014, four of the 10 leading causes of death were nutrition related: heart disease, cancer, stroke, and diabetes (Murphy, Kochanek, Xu, and Aria, 2015). This statistic shows that nutrition has a significant effect on life expectancy in the U.S., which is currently about 81 years for women and 76 for men (Stein, 2016). Overall, Americans are expected to live only 79.3 years. The U.S. is 31st in international life expectancy with Japan (expected 83.7 years) leading the world (WHO, 2016).

Solutions

There are programs that are working to reverse malnutrition in this country. For example: "FNS [Food and Nutrition Service] administers the USDA nutrition assistance programs that currently touch the lives of more than one in four Americans each year" (Food and Nutrition Service, 2010, p.9). For those struggling financially, U.S. food banks are shifting from a policy of simply feeding the hungry to feeding them healthfully. There was a significant increase in distribution of fresh produce and a decline in sugary snack foods at most food banks between 2007 and 2010. Most food bank managers have been supportive of this trend (UC Berkeley, 2014). For the homebound or elderly, there is a program called Meals on Wheels that provides delivered meals. The program affirms: "Meals on Wheels clients receive delicious, nutritious,

and visually appealing meals that take into consideration the special needs and dietary requirements of our clients" (Meals on Wheels Services, 2016).

There are also education programs that help people to choose more nutritious foods for themselves. Some target children: The Child Nutrition Reauthorization (CNR) program works to inform children about food and nutrition, prompting them to eat the nutritious meals provided through CNR programs and make other healthy choices (Hard, Uno, and Koch, 2015). Another resource for children is the edible schoolyard project:

> "Edible Education 101 aims to inspire you to become more aware, informed, and intentional about your role and participation in the food system. Learners also have an opportunity to experience the diverse disciplines and myriad career paths available to those desiring to impact the future of food in a meaningful way" (The Edible Schoolyard Project, 2017).

Other services target older adults, low-income adults, or both. One controlled and randomized study examined a multi-session nutrition education module designed for limited-resource older adults. This study found that those who were educated were more likely to take better care of themselves than their uneducated counterparts (Mitchell, Ash, McClelland, 2006). While there is a prevalent malnutrition issue in the U.S., some are trying to make a difference and positively affecting the lives of others.

Analysis

Early hominids needed as much energy as they could find simply to survive long enough to get to their next meal, making them crave foods with fat and sugar. The human body cannot have evolved in this respect because it still craves high calorie foods. Fast food industries profit when customers to come back to eat again and again, so they load their food with salt and fat which is pleasant to the human taste buds and the population is drawn to these enticing and cheap foods with little nutritional value.

People will eat what's in front of them until they're full or beyond full, and serving sizes in the U.S. are much larger than those in other countries. If what a person is served is smaller, then they'll probably feel full when they finish that serving. Inversely, if someone has a huge serving of food they'll probably eat all of it before realizing that they're full. The problem with junk food may be reduced simply by lowering the amount of calories ingested in a sitting. It could help reduce the obesity epidemic.

The most common treatment is for obesity is exercise and better nutrition. If a person is unlucky enough to be unable to afford more nutritious foods or they live in a food desert (area with little food options; usually with a liquor store and a couple of fast food places), they are unable to make the necessary dietary changes. These would be significant contributing factors to why people eat junk food in the first place and probably a good portion of the obese population falls into these categories. One proposed solution would be to have more options like farmers' markets or Whole Foods stores in these food deserts. That way this suffering population has access to fresh and more healthful foods.

Malnutrition and obesity are not only caused by reliance on junk food, though it's a large factor. Obesity can be caused by genetics or disorders such as hypo-thyroidism. Nutritional deficiencies and the conditions that rely on them can be caused by lack of access to food (extreme poverty), or disorders such as celiac that prevent the body from absorbing all of the nutrients that pass through it. If a person is diagnosed with sleep apnea, type 2 diabetes or other commonly nutrition related disorders, they should be screened for underlying conditions that could be the true culprit. That being said, dietary conditions are usually caused by a person's diet.

Efforts to fight malnutrition focus mainly on "at risk" groups. However, the problem isn't only present in these groups. People craving sweet, fat, and excessively salty foods can come from all age groups and economic backgrounds. More efforts need to be made to help the population at large. Education programs can be made at workplaces for the ever-busy working population, and doctors' offices can spend more time on preventative measures than treatment of dietary conditions. Malnutrition isn't a hopeless plight.

Reflection

Over this last summer I wrote a paper on the comparison of the diets in the U.S. and in Hungary. After writing this paper I wanted to learn more about what causes the negative dietary trends that exist in the U.S. and how the problem could be addressed. I want to go into the medical field and I think this is a problem that I could make a difference in. This project let me begin building an understanding of how I could make a difference.

While this is an important dilemma, the world is full of problems. I think that those people that are more fortunate in the world should contribute more to raising the standard of living for others. These contributions could be made through donations to charities or volunteering with them. However, if someone refuses help there isn't much to do.

We have a concept of pride in our society that doesn't leave much room for "weakness". I think that for the helpers of the world to start making more of a difference, society has to allow people to accept help without shame. Once people accept help and start asking for it when they need it, support systems can start to break through the divide between fortunate and unfortunate. Problems that are psychological like racism or sexism could be changed if people allowed themselves to be open to changing their viewpoint. People don't need to simply change their beliefs, but they should be open to listening to a different view and accepting it as valid. Most of the world's problems could be solved if people were willing to be more open and lend a helping hand.

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Appendix A

Interview with Gail Seche

1. What cultural patterns contribute to the typical American Diet?

Cultural influences include Mexican and Asian food being a large part of the diet, also families eating out frequently: fast food, fast casual food and restaurants for busy families.

2. How much of the U.S. population is suffering from malnutrition?

don't know, I think 25-50% of the hospitalized population suffers from some degree of Malnutrition.

3. How is malnutrition affecting the population as a whole?

obesity

4. What are the most common deficiencies in the U.S.?

calcium, vitamin D, iron.

5. What are the most common illnesses correlated with deficiencies in the U.S.? Which deficiencies are they correlated with?

obesity=lack of structured, wholesome meals, VIT D deficiency, Rickets, iron deficiency anemia

6. What are the most common illnesses correlated with nutrient excesses in the U.S.? Which nutrient excesses are they correlated with?

Type 2 diabetes= excess refined sugar, excess calories

7. What efforts are being made to counteract malnutrition in the U.S.?

School nutrition education, edible school yards, food banks, Meals on Wheels, hospital based malnutrition screening.

8. Are there any resources you think I should look at for further information? Is there anyone else I should send this form to?

Academy of Nutrition and Dietetics (AND)

9. Is there any information that you think would be useful that I didn't ask for?

No, just that some of the questions were quite general.