Health and a Plant-Based Diet

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Abstract

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Worldwide there has been an increase in a multitude of preventable diseases such as type two diabetes, coronary heart disease, and some cancers. The solution to this epidemic is switching to a plant-based diet, which provides a plethora of benefits, if followed correctly, including increasing overall health while decreasing annual national costs. Changing the global diet is imperative if the world is to become healthier. This paper examines the correlations between diet and disease through studies—such as the China Study—and statistical data. Additionally, this paper encourages dietary change to improve personal health, and the prevention or reduction of cancer, type two diabetes, and coronary heart disease, among possible other diseases.
Health and a Plant-Based Diet

Centuries ago, one of the most feared diseases was the Black Plague, a disease spread by infected fleas and humans. This disease decimated the European population so much that the effects can still be seen in modern population counts. Recently, however, a new range of diseases have been haunting humans. Some of these diseases include heart disease, diabetes, and cancer. According to the Center for Disease Control and Prevention (2015), "[Coronary Artery Disease] is caused by plaque buildup in the walls of the arteries that supply blood to the heart (called coronary arteries) and other parts of the body." Plaque is made up of deposits of cholesterol and other substances in the arteries, which can lead to a myocardial infarction (a heart attack). Cancer is caused by the rapid growth and reproduction of non-functioning cells which can spread from the point of origin, causing problems throughout the body. Diabetes is a disease in which either the pancreas does not produce enough insulin to even out blood glucose levels, or the afflicted cells cannot uptake insulin. People with diabetes must consistently watch their blood sugar, and adjust food intake accordingly, to keep it within a healthy range. Worldwide there has been an increase in a multitude of preventable diseases such as type two diabetes, coronary heart disease, and some cancers, and the solution to this epidemic is switching to a plant-based diet, which provides a plethora of benefits, if followed correctly, including increasing overall health and decreasing annual national costs.

Many studies have found correlations between diet and disease. In China, two famous studies were conducted to evaluate various claims on the cause of cancer. The Cancer Atlas was a study on cancer mortality in China. Fourteen types of cancer were studied in 2,392 counties to create 58 maps to spark a revolution (Li JY, et. Al, 1981). Years later, the Cancer Atlas continues to be updated with advancements in the analysis and treatment of cancer. In 2006 a new study
was published called the China Study, conducted by T. Colin Campbell and Thomas M. Campbell. This study was more selective in its research subjects; 65 counties in rural and semi-rural China were chosen, and over 6,500 individuals and their families were surveyed (p.39). According to Campbell, the study found "more than 8,000 statistically significant associations between various dietary factors and disease... people who ate the most animal-based foods got the most chronic disease" (p. 7). The results of the study provide evidence supporting the direct relationship between disease and animal product consumption.

The consequences of cancer, type 2 diabetes, and CHD include premature death and medical expenses, among others, and the diagnosed cases keep increasing. According to the Center for Disease Control and Prevention (2015), "during 1995–2010, the age-adjusted prevalence of diagnosed diabetes among U.S. adults increased in all geographic areas, with the median prevalence for all states, DC, and Puerto Rico increasing from 4.5% to 8.2%," creating a considerable number of new cases, which increases the amount of treatment needed, which increases the total loss of money due to loss of productivity and the amount spent on treatment. The American Heart Association (2014) states that about 9% of the US adult population has diabetes, and estimates that about 35% of the total US population has pre-diabetes. This means that if the US population is about 321.42 million people, then approximately 28.93 million Americans have diabetes, and 112.49 million more have pre-diabetes. Cancer is estimated to increase rapidly by about ten million cases in the next twenty years, argues the Worldwide Cancer Research Fund Institute (2014). The amount of money being spent on the treatment for these diseases alone are almost unimaginable; the cost of healing can include medications, surgery, and treatments. According to Cancer.gov (2016), National expenditures for cancer care in the United States totaled nearly $125 billion in 2010 and could reach $156 billion in 2020. All of
the money spent on treatment could be used to fuel a solution, a solution that could prevent and even reverse cancer, type 2 diabetes, and coronary heart disease.

The solution to this epidemic is switching to a low-fat, low processed plant-based diet. A plethora of studies done throughout the world have shown strong correlations between a plant-based diet and lower levels of heart disease and cancer. It is essential, however, that people who are switching to this diet understand the terms used to describe the lifestyle. People who follow a plant-based diet are called vegetarians. Vegetarianism is defined as the consumption of strictly plants, and plant-based products. There are, however, different types of vegetarianism, such as lacto-ovo-vegetarian, characterized by the allowance of dairy and eggs in a plant-based diet, lacto-vegetarian, vegetarianism that includes just dairy products, and vegetarian; commonly known as veganism, which is characterized by the strict avoidance of any animal-based product.

The benefits of a plant-based diet outweigh the few risks associated with the dietary change. Some people may not feel comfortable switching to a vegetarian diet because of concerns surrounding nutritional adequacy and job security. According to registered dieticians, Winston Craig and Reed Mangels (2009), "It is the position of the American Dietetic Association that appropriately planned vegetarian diets, including total vegetarian or vegan diets, are healthful, nutritionally adequate, and may provide health benefits in the prevention and treatment of certain diseases." The benefits of a plant-based diet outweigh the risk of possible malnutrition: many studies have shown a correlation between a plant-based diet and the reduction of specific diseases. One group that agrees with this statement is from Queen's University Belfast, Claire McEvoy, Temple, and Woodside (2012): "both vegetarian diets and prudent diets allowing small amounts of red meat are associated with reduced risk of diseases, particularly CHD and type 2 diabetes." Although this statement claims that low meat diets also reduced the risk of disease, it
is countered by the China Study. According to Campbell "even relatively small intakes of animal-based food were associated with adverse effects" (p. 7). Which argues for a complete removal of animal-based foods from the average diet to optimize health. Even small amounts of meat can increase risk of cancer. In regard to job security, if virtually all Americans converted to a plant-based diet then the American meat industry would suffer, and, therefore, a plethora of those jobs supplied would be lost. Although jobs would be lost in that specific sector of the food industry, more jobs would be created in the plant-based industry because of an increased demand for plant products. If a product is in demand, there will in turn be a greater amount of the product being produced, and if a product is in low demand, then there will be less supplied. Increasing demand, while decreasing price, may elicit an increase in the amount of people switching to a plant-based diet.

In order for the benefits to be significant, people must be convinced to adopt this style of life. Every five years the Office of Disease Prevention and Health Promotion comes out with new dietary recommendations for Americans. According to the American Heart Association (2014), currently "less than 1 percent of U.S. adults meet the American Heart Association’s definition for “Ideal Healthy Diet” [and] essentially no children meet the definition." Meaning that virtually all Americans are at risk for diet related diseases. This is an overwhelming problem. In 2020, however, if implemented effectively, the new dietary guidelines could promote the necessity of a plant-based diet in American society. If added to the guidelines, schools around the country would be coerced into supplying more plant-based foods and meat alternatives, promoting the new diet to children. Additionally, the FDA could implement food labeling for animal substances in products, and possible risks of consuming that food product, in effect, possibly decreasing the amount of animal products purchased.
A low-fat whole foods plant-based diet, implemented effectively, would reduce cases of cancer, type two diabetes, and coronary heart disease. Changing the global diet is imperative if the world is to become healthier, and not continue with the rising levels of the stated preventable diseases. Implementing new guidelines would increase the normality of plant-based diets, increasing demand for related products, and decreasing the cost of previously expensive foods, such as tofu and tempeh. Individuals and families could begin accommodating dietary changes into their routines, to better their health. Switching to a vegetarian diet could save countless people around the globe by reducing diet-related disease. More personally, switching one's diet would promote a happier, healthier, longer life.
References


