

There is another great book I highly recommend reading. It is called *The China Study*, by T. Collin Campbell. This senior thesis is a school required paper that my son and I researched together. (A few adjustments have been made to the original paper handed in to be graded) There is much of Dr. Campbell's research information throughout Jordan's paper. We thought we would share it with you. It is amazing to study the effects of food on a body. We hope you will appreciate the learning as we did. **The Atkins Diet Effects**

The day that the Atkins Diet hit America it soared, along with cholesterol levels and other chronic diseases. People who go on high-animal protein, high-fat, and low carbohydrate diets will be unable to maintain this diet for their lifetime without experiencing psychological, as well as serious health problems. When the Dr. Atkins Diet Revolution was first published, the President of the American College of Nutrition said, "Of all the bizarre diets that have been proposed in the last 50 years, this is the most dangerous to the public if followed for any length of time" (Atkins "Nightmare" Diet). An enormous amount of research has been done linking nutrition to health. Often the real science has been buried beneath a clutter of irrelevant or even harmful information. Everything that we eat works together to cause vitality or disease. A person's choice is made one bite at a time and shows whether they eat to live, or live to eat. Like the old saying goes, "You are what you eat" (Osmond). A more true statement may be, a person is what they can absorb. The Atkins diet consists of eating foods with high-animal protein, along with minimal carbohydrates and most often calculates into fewer calories than they consumed previously. The diet also consists of consuming cheese and eggs, and staying away from sugar, bread, pasta, milk, fruits and vegetables. The main problem with not eating enough carbohydrates is best stated in The 80/10/10 Diet:

When one is eating enough carbohydrates, fat can be completely broken down as well. But when one's body runs out of carbohydrate fuel to burn, its only choice is to burn fat inefficiently using a pathway that produces toxic byproducts like acetone and other so-called 'ketones'. The kidney uses minerals such as potassium and calcium to help rid one's body of toxins like ketones. People on the Atkins Diet are urinating these minerals away. And critically low levels in the blood of these electrolytes can lead to fatal cardiac arrhythmias-lethal heart rhythms. (Graham 83)

The American Heart Association has recommended avoiding high protein diets. Instead they have suggested eating diets rich with fruits and vegetables.. It is an established fact that fresh fruits are the highest source of vitamins and fresh vegetables are the highest source of minerals. The Association has established these recommended guidelines which allow a person to create a healthy lifestyle. If a person does choose to go on a high protein diet, many negative results may follow. The first thing that may happen is short term weight loss. One should be not deceived by the sound of the words, weight loss. The initial weight loss occurs from a lack of calories, along with muscle loss and dehydration. (Part of the body's loss of fluid occurs when refined carbohydrates are eliminated.) Also, when a person eats less carbohydrate, their bodies turn to fat for energy. This is "ketosis". The bad breath that often accompanies ketosis is caused by the acetone molecule that cannot be used by the body and must be excreted as waste. Ketosis makes dieting easier because it lowers appetite, but it may cause nausea.

One of the studies that was funded by the Atkins Center for Complementary Medicine chose 51 subjects. In this study the subjects all went on the Atkins diet. Out of the 51 people who went on the diet, only 41 could maintain the diet. The 41 who stayed on the diet for six months lost an average of 20 pounds and their blood cholesterol levels dropped. To this information it seems like the Atkins Diet works, but the media did not reveal the other information about the subjects. "At some point during the twenty-four weeks, twenty-eight subjects (68%) reported constipation, twenty-six (63%) reported bad breath, twenty-one (51%) reported headache, four (10%) noted hair loss, and one woman (1%) reported menstrual bleeding". (Campbell 96) Another thing that was found in the study was that dieters had more than 53 percent increase in the amount of calcium in their urine; this is a huge sign of disaster for bone health. The weight that people lose on high protein diets is hard to maintain if their diet ever changes. When the person is on the diet, they lose the desired weight, but it leaves them feeling hungry, fatigued, deprived and dizzy. When the person is off the diet, they go back to their old habits, and often put more weight than they had before. A person cannot deprive themselves into health, willpower is not infinitely sustainable. A main reason for this inability to "deprive ourselves into health" is explained by Dr. Douglas Lisle. He has described a motivational triad which has been embedded into the genes of every human. These mental tools consist of specialized neural circuits that give feedback by means of good and bad feelings. This motivational system is a three-part mechanism that encourages each person to seek pleasure, avoid pain, and conserve energy. Eating is a VERY powerful instinct within every human being. Under normal circumstances, a person is born knowing how to eat. Eating is a survival instinct. A part of seeking pleasure is to eat and then to feel full. It is called the Law of Satiety. It is as true as the Law of Gravity. It has been determined that a person needs approximately one pound of food to stimulate the stomach's stretch receptors which causes a person to feel satisfied. Food that is high in fat, low in water and low in fiber is called calorically dense. Atkins diet food is calorically dense. A pound of this calorically dense food will be too many calories to lose weight, so a person must continually eat under a pound of food. Eventually the body's powerful instincts will crave food because it seeks to avoid pain. A body does not like the feeling of hunger. It is registered as pain. Over time, the Atkins Diet does not meet the basic needs of this motivational triad.

"A lack of fiber also increases a person's risk for cancers of the digestive track and cardiovascular disease. It ... puts you at a higher risk for constipation and other bowel disorders" (Landry). All plant-based food has fiber. All animal-products have no fiber. Fiber is the indigestible portion of plant foods.. There are two types of fiber, soluble and insoluble. Soluble fiber actually binds to cholesterol in the intestines and brings it out of the body. Fiber helps to create a feeling of satiety. It also helps to stabilize blood sugar levels. Insoluble fiber is good for regularity by bulking up the stool, which dilutes any substance that may irritate the walls of the large intestines. Foods high in fiber decrease caloric density. Atkins diet food is low in fiber. With low fiber diets waste products are more concentrated in the intestines and generally stay there for a longer period of time than with diets containing more fiber. Fiber keeps things moving through the digestive system. Fiber in the food we eat is a critical aspect to colon health. Dr. Ann Wigmore's concept of disease is that most diseases are caused by toxicity or deficiency in the colon area. The Atkins Diet increases both toxemia which is partly caused by lack of fiber, and deficiencies which originate through lack of nutrients. Since our nutrients are absorbed through our intestinal walls, the blockages created through a slow moving low fiber diet prevent much absorption and assimilation of nutrition as food often stagnates and ferments, causing gas

and bloating before it ever passes through the body. A person seeking health must choose to eat the foods that are easily digested, assimilated, and eliminated by the body. Water is also part of the caloric density of food. The food on the Atkin's diet is low in water content. The most significant determinant of caloric density is water. A person's make up is of high water content, about 80%, and requires constant replenishment. Caloric density increases as the fat content increases. Atkin's diet is high in fat. Eating foods high in fiber and water content, with enough fat to make up approximately 500 calories to a pound; will make it easy for a person to feel full and satiated. This is the kind of lifestyle that can meet our motivational triad, or psychological needs.

Another disease promoted by the high-fat, high protein, animal-based foods is diabetes. The food a person eats has an enormous influence on diabetes. The right diet not only prevents diabetes, but treats it as well (The China Study pg.148). The right diet that it is referring to is a high carbohydrate, low-fat, plant based diet. The reason the Atkins Diet increases the chance of diabetes is because of the diet's high levels of fat. The fat that is in the blood stream inhibits the ability of the insulin to transport the glucose through the receptor sites in the cell walls. A study was done that found the rate of diabetes could be reduced by 58 percent just by modest lifestyle changes, including exercise, weight loss and a moderately low-fat diet. Imagine if everyone fully adapted their diet to the healthiest diet, whole foods and a plant based diet, diabetes could virtually be prevented (Campbell Campbell 154).

The American Dietetic Association, American Heart Association, and many other groups have spoken out on the dangers of this diet for over thirty years. It must be assumed that people who go on this diet are not so much seeking health, physically or emotionally, as they are concerned about their appearance and losing weight. A sad result is that a person's outer appearance may not become what they had hoped. There is a distinct look between a healthy vibrant countenance compared to another look of a dehydrated and fatigued thin person. A high protein diet depletes the muscle glycogens, which allows the body to fatigue easily, making exercise and movement uncomfortable. That in turn causes overall muscle atrophy. Muscles and skin begin to lack tone and appear saggy. Less muscle tone results in a lower metabolic rate which is represented by the balance of the catabolic (breaking down) and anabolic (building up) processes of the body. A person may initially weigh less, but a healthy glow is not an outcome of the Atkins Diet. Health and permanent weight loss must be combined with healthful lifestyle changes. A further result of the Atkins Diet is a lack of nutrition, such as vitamins, minerals, antioxidants, and phytonutrients as found in 'whole, fresh, ripe, raw, organic' fruits and vegetables. Without all these nutritional needs the body cannot function properly, causing the body to become susceptible to disease, such as high blood pressure, cancer, stroke, kidney failure, heart problems, and diabetes.

Dr. T. Collin Campbell, Ph.D., is widely recognized as a brilliant scholar. He received his master's degree, and Ph.D. at the University of Cornell. He also spent ten years on the faculty of Virginia Tech's Department of Biochemistry and Nutrition. He has authored more than 300 research papers in his lifetime. In his book, The China Study, the realities of diet and health are illuminated very clearly. America is an affluent nation and many die certain deaths because of it. The China Study said that people are eating like they are kings and queens everyday of the week. These ailments seem to arrive when a traditional culture starts accumulating wealth and starts eating more and more meat and dairy. The nations eating habits have increased disease.

Civilizations in rural China have a completely different eating style than America does. All of the Chinese diet consists of whole plant foods. This is why diseases such as heart diseases, cancer, stroke, Alzheimer's disease, and obesity are unknown to rural China. These diseases are among the top diseases in America.

"Over the next twenty-four hours, approximately 3,000 Americans will have heart attacks, roughly the same number of people who perished in the terrorist attacks of September 11, 2001" (The China Study 78). The Farmington heart study found that for every one percent increase in cholesterol, there is about a two percent increase in the risk of developing heart disease. Every time we consume fat our body produces bile, which is made by the liver. It is used to break large fat fragments into smaller ones that are easier to digest. The more fat we eat, the more bile we need to make. The main ingredient of bile is cholesterol. A person needs cholesterol, but all we need can be produced within the body. Plants contain no cholesterol. Excess cholesterol is consumed through animal products.

There are also staggering statistics on obesity among Americans. High cholesterol levels are especially high among those that are above their healthy weight allowance. Studies show that vegetarians consuming the same amount or even significantly more calories than their meat-eating counterparts are slimmer while consuming a greater volume of food and more calories. A 12 year Harvard study of 74,000 women found that those women that ate high quantities of fruits and vegetables were 26 percent less likely to become obese compared to those who only ate fruits and vegetables sparingly. Unlike the guidelines of the Atkins diet which cannot be followed for a lifetime, a person can actually eat as much as wanted and still lose weight – as long as it is the right type of food. The negative psychological effects of 'dieting' will also be gone. A person can lose weight without losing their mind. There does not need to be the feelings of sacrifice or deprivation. The feeling of 'cheating' will be gone. Cheating causes psychological effects such as feelings of guilt and frustration. When those types of feelings, as if one has failed are eliminated, a person is more likely to continue to eat healthfully from experiencing beneficial results from longer lasting lifestyle changes. Feeling hungry or weak is a sign that something is wrong. Moreover, a person needs to know that there are mechanisms in our bodies that naturally allow the right kind of plant-based foods to nourish us, without our having to think about every morsel of food we put in our mouths. It is a worry-free way to eat. Bodies have been created to do the right thing when given the right food. A person has an inner mechanism created to naturally maintain an optimum weight on this type of food.

Autoimmune diseases increase with the foods consumed on the Atkins Diet. A study in Finland has shown that dairy consumption increases the risk of Type I diabetes five to six fold. The consumption of meat high in saturated fat, as is dairy, was also associated with an increase in Multiple Sclerosis (Campbell Campbell 197). Another disease from the Atkins Diet is Osteoporosis. Animal protein, unlike plant protein, increases the acid load in the body. An increased acid load means that our blood and tissues become more acidic. The body does not like this acidic environment and begins to fight it. To maintain homeostasis, blood stays within a very narrow PH margin. In order to neutralize the acid, the body uses calcium, one of the alkaline minerals, which acts as a very effective base. This calcium, however, must come from somewhere. It ends up being pulled from the bones, and the calcium loss weakens them, putting them at greater risk for fracture.

There are many more diseases that are increased by the consumption of a high-animal protein diet. Another disease that the Atkins Diet promotes is many types of cancers. It has been recently noted that the same risk factors that promote colorectal cancer, a diet low in fruits and vegetables and high in animal foods also promotes an insulin resistance syndrome. From there, scientists have hypothesized that insulin resistance may be responsible for colon cancer. One of the strongest links between any cancer and any dietary factor was between colon cancer and meat, as well as dairy intake. Our bodies make a hormone called the Insulin Growth Factor I as needed for cell growth. Consuming animal-based foods increases the blood levels of this growth hormone. With regard to prostate cancer, people with higher than normal blood levels of Insulin Growth Factor I have been shown to have 5.1 times the risk of advanced stage prostate cancer. Super charge vitamin D is also an influence in various cancers, autoimmune diseases, osteoporosis and other diseases. This is not something we need to consume; our bodies can make this with the help of sunshine. Animal protein suppresses the production of this supercharged D. Excessive calcium, as found in milk, also suppresses the production of supercharged D which aids in the preventions of cancers. Still another cancer increased by consumption of foods on the Atkins Diet is breast cancer in women. The risk of breast cancer also increases when a woman has high blood cholesterol. Again, eating a diet high in animal foods and refined carbohydrates increases the blood cholesterol levels. The link between these two are not just ironic, it is the pure truth between the Atkins Diet and breast cancer (Atkins "Nightmare" Diet). The China Study found that diets high in fat, calories, and animal protein, and low in dietary fiber hasten the start of menstruation by accelerating growth. A greater likelihood of developing cervical cancer and breast cancer accompanies an early onset of menstruation. Within China, it was found that even relatively small additions to the diet of meat, milk, and fat were associated with increasing levels of estrogen. The increased estrogen we consume from animals is that which the animal was given to increase their growth which made them more profitable. To use the words of one of the leading breast cancer research groups in the world, "There is overwhelming evidence that estrogen levels are a critical determinant of breast cancer risk" (Campbell Campbell 180). There is now enough information to show that a diet low in animal-based protein, low in fat and high in whole plant foods will reduce estrogen levels. Woman with high estrogen levels will often suffer from severe menopausal symptoms as their hormone levels make an abrupt crash. Those eating more plant food had lower estrogen levels which made the drop into menopausal levels less noticeable.

The International Olympic Committee, in its book *Food, Nutrition and Sports Performance*, concluded that a diet based on fruits and vegetables was the healthiest for athletes and result in the best possible performance (Graham 112). Eating in such a way, and making lifestyle changes, can make athletes perform at peak performance. It allows them to have more energy, better endurance, and able to breathe easier. In the book *On Nutrition and Physical Performance: A Handbook for Athletes and Fitness Enthusiasts*, it says that athletes need some protein, but it also says:

The real human concern in terms of protein comes from too much protein rather than not enough. Almost invariably, foods with high protein content are composed primarily of fat. This means that over consumption of protein results in over consumption of fat as well...Fat consumption is directly related to atherosclerosis and arteriosclerosis. These conditions result in narrowing and hardening of the large and medium arteries...which reduces blood flow (Graham 32).

Blood transports around life giving oxygen. A reduced blood flow and too much fat in the blood stream will limit the oxygen from transferring throughout the body. This diminishes a person's performance capacity. By overeating on fat, a person also not only reduces the amount of simple carbohydrates consumed, which are easily broken down into glucose molecules, but inhibits the body's ability to transfer glucose. This is important to athletes. It would be well if it were important to every person. It would increase the daily quality of life.

The provocative results of T Collin Campbell's four decades of biomedical research, including the findings from a twenty-seven-year laboratory program prove that eating foods such that comprise the Atkins Diet creates disease in a body. Eating right can save a person's life.

"I was raised on a dairy farm and ate plenty of meat and eggs ... and I wrote my Ph.D. dissertation on the ways animal protein could be produced more efficiently so we could eat more animal-based foods" (Campbell Campbell 3). After doing his nutrition research in the 1960's, and especially after the China Project, Dr. Campbell is now over 98 percent vegetarian. "I was just paying attention to what the scientific evidence was showing me" (Campbell Campbell 5). Each person has the option to choose vitality or disease one bite at a time. A person is said to have approximately sixty to one hundred food choices each day. It may take a nationwide effort to increase each person's education on the risks and benefits of so-called diets. There is a need to overcome the seeming complacency of the effects of improper food consumption and the increase of disease. Gaining a true knowledge of what food should be consumed for optimal health is an important part of this day and age. Ironically, the choices that affect a person's health are seldom thought about. They are folded into daily habits and they are easy to overlook. They get lost in the mix of work, family, school, chores, and all the other daily demands. Each small conscious choice has the potential to produce lasting improvements in how a person may look, how they may feel, and how they live every day. Increased vitality will be the result of healthy choices. The Atkins' Diet has an overall negative effect on a person. The miraculous human body was created to feel and to function well when given what it needs. The human race was created to thrive.

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