

Book Review: *The China Study*

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ABSTRACT

The China Study, by T. Colin Campbell and Thomas M. Campbell II, presents decades of nutrition research, including a recent large-scale epidemiological study of over 3000 Chinese adults, and uses it to link Western chronic diseases to diets high in animal products. While the authors provide good evidence for the health benefits of a whole-foods, plant-based diet, they fail to address opposing arguments and potentially confounding variables in their analyses. Despite these flaws, *The China Study* plays a valuable role in highlighting the chronically overlooked role of nutrition in medicine.

KEYWORDS: *china, study, book, review, nutrition*

Dean Ornish, a respected American physician and founder of the Preventative Medicine Research Institute, calls *The China Study* “one of the most important books about nutrition ever written—reading it may save your life.”¹ Given Ornish’s endorsement, it is not surprising that *The China Study* contains many important findings, yet the book is not without flaws. Nevertheless, I consider it an important read for all medical professionals as it explores how our health is directly affected by what we put on our plates.

The book takes its name from a massive health and lifestyle study of over 6500 Chinese adults. Dr. Campbell and his colleagues collected data on over 350 variables in 65 counties in China, and subsequently found links between diet and hundreds of health indicators. Although this study—called the “Grand Prix of epidemiology” by the *New York Times*¹—is impressive in its sheer magnitude, it does much more than simply present its findings. In addition, Dr. Campbell and his son draw on decades of nutrition research, from animal studies and laboratory experiments to epidemiology and clinical trials, to present a well-written, highly readable account of the evidence linking the Standard American Diet to the most devastating diseases in the developed world. According to Campbell, heart disease, cancer, diabetes, autoimmune disorders, and osteoporosis can all be linked to diets high in animal products and processed foods. The authors go a step beyond condemning the typical targets of fast food and pre-packaged snacks and contend that many things considered healthy in the Western diet, such as lean proteins and dairy products, may actually do more harm than good.

The overarching message in *The China Study* is the promotion of a whole-foods, plant-based diet as a means of preventing and even reversing disease. Campbell contends that animal products, as a group, are disease-causing—they are

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high in saturated fats, cholesterol, and protein and low in fiber, vitamins, minerals, and other antioxidants. This combination of characteristics results in inflammation, cancer promotion, weight gain, digestive problems, and autoimmune reactions. Campbell devotes a chapter each to some of the most feared diseases in Western society—cancer, heart disease, diabetes, autoimmune diseases, kidney disease, brain disease, and eye diseases—and links each of them to consumption of animal products. For example, Campbell describes his own animal studies in which diets high in casein (a protein found in dairy products) were very strongly linked to cancer development.

While Campbell presents substantial evidence in favor of plant-based diets, there are several statistical and methodological holes in his arguments. Firstly, Campbell presents an almost exclusively unilateral analysis of the data in *The China Study*. Thus, many potentially confounding variables, such as other dietary patterns (alcohol, sugar, and wheat intake), activity levels, and geographical location, are overlooked. Secondly, in the extensive discussion of his research on the cancer-promoting effects of casein, Campbell fails to mention if the negative effects of casein observed in rat studies have also been shown in human studies. Finally, Campbell fails to address research that runs counter to his data, for example, arguments that dairy-derived whey protein has protective effects against cancer and other diseases. *The China Study* makes startling claims that run counter to a great deal of conventional wisdom and offers evidence to

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support these claims. However, by failing to address the opposing, conventional arguments, Campbell leaves the scrupulous reader unconvinced of the veracity of his assertions. In many of these areas, further research is certainly needed for Campbell's claims to be accepted as facts.

Despite the book's shortcomings, one of the most valuable sections is the final chapter wherein Campbell discusses the politics of nutrition, notably the unhealthy ties between the food production industry and government and the immense power of the dairy and agricultural industries. These revelations may come as a surprise to many readers, and serve as a useful reminder to be aware of the source of our nutrition-related information. In these final chapters, Campbell also explores the resistance of many physicians to the idea that the single most important treatment for many Western chronic diseases may be as simple as changing what we eat. As we progress in our understanding of the crucial ties between nutrition and health, one hopes that this attitude will be less pervasive.

The China Study sends a clear message: our diets are killing us. While some of Campbell's assertions lack critical analysis, there is certainly validity to the notion that a whole-foods, plant-based diet—when compared to a standard Western diet—can improve health with respect to a variety of diseases. While following such dietary measures may seem extreme to some, the dire state of health in North America suggests they may be necessary. I would recommend this book to future health care professionals as it draws attention to the often overlooked role of nutrition in disease prevention and treatment. As health care professionals, we have a responsibility to provide the best possible care to our patients; Campbell suggests that in many cases, the best possible care involves three simple things: breakfast, lunch, and dinner. 🙌

REFERENCES

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The Impact of Low Literacy on Health

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ABSTRACT

Forty eight percent of Canadians have been reported to have literacy below the minimum level required for full societal function, which directly impacts multiple aspects of their lives including mitigating healthcare accessibility, utilization, and health status. While effective communication can temporarily overcome the literacy barrier,⁶ a more comprehensive approach involving understanding and identifying those who struggle with literacy is necessary for long term improvement and efficient prevention of miscommunication. As there is currently no gold standard for these situations, this article makes several recommendations on how primary care providers and community members alike can enhance the care of people with low literacy.

KEYWORDS: *low literacy, healthcare professional*

The word 'literacy' is empirically defined as the ability to read and write. However, when describing one's functionality in a specific area, literacy measures the amount of knowledge one possesses which involves an individual's comprehension of language, integration of information, and expression of thought.

For example, consider the following sentence: "The two different fields move in parallel with the particle but with perpendicular vectors." If literacy can be attained simply through reading and writing, then most literate individuals should be able

to understand the previous sentence. However, readers without a background in optics would not be able to identify the material as the physics of light. Unfortunately, a similar scenario occurs in healthcare everyday, as roughly half of Canadians struggle with understanding what doctors consider to be 'plain English'.

The International Adult Literacy and Skills Survey (IALSS) measured the literacy levels of 23,000 Canadian adults on a scale between one and five, with the score of three being the minimum score required to function in society. The survey showed that 22 % of adult Canadians scored one, which is the lowest level of English proficiency.¹ IALSS indicated that these individuals struggled with tasks such as understanding the instructions

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