

Global Issues Surrounding Nutrition and Their Correlation to Epidemic Diseases: Hope for a Healthier Future and Possible Solutions Moving Forward

- By Corey Bova, May, 2020

The role of proper nutrition and adequate nutrient intake is crucial in societies throughout the world, including the United States. However, in many nations nutrition related health conditions continue to be a major problem and hinder the lives and wellbeing of many individuals. This poses an immense public health concern and presents many negative consequences such as high healthcare expenses, increased mortality, and reduced quality of life. Certain areas of the world share similar nutritional barriers and challenges when it comes to accessing fresh and nutritious meals, although some also experience differences such as availability of particular resources or environmental factors. Malnutrition and poor eating habits has led to rises in a multitude of ailments that often end up being fatal and can most of the time be preventable in the first place. When first examining data from the United States, according to the Centers for Disease Control, a total of 34.2 million people are living with diabetes just in the country alone in the year 2020 and about 90-95% of these cases are type two diabetes (Centers for Disease Control and Prevention, 2020). This is still over ten percent of the population and type two diabetes is strongly linked to diet and physical inactivity, “less than three times per week” (2), according to the CDC. Diabetes is one of the leading causes of chronic kidney disease, fatty liver disease, various types of neuropathies, and more.

In addition to diabetes, the leading cause of heart attacks, coronary heart disease, is also highly abundant throughout the United States and United Kingdom. In the United States, an

estimated one person every thirty seven seconds dies from the disease (Centers for Disease Control and Prevention, 2019) and cardiovascular health conditions account for staggering amounts of deaths each year. The American Heart Association's 2019 update reported that cardiovascular and stroke related health conditions present a collective cost of about 351.2 billion dollars from 2014 to 2015 (Benjamin EJ, et al., 2020), and this has not significantly decreased. On top of this, about one third of adolescents in America are obese and many people do not meet healthy dietary guidelines (Health.gov), developing conditions that cost billions of dollars in healthcare expenses each year (Harvard: School of Public Health, 2020). A large part of this could be associated with the fact that many people do not have access to quality foods or simply cannot afford it, with many citizens living at or near the poverty line. These are only some of the numerous diseases and medical conditions related to a lack of proper nutrition. Although these particular diet related issues primarily consisting of poor diet quality or overconsumption are abundant in the United States, some other nations experience diet related challenges in different ways. Regardless, some underlying questions still exist. What causes such discrepancies and what are the root causes of these epidemic health related problems in different regions of the world? Are there similarities and differences? The short response to this question is yes, but we must dig deeper in order to analyze and answer this question.

In third world developing countries such as Africa and India, many people struggle with severe lack of food resources and have trouble acquiring food to survive on a day to day basis. This also affects adolescents and infants, as the childhood growth stunting rate in India was 39.3%, underweight child percentage was 32.7%, and 59.7% of the childhood population suffered from anemias in 2017, according to a journal article published by The Lancet Child &

Adolescent Health in 2019 (Swaminathan S., et al., 2019). In addition to this, The State of Food Security and Nutrition in the World reported that 194.4 million people amongst all states in India were undernourished in the year 2019 (FAO,WHO, et al., 2019), leaving many people hungry. These severe health impacts and disease tolls are most likely attributed to barriers in accessibility and affordability of food, high population numbers in these countries, and hindrance in the production and growth of crops due to environmental changes, where they are presented with hot and dry conditions year round, face soil degradation, and have little land for growing (Bhattacharyya, et al., 2015). This issue has the ability to cause a vast number of nutrient deficiencies, which can become fatal. Most of these same issues are prevalent in Africa and middle eastern nations as well. In this area of the world, countries such as Yemen and the Central African Republic suffer from extreme hunger and malnutrition, where half of the population suffers from hunger in CAR and the malnutrition rate in Yemen is 39%. Just to add to these severe impacts, about 66% of children under five years old have anemia in Haiti (Montilla, 2019). Nutrient deficiencies can lead to severe health conditions if untreated early, such as rickets (vitamin D and calcium), pellagra (vitamin B-3), anemias (iron and B vitamins), xerophthalmia (vitamin A), and more.

With such discouraging and unpromising statistics and information, the efforts to help reduce and eliminate some of the epidemic health concerns associated with diet may appear hopeless. However, there are possibilities and solutions remaining. Opening up facilities and organizations such as food banks, food pantries, government nutritional aid programs, and other facilities have allowed more people to access nutritious foods that meet their dietary guidelines for very low or no cost. Organizations such as UNICEF, Action Against Hunger, and The World

Food Programme, are all doing their part by enabling people to have more food security and have access to quality foods their bodies need. In doing so, they are helping millions of people across eighty-three countries (8). One of the main issues is most likely a lack of education and lack of affordability towards healthy foods. The likely problem in countries such as the United States is that, in areas where there is more poverty and lack of money, there are more fast foods chains serving foods high in saturated fats, excess sugars, and other harmful chemicals, yet less healthy options such as markets that supply whole foods or inexpensive healthy options are present. The reason for this is because it is cheap and convenient, and fast food companies know they can target the lower class citizens who are already financially vulnerable and desperate for food. A solution to this could be to produce more locally grown foods that are fresh and wholesome, being free to all in the community. Some plans to implement these options in underdeveloped areas have been initiated, such as in rural areas where Community Supported Agriculture (CSA) movements have become more common as well as local farmers markets. Many cities are adopting what they call “Up-top acres” (Bethesda Green, 2020).

In less developed nations such as India, Africa, and the middle east, some additional measures can be taken. In these countries there is no funding and less government actions to promote proper nutrition. Their food production and distribution systems may not be effective and lead to issues such as food wasting (Food Security Foundation India, 2011-2015). For example, in India, their “supply chain markets” are “inefficient” (9). It is vital for more developed nations to do their part in providing people in these areas of the world with the resources to expand their food production methods and nutrition access. This includes nutritional education and funding for initiative programs. By implementing these ideas and taking action,

we can make a change in the world and begin to reduce nutritional related disease burdens further, step by step.

References

- 1.) Centers for Disease Control and Prevention. *National Diabetes Statistics Report, 2020*. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2020.
- 2.) Centers for Disease Control and Prevention. Diabetes Risk Factors. (2020, March 24). Retrieved from <https://www.cdc.gov/diabetes/basics/risk-factors.html>
- 3.) Benjamin EJ, Muntner P, Alonso A, Bittencourt MS, Callaway CW,& Virani SS; American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart Disease and Stroke Statistics—2019 Update: A Report From the American Heart Association. (2020). *Circulation, 141*(2). doi: 10.1161/cir.0000000000000746
- 4.) Swaminathan, S., Hemalatha, R., Pandey, A., Kassebaum, N. J., Laxmaiah, A., Longvah, T.,& Gupta, S. S. (2019). The burden of child and maternal malnutrition and trends in its indicators in the states of India: the Global Burden of Disease Study 1990–2017. *The Lancet Child & Adolescent Health, 3*(12), 855-870.
- 5.) Health.gov. (n.d.). Chapter 2 Shifts Needed To Align With Healthy Eating Patterns. Retrieved May 14, 2020, from <https://health.gov/our-work/food-nutrition/2015-2020-dietary-guidelines/guidelines/chapter-2/current-eating-patterns-in-the-united-states/>

- 6.) FAO, IFAD, UNICEF, WFP and WHO. (2019). The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns. Rome, FAO.
- 7.) Harvard: School of Public Health. (2020, January 6). Poor diets linked to \$50 billion in U.S. health care costs. Retrieved May 14, 2020, from <https://www.hsph.harvard.edu/news/hsph-in-the-news/poor-diets-health-care-cost/>
- 8.) Bhattacharyya, R., Ghosh, B., Mishra, P., Mandal, B., Rao, C., Sarkar, D., ... Franzluebbers, A. (2015). Soil Degradation in India: Challenges and Potential Solutions. *Sustainability*, 7(4). doi: 10.3390/su7043528
- 9.) Montilla, I. G. (2019, December 21). 10 Most Malnourished Countries. Retrieved May 14, 2020, from <https://borgenproject.org/10-most-malnourished-countries/>
- 10.) Food Security Foundation India. Hunger in India. (2011-2015). Retrieved from <https://www.indiafoodbanking.org/hunger>
- 11.) Bethesda Green. (2020). Farming in the City: How to Get Local Produce to Urban Tables. Retrieved May 14, 2020, from <https://bethesdagreen.org/farming-in-the-city-how-to-get-local-produce-to-urban-tables/>