

## *The China Study:*

### **The Most Comprehensive Study of Nutrition Ever Conducted and the Startling Implications for Diet, Weight Loss and Long-Term Health**

The China Study, by T. Colin Campbell, PhD, shares with us the results of the scientific research performed and collected by Dr. Campbell over the course of **40+ years**, including a 20-year study after which the book is named.

Having grown up on a dairy farm, Dr. Campbell chose to study pre-veterinary medicine at Penn State and then attended veterinary school at the University of Georgia for one year before Cornell University offered scholarship money for him to do graduate research in "animal nutrition". There, he worked to find better ways to make cows and sheep grow faster. **He was promoting better health through advocating more meat, milk and eggs.** He received his PhD through Cornell, where he helped to discover dioxin, the most toxic chemical ever found. Dr. Campbell is no stranger to science.

Dr. Campbell then became coordinator for a nationwide project in the Philippines (funded by the U.S. Agency for International Development) working with malnourished children to investigate the unusually high numbers of **liver cancer** in children. Their goal? To be sure the children were getting as much protein as possible, since it was thought that liver cancer was caused by a lack

of protein. **Dr. Campbell soon discovered that children who ate the highest protein diets were the ones most likely to get liver cancer.**

Dr. Campbell then came across a research report from India that studied two groups of rats. The first group was given the cancer-causing aflatoxin, then fed a diet composed of **20% protein**...this level is comparable to what we consume here in the West. The second group was given the same amount of aflatoxin, yet fed a diet composed of **5% protein**. *Every single animal that was fed the 20% protein had evidence of liver cancer and every single animal that consumed a 5% protein diet avoided liver cancer. A 100 to 0 score.* This was a defining moment in Dr. Campbell's career.

One question I had while reading this book was why should we care about the effects of protein on laboratory rats? We're humans -- surely we cannot be compared. However, I learned that the findings are relevant to humans for four reasons.

1. Rats and humans have an almost identical need for protein;
2. Protein operates in humans virtually the same way it does in rats;
3. The level of protein intake causing tumor growth is the same level that humans consume;
4. In both rodents and humans the initiation stage is far less important than the promotion stage of cancer.

It was at this time Dr. Campbell decided to start an **in-depth laboratory program** to investigate the role of nutrition, especially protein, in the development of cancer. His research lasted 27 years and was mostly funded by the National Institutes of Health, the American Cancer Society, and the American Institute for Cancer Research. The results were then reviewed for publication in many of the best scientific journals.

One thing Dr. Campbell discovered in his research is that **dietary protein** had such a tremendous effect on cancer that they could **literally turn on and turn off cancer growth** simply by changing the level of protein consumed.

But not all proteins are alike. The protein they used in their studies?

**Casein.** Casein, which makes up 87% of cow's milk, promoted all stages of the cancer process.

The type of protein which did not promote cancer even at higher levels of intake? **Plant proteins, including wheat and soy.**

*In study after study, an increase in protein meant an increase in disease, even (incredibly) tumor initiation. A decrease in protein, meant a decrease in disease. It's interesting to note that plant protein did not promote negative results, even at higher levels. In testing of laboratory rats, the animals that were switched (after 40-60 weeks) from a high-protein to a low-protein diet*

had significantly less tumor growth (35%-40% less!) than animals fed a high-protein diet. Animals that were switched from a low-protein diet to a high-protein diet halfway through their lifetime started growing tumors. The point is that nutritional manipulation can turn cancer "on" and "off" just like a switch.

All of these findings and experiences led Dr. Campbell to begin The China Study, which is the most comprehensive study of diet, lifestyle and disease ever undertaken. The New York Times called it the "Grand Prix of Epidemiology". This project, which surveyed a large range of diseases and diet and lifestyle factors in rural china and, more recently, in Taiwan, eventually produced more than 8,000 statistically significant associations between various dietary factors and disease.

It's interesting to note that in America, 15-16% of our total calories come from protein and upwards of 80% of this amount come from animal-based foods. But in rural China, only 9-10% of total calories come from protein, and only 10% of the protein comes from animal-based foods. In all dietary categories (such as Calories, Total Fat, Dietary Fiber, Total Protein, Total Animal Protein and Total Iron) there were massive dietary differences between the Chinese and American diets. Much higher overall calorie intake, less fat, less protein, much less animal foods, more fiber and much more iron are consumed in China.

What made this study so very important was that Dr. Campbell was studying, within the Chinese range, diets rich in plant-based foods to diets **very** rich in plant-based foods. In almost every other study ever conducted, all of which are Western, scientists have always compared diets rich in animal-based foods to diets **very** rich in animal-based foods. It was this distinction that made this study so important.

So very many of these findings pointed to the same conclusions: **people who ate the most animal-based foods got the most chronic disease.** Even relatively small intakes of animal-based foods were associated with adverse effects.

**On the opposite spectrum, those who ate the most plant-based foods were the healthiest and tended to avoid chronic disease.**

Dr. Campbell was not satisfied with simply accepting the impressive findings of their animal studies and the massive human study in China. He also sought out the findings of other researchers and clinicians, which show that heart disease, diabetes, and obesity can be reversed by a healthy diet. Other research shows that various cancers, autoimmune diseases, bone health, kidney health, vision and brain disorders in old age are influenced by diet. *But most important, time and time again the diet that has been shown to reverse or prevent these*

*diseases is the same whole foods, plant-based diet that he found promoted optimal health in his laboratory research and in The China Study. The findings were consistent.*

Another interesting finding is that certain diseases cluster together in the same geographic areas. As a developing population accumulates wealth, people change their eating habits, lifestyles and sanitation systems. As wealth accumulates, more and more people die from “diseases of affluence” than “poor” diseases of poverty. The vast majority of people in the U.S. and other Western countries die from diseases of affluence, which include Cancer, Diabetes and Coronary Heart Disease.

*The China Study* goes in depth with many different diseases afflicting Americans, from High Cholesterol to Obesity, Diabetes to Cancers, Autoimmune Diseases to Bone/Kidney/Eye and Brain Diseases.

The China Study is an important book for many reasons, not the least of which is that animal proteins can contribute greatly to many diseases. It's clear that removal of animal products could play a major role in slowing the disease process and achieving lasting weight loss, among other benefits.

**But Vegetarians and Vegans need to read this book too...**

*Vegetarians* should consider reading this book because, while they have removed animal meats from their diet, they may drink milk and butter believing this to be okay. However, due to the fact (as mentioned above) that **casein** makes up 87% of cow's milk, this couldn't be further from the truth.

But why should **Vegans** read this book? They don't even drink milk! But many Vegans remove milk and other dairy products from their diet and replace those products with non-dairy alternates. However, what many don't realize is that these very same products contain this **casein** also which makes for some very unhealthy and possibly cancer promoting substitutes. So if you're Vegan or simply want to remove dairy from your diet, please be sure to check those labels and *avoid the products which contain casein*, which can be found in non-dairy cheeses, sour creams, cream cheeses, and frozen foods, among many other foods.

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