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### **Is Food Thy Medicine?**

When I think of summer, I am reminded of being outside and enjoying the warm weather, campfires, the smell of sunblock and chlorine, tan lines, and summer BBQs. Summer BBQs for my family usually include all sorts of delicious dishes from El Salvador and of course the typical American foods such as hamburgers, hotdogs, potato salad; the works. Now that I'm older, I have started thinking about how food plays a role in my life. I have been an on-again, off-again vegan because I want to take care of my body, but I just can't seem to stay away from the food that I have grown up with like carne asada; Mom and grandma's cooking is just too good to stop eating it! However, seeing my family members be overweight for most of their lives and how they have been affected by illnesses like cancer, I have started to think about how my environment might play a role in what will happen to me in the future. Could excess consumption of animal-based foods be the culprit or is this a myth? If eating meat is really just a helpless little scapegoat, then I will go out on my porch, shake my fist as joggers run past my house and scream "It's a lie! It's a lie!" as I sink my teeth into a mammoth-sized turkey leg. I'm not sure if animal-based foods really are helpless scapegoats or if they are evil villains disguised in various delicious forms like rich, velvety cheese, but I intend to be more informed.

It's easy to see a problem such as the obesity epidemic and think to oneself that the people suffering from obesity simply need to get off their lazy butts and exercise while making healthier food choices. If this is the case, and this is all there is to it, with so many different diets

to choose from, how does one know what is the best diet to choose? Joe Cross, from the film *Fat Sick and Nearly Dead*, was an Australian man in terrible health who sought an end to not only his problems with his weight but also an end to a rare auto-immune disease called chronic urticaria, which he had been diagnosed with in 1998. Fed up with being sick, 100lbs overweight, and taking an immense amount of pills just to survive, Joe Cross did something quite drastic. He traveled the US and went on a 60-day raw juice fast, which means he only consumed juice that was made from raw fruits and vegetables for 60 days. Absolutely no solid food.

Although this is a very drastic form of treatment, his theory was “when I was a child, and I fell down and scraped my knee, I didn’t have to do anything; my body healed itself. So if the body can heal itself externally, why couldn’t it heal itself internally without the use of medications?” Cross visits Dr. Joel Fuhrman, an expert in nutrition (which I presume is the reason for him traveling the US instead of staying in Australia) to keep track of his progress and to ensure his health is not compromised during the fast. As he completes his 60-day fast, he meets Siong, a woman who is not overweight but is an avid coffee drinker and suffers from chronic migraines, and Phil, a truck driver who is also diagnosed with the same auto-immune disease as Joe and weighs 429lbs.

Even though the film doesn’t state the exact amount of Joe’s weight loss in those 60 days, at 52 days, he had already lost 72lbs and shortly after he completed the fast, he was able to completely stop taking all medication. Siong did a 17-day fast and stopped having migraines. The most impressive results were with Phil’s fast. Phil was also able to stop taking all medication, started exercising daily, and within 10 months, he had lost a total of 202lbs. He also quit his job as a truck driver and went on a mission to inspire others to consume more fruits and vegetables.

In one interesting part of the documentary, Dr. Fuhrman was discussing a study by T. Colin Campbell, PhD and Barbara Sarter, PhD in which they studied weight loss with people who were diabetic, had high blood pressure, and/or had heart disease. In the study, they focused on a diet mostly consisting of vegetables, then fruits, beans/legumes, followed by whole grains, then fish or fat-free dairy, and then poultry, eggs, oils, beef, sweets, cheese, milk, processed foods, and hydrogenated oils. This was all illustrated on a food pyramid in the film, which showed vegetables being the foundation. The subjects were limited to only eating animal-based foods twice-weekly or less. The study showed “the most sustained weight loss ever recorded in a medical study. At a one year follow up, there was a an average weight loss of 33lbs and after a two-year follow up, there was an average weight loss of 53lbs” (*Fat, Sick, and Nearly Dead*). None of the people in the study gained any of the weight back.

This documentary shows amazing results by making raw fruits and vegetables the foundation for a healthy diet, but with the radical fasting method that the film centers on, is it really feasible to think that anyone can have the same type of results? The film also shows that Phil started slowly incorporating fitness into his daily routine by starting with a ten-minute walk. How much of a factor was fitness in the results they achieved? Also, could their weight loss be attributed to lower caloric intake? How do we explain Joe and Phil being able to stop taking all medication for a rare auto-immune disease? Was it really all attributable to the consumption of fruits and vegetables? Although this was a great film, I don't expect to look at one piece of evidence and make up my mind that this is the optimal way to eat.

However, in *Forks Over Knives*, the documentary film tackles more health concerns that are plaguing our nation. In the film, they discuss our nation's problems, including diabetes, heart disease, high blood pressure, and even certain types of cancers, can be eliminated if not reversed

by simply adopting a whole-food, plant-based diet. The diet consists of limiting or eliminating the consumption of processed and animal-based foods.

In the film, we meet Dr. T. Colin Campbell, author of “The China Study,” who studied the effects of a standard American diet in China. Prior to his research in China, Dr. Campbell was in the Philippines and came across an article called “The Effect of Dietary Protein on Carcinogenesis of Aflatoxin,” which showed a correlation between the consumption of casein, an animal protein, at 20% and 5%. At 20%, cancer risk was turned on and at 5%, cancer risk was turned off. What I found interesting about Dr. Campbell’s commentary is that he mentioned that cancer starts with genes and we can inherit those genes or those genes can go through a chemical transformation that causes them to become cancerous. Regardless of how those cancer cells got into our body, Dr. Campbell states that they can be accelerated and triggered just with nutrition and that only a very small amount of cancer cases are actually caused solely by genes.

Another advocate of a whole-foods, plant-based diet in the documentary was Dr. Esselstyn, a chairman of the breast-cancer task force in 1978 at the Cleveland Clinic. He began to do research into breast cancer because he found that even though he was performing numerous surgeries to help one person, he wasn’t doing anything to help others before breast-cancer diagnosis. While researching, he found that in 1978, Kenya had a much lower risk for breast cancer than the US; 82 times lower to be exact. He also found that in 1958, Japan had 18 total deaths caused by prostate cancer. In the same year, the US had over 14,000 deaths caused by prostate cancer. In addition, he discovered that during the time the Germans invaded Norway and confiscated all animals for their soldiers to eat while leaving the Norwegians with mostly potatoes to consume, the incidence of deaths caused by circulatory diseases dramatically

decreased. As soon as the Germans were no longer a threat and the Norwegians were able to get back to consuming animal products, the numbers again increased.

The film also lists some other interesting facts and statistics. Cholesterol is naturally produced by animals and humans, but when it is consumed by eating animal-based foods, there is a surplus of cholesterol, which causes the blockage in the arteries leading to coronary artery disease. In this case, a person would need to go through heart bypass surgery, which over 500,000 Americans undergo every year. The procedure costs on average \$100,00 per person.

If *Forks Over Knives* is also an indication that eating a diet mostly consisting of vegetables, fruits, whole grains, beans, and legumes while also limiting any animal-based foods can cure if not eradicate some of our nation's most harmful illnesses, why aren't we being more proactive in getting this information to the masses? Or is the information out there and we just need to be more proactive in our personal health? If the information were presented without any effort needed on our part to actively search for it, would there be any change, or would we still want to have the freedom of consuming whatever we want, whenever we want no matter what doctors or other health experts say? Is it only when we are directly impacted with a health scare that we are faced with an eye-opening experience and therefore are more willing to make changes? Is asking people to limit animal-based foods asking too much? And is the grass really greener on the vegan side?

Winston J. Craig wrote an article called "Health Effects of Vegan Diets." The article states that "Vegans tend to be thinner, have lower serum cholesterol, and lower blood pressure, reducing their risk of heart disease" (2009). Because those who consume plant-based foods eat more fruits and vegetables, which increases fiber intake, "folic acid, antioxidants, and phytochemicals" (Craig, 2009), vegans and vegetarians have a much lower risk of heart disease,

strokes, and lower levels of cholesterol. In addition, people who consumed animal-based foods had a higher risk of being diagnosed with prostate and colorectal cancer compared to vegetarians and vegans. This study aligns with what Dr. Esselstyn found in 1958 with Japan having only 18 total incidences of prostate cancer compared to the US, which had over 14,000, as stated in *Forks Over Knives*.

Although Winston J. Craig states the health benefits attached to eating a plant-based diet, he also focuses on the potential risks associated with them. He says that “eliminating all animal products from the diet increases the risk of certain nutritional deficiencies” (2009). In the article, he lists “vitamin B-12 and D, calcium, and long-chain n-3 (omega-3) fatty acids” as concerns for those on vegan diets since they may not actually receive those nutrients through diet alone.

Omega-3 fatty acids have been found to be essential to heart, eye, and brain activity. Typically Omega-3s are found in consuming “fish, eggs, or sea vegetables (seaweeds).” In this case, a vegan/vegetarian would need to supplement their diet with the necessary Omega-3s for optimal body functions. Along with insufficient Omega-3, vegans can be deficient in Vitamin D, which can be obtained through exposure to the sun and/or eating foods that have been fortified with Vitamin D. Other nutritional deficiencies for vegans include iron and zinc. Because of this, a person on a plant-based diet needs to find foods that are either fortified with essential nutrients or take supplements.

Even though there are some possible health risks with eating a mostly plant-based diet, is this the lesser of two evils? I believe that with the two films and the article about the health effects of vegan diets, a good amount of data supports the idea that plant-based diets are better for you. However, it is still hard to believe that food can be the cure for our ailments. Maybe Hippocrates was right when he said “Let food be thy medicine and let thy medicine be food.”

Another article I found interesting in my quest for answers, by Lana R. Young, is called, “Vegan diet preventing recurrence of breast cancer.” She states that even though other factors come into play when studying breast cancer such as smoking, obesity, hormone replacement therapy, alcohol consumption, and lack of physical activity, her main focus in the study was to analyze the effect of a vegan diet on the recurrence of breast cancer.

The study involved using female breast cancer survivors regardless of age or any other factors, free of cancer and willing to adhere to a vegan diet after they had previously been diagnosed and treated. The subjects were not on a vegan diet for any specific length of time. In the article it states that “The Shanghai Breast Cancer Survival Study of 5,042 participants found that soy intake is not only safe for breast cancer survivors, but it lowers the mortality and recurrence of breast cancer” (Young). She also found that components in a diet with higher protein and dairy consumption increased the risk of prostate cancer, breast cancer, and colorectal cancer. Since vegan diets are typically low-fat and do not include consumption of dairy, there is a lesser risk associated with these types of cancers.

In summary, Young states that the risk of being diagnosed with breast cancer and the breast cancer recurring can be avoided simply by changing one’s diet. There was a negative and positive correlation between breast cancer and vegetarian diets, which causes confusion as she states in the article. The difficulty she finds with studying the effects vegetarian diets have on breast cancer is that there are too many different types of vegetarian diets that are not specific to how much fat intake there is and what types of animal foods are consumed. Ultimately, she finds that vegan diets are best when looking to avoid the “occurrence or recurrence” (Young) of breast cancer.

The article by Young adds some support to the benefits of eating a whole-foods, plant-based diet, but since the study was too general, it's really hard to pinpoint that animal-based foods are directly correlated with the "occurrence and recurrence" (Young) of breast cancer. Because I am not definitively sold on the idea that animal-based diets are the cause of many illnesses, I continued my search.

On my quest, I also found a TEDx video by Rip Esselstyn, which is titled "Plant-strong & healthy living." In the video, Rip talks about the health effects of not only animal-based foods such as meats and cheeses, but also warns of the detrimental health effects of olive oil because of its 15% saturated fat content. What I enjoyed most about this video is that he is not just warning us against animal-based foods but also the plant-based foods that we're told are good for our hearts and that contain essential fatty acids. One standout claim he made was that "one egg yolk has almost 200mg of dietary cholesterol; that is the same amount as two Burger King Whoppers" (Esselstyn). Yikes!

Rip goes on to share his story of when he was a firefighter and how he was able to get all of the members of his crew to adopt a plant-based diet. He says they "had an event that led to the discovery that one of our own was basically a dead man walking" (Esselstyn), so he convinced them to adopt a plant-based diet for just 28 days and they saw remarkable results just within that timeframe. Unfortunately, he doesn't divulge the actual results of the diet within the 28 days, so it's difficult to say how effective the diet was for all the crew members. Although this video included great information, it still did not persuade me to either side of the animal/plant diet debate, so I continued my research.

In "The Impact of Vegan Diet on B-12 Status in Healthy Omnivores: Five-Year Prospective Study," the main focus is to point out the effects of nutritional deficiencies in

vegans; more specifically the possibility of low levels of vitamin B-12. The experiment was performed on 20 volunteer vegans who would either eat food that had been fortified with vitamin B-12 or eat food that was natural and not fortified. The experiment was conducted over a period of 5 years and the subjects were split into 2 groups of 10 and were tested at intervals of 6, 12, 24, and 60 months after the beginning of the experiment.

In the end, it was determined that the participants who had not eaten the B-12 fortified foods had an increased risk of being deficient in vitamin B-12 and it was suggested that vegans find fortified foods or supplements to avoid this deficiency. The results from this experiment make me wonder that if adopting a vegan diet could lead me to be nutritionally deficient in other areas; is it necessary for me to continue eating meat and dairy foods in order to be completely healthy? Because I think it's important to continue to look at both perspectives, I watched a documentary film called *Vegucated*.

The documentary *Vegucated* follows three New Yorkers who know very little about what it means to be a vegan. In the film, the volunteers follow a vegan diet for six weeks and learn about why anyone would want to be a vegan. Throughout the documentary, the participants learn about the effects of eating animal-based foods on their health, the environment, and the treatment of animals, but I am only going to focus on the health aspects.

At the conclusion of the film, the three participants all saw positive health results. Tesla, the most resistant to the vegan diet, saw a decrease of bad cholesterol by 26 points, her blood pressure dropped 20 points, and she lost 10 pounds. Brian, another participant, lost 5 pounds, lowered his bad cholesterol by 18 points, and lowered his blood pressure by 30 points. The last participant was Ellen who was the most consistent and open to the diet. She lost a total of 21 pounds and lowered her bad cholesterol by 20 points.

Considering that these are results after only six weeks of being on a plant-based diet, these results are impressive. Although only one of them decided to continue being a vegan, the other two participants converted to vegetarianism and decided to limit their consumption of animal-based foods. Because the film also centered around environmental aspects as well as the ethical treatment of animals, I wonder if their conversion to eating less animal-based foods was greatly affected by the information they received in all aspects rather than just their health.

The last article I read was “Why I’m Not a Vegan,” by Mark Bittman. I found this article to be interesting because Bittman says, “A vegan diet is no guarantee of a good diet, unless the only goal is to avoid killing animals. Sugar-sweetened beverages, French fries, and doughnuts can all be vegan” (Bittman). This is completely true. His main focus of the article was to emphasize the importance of eating a larger portion of plant-based foods but not necessarily eliminating animal-based foods and to completely eliminate processed foods. Bittman has written a book called “*VB6*” which is short for “Vegan before 6 pm.” His diet consists of “mostly unprocessed plants before 6 p.m., and then whatever I want afterward” (Bittman). He goes on to say that he has met people who were only vegan on the weekends or even only 5 days out of the entire month.

The reason I found this interesting is because it emphasizes a balance. He accepts the findings in research that show that plants may be helpful in protecting against cancer but he also mentions that it is not enough to call yourself a vegan and believe that it is the optimal diet. It is necessary to limit animal-based foods but to mostly eliminate processed foods in order to live a healthy life.

To think that diet alone can make a substantial difference in the way we live our lives and the length of time we are allowed to live is intriguing. I have always been taught that fruits and

vegetables are good for you but being from a Hispanic family, meat and animal-based foods have always been the main focus at each meal. With the scare of a loved one being diagnosed with Leukemia a few years ago, I wonder if that could've been easily avoided by a simple change in diet. Or is it something that is inherited and unavoidable? Could you have a gene that is linked to a certain cancer or other type of illness but overcome that just by eating fruits and vegetables just as Dr. Campbell implied in *Forks Over Knives*?

Now that I've done my research, I'm still unclear as to whether or not it's time for me to break up with animal-based foods or if I should become a stage-5 clinger and not let that bowl of ice cream out of my sight, hold onto it tightly, and yell "Don't ever leave me...because I'd find you!" (Dobkin, *Wedding Crashers*, 2005) Or maybe it's time I have the "it's not you, it's me" speech with that decadent piece of cheesecake, walk away from it with longing eyes and sob desperately knowing that we could never be more than distant acquaintances. I believe that with all the evidence I have gathered during my research into this topic that animal-based foods really do have a profound impact on our waistlines as well as our overall health but can also provide essential nutrients that cannot be obtained through only a plant-based diet.

My research has led me to think about how we have started relying on taking medications to relieve the symptoms when in reality, it's our body signaling us that something is wrong. Instead of letting that headache cure itself by taking a nap, we medicate ourselves. Instead of getting some sleep, we take energy drinks and rely on the excessive consumption of caffeine to help us through our days. Instead of curing, we are masking the real problem. The same goes for the medications we have started relying on to relieve the symptoms of diabetes and other health concerns. What if we were to "let food be thy medicine and let medicine be thy food?" I'm not sure if this is the real solution to our nation's problem, but I think I will focus on incorporating

more plant-based foods into my diet and rely less on processed and animal-based foods. The only thing left to say is “Dear cheesecake, don’t call me, I’ll call you.”

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