Dr. T. Colin Campbell explains Why Ordinary Food Will Be the Future of Medicine. #Nutrition is now in a position to displace modern #medicineas the treatment of choice for chronic #disease.

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# The Health Care Doctors Forgot: Why Ordinary Food Will Be the Future of Medicine

February 3, 2014 by T Colin Campbell, Jacob Gould Schurman Professor Emeritus, Cornell University

# The problem

Few issues have become so intensely debated and politically charged as the need to reform the health care system. This debate has resulted in the ObamaCare program (The Affordable Care Act), which aims to expand and improve health care, thereby reducing health care costs.

Presently, US health care costs constitute 18% of GDP, up from about 5% around 1970 (1). These costs are burdensome and many sectors of our society are paying the price. School programs are being scaled back because of the escalating costs of retiree health care benefit programs, as illustrated in Michigan where they are "laying off teachers, scrapping programs and mothballing extracurricular activities...[because of]...health care bills of retirees."(2). About 60% of personal bankruptcies are now attributed to medical care costs (3) and these rising costs are eroding family incomes (4), among many other devastating outcomes.

## PART OF A WHOLE FOOD PLANT BASED DIET

It is also far from evident that the almost four-fold increase in the costs of healthcare (as a percent of our dollars) since the 1970s is leading to better health outcomes.

A solution is urgently needed but, in my opinion, this will not happen if we depend on the health care reform proposals offered in recent years, either from the political right or the political left. These proposals mostly concern who will pay a bill that is dependent on the use of expensive pills and procedures. This is not the needed solution because it ignores a strategy that decreases demand for services by improving health.

## Current prevention programs are inadequate

Present day wellness programs are mostly cosmetic. Advisories to quit smoking, wear seat belts, use stairs not elevators, monitor blood pressure, use alcohol in moderation, and exercise regularly, make medical sense but, except possibly for smoking cessation, I don't see how they can have much effect on improving health and reducing health care costs. Similarly, the United States Department of Agriculture makes dietary recommendations (think Food Pyramid) but these also are modest, at best, and highly questionable at worst (5).

As a consequence, by relying on modest or ineffective dietary and lifestyle recommendations (6,7) the health care system as a whole allows, even encourages, the use of very expensive pills and procedures. Consider, for example, the preventive component of the new ObamaCare program (3). This program wants to offer "free preventive women's services, including mammograms," to ensure "that there are no out-of-pocket costs on patients receiving ... colonoscopies and provide lower prescription drug costs for people on Medicare." These will cost money but there is little evidence they will significantly improve overall outcomes (8-10).

Much the same criticism can be made of personalized medicine and other projects of corporations (11) and governments (12) to target medical interventions to specific organs, ailments and individuals (14). I can find little or no evidence that these measures will improve health and decrease demand for health care services. In fact, I suggest (and the pharmaceutical industry hopes) that the thrust of personalized medicine will increase the use of pharmaceuticals as doctors will target illnesses detected earlier.

Add to this the alarming statistic that the third leading cause of death in the U.S. is the use and misuse of pills and procedures (15). Is it any wonder we have an ineffective, costly health care system? Our health care system is travelling a path to self-destruction, regardless of who pays the bill.

#### The solution

When I examine the various proposals made in recent years to reform this system, I see all as having one remarkably consistent omission. It is our neglect of the remarkable ability of nutrition to promote health and decrease illness. I particularly refer to the emerging evidence on the exceptional health benefits provided by a whole food plant-based (WFPB) diet—or should I say, re-emerging evidence. Re-emergence because the idea of the healing power of food has been around at least since the time of ancient Greece. Hippocrates said it best when he exclaimed, "Let food be thy medicine."

I am referring here not only to the well-known ability of nutrition to prevent diseases like heart disease, cancer and diabetes but to the ability of the WFPB diet to actually treat and thus reverse diseases that are already diagnosed or forecast by out-of-range risk factors.

A WFPB diet (5) is defined as one rich in antioxidants and complex carbohydrates. It also avoids animal-based foods, refined carbohydrates, and added fat typically used to make processed, convenience foods. The remarkable health benefits of the WFPB diet is attributed to its being naturally low in fat (10-12% of diet calories), low in protein (10-12% of calories), high in complex carbohydrates (75-80% of calories) and abundant in natural vitamins and minerals.

The science behind a WFPB diet is compelling. A WFPB lifestyle is effective in the short and long terms against a broad spectrum of diseases and ailments (16,17). Population-level studies show lower chronic disease

rates the closer diets approximate the nutritional composition of a WFPB dietary lifestyle (7,18). That is, these population studies show the effects on a long term basis and that this dietary lifestyle serves the body's innate biological tendency to repair itself and so constantly create health. But a WFPB diet can also act to reverse disease progression in a manner that is surprisingly fast (a few days to a few weeks). Such a diet can therefore function as a medical treatment.

The remarkable treatment effects are best documented in a clinical trial for patients with advanced heart disease (19-21). In one published study (19), seriously ill heart patients (i.e., 49 cardiac events during eight years prior to dietary intervention) cured themselves of coronary heart disease by adopting the WFPB dietary lifestyle. Now, 26 years later, five have passed but none from coronary disease (22). Additionally, the occurrence of cancer in these individuals is only about 10% of that expected (23). These results are unprecedented in a clinical trial.

In a 74-week study on type 2 diabetics (24), a close approximation of the WFPB diet decreased body weight, serum HbA1c (the preferred clinical indicator for Type 2 diabetes) and blood lipid levels even more than a companion group who adopted the traditional American Diabetes Association diet (25). The WFPB dietary effect is so pronounced that in our experience it may cause hypoglycemic shock among those who continue their insulin enhancing medications (personal communications: J McDougall, N. Bernard, and TN Campbell).

Additionally, a rich body of evidence has come to light in recent years to support the ability of a WFPB diet to suspend progression of, or even reverse, serious diseases like melanoma (26), prostate cancer (27), multiple sclerosis (28), rheumatoid arthritis (McDougall, J. Diet: only hope for arthritis. McDougall Newsletter (2002) and many other diseases (5). The breadth of this dietary effect both to prevent and to reverse such a diversity of diseases and ailments is truly remarkable.

Much of the benefit of a WFPB diet originates from the avoidance of cow's milk protein, the most biologically active protein of animal origin yet known, which in experiments markedly promotes cancer development (29-31). A discussion of the multiple mechanisms accounting for this effect on cancer may be found elsewhere (5). Cow milk also elevates serum cholesterol (total, LDL) as well as early lesions that lead to heart disease (32, 33), decreases the production of cells that repair heart vessel damage (34) and is the major cause of early childhood allergies (35, 36).

It is now abundantly clear that the health restoring effect offered by the WFPB diet is greater than that of modern medicine. The WFPB treats a broader range of diseases, it is more effective, and it acts just as fast or even faster. Nor, importantly, is it typically reliant on a detailed diagnosis. Were a composite pill made containing the best of all known pharmaceutical drugs, such a pill could not compare with the benefits of a WFPB diet. When the lesser side effects are taken into account, it is no contest. Thus nutrition is now in a position to displace modern medicine as the treatment of choice for chronic disease.

## Seeing the diet, not the nutrient

A common question asked by many people is why has this remarkable information not been widely shared and why is it so foreign for so many people. Sad to say, the general topic of nutrition—irrespective of any particular brand of nutrition—is almost never taught in medical schools and receives only meager funding from federal agencies. As a result, the public must rely on corporate messages (generously offered) that are far more concerned about marketing products, not about promoting human health. These messages are supported, if at all, only by evidence obtained on out-of-context nutrient-rich products and supplements.

I acquired this more comprehensive view of nutrition after spending decades initiating and directing well-funded academic research and teaching programs in nutritional science (my funding was obtainable because it was deemed cancer research!) and after participating for decades on expert panels in food and health policy development. My own community of nutrition research colleagues has been doing honorable, sincere work for a long time, but we also have been working within a paradigm that is largely responsible for miscommunicating this science to the public. We are good at researching details but come up short describing how these details can be assembled into a fabric of information that is useful for the public. We work well with the threads of the tapestry, not on the tapestry itself, unless that tapestry is woven to please the gods of the corporate world.

The food and drug corporate complex increasingly infiltrates and corrupts academic research (5). It also helps steer food and health policy and public nutrition information in a direction of their liking. Such mischief becomes possible because of a fundamental flaw in how we think about the concepts of biology, nutrition and medicine. We focus on parts but fail, miserably, to see the whole. When we rely only on parts, almost any health claim can be made to look good. This deeply embedded reductionist practice occurs in response to a "free market system" that requires a system of intellectual property protection that depends on a description of parts, appropriately patented and specifically described. In nutrition, this means relying on individual nutrients; in medical practice, this means relying on drugs.

Nowhere, in my opinion, is this flaw of worshipping biological parts rather than the whole more damaging than it is in the science of nutrition and in the practice of medicine. In reality, nutritional efficacy is wholistic ('w' intended) but our research investigations of nutrition are reductionist. Reductionist details, when presented in isolation, cause massive confusion. As a result, everyone pays, both with their wallets and in lost health. Also, because the practice of medicine is constrained by procedures and treatments within a reductionist paradigm, it follows that wholistic nutrition does not fit into this practice. This is an extremely costly mismatch, with tragic consequences on so many accounts.

If there is a realistic hope of resolving the health care crisis, which extends into so many sectors of our society and our planet, it must begin by accepting nutrition as a wholistic concept. Communicating this to the public

suggests that nutrition scientists should take the lead but, in doing so, it will be necessary for the academic community to cleanse itself of the numbing stranglehold of corporate control. Only by doing so can this professional community generate the public support that our discipline richly deserves.

To summarize, adoption of the WFPB dietary lifestyle offers far more health benefits than the modern medical system. For those who comply, current evidence shows that at least 90% of all cardiovascular disease and type 2 diabetes, upwards of 70% of all cancers, and a broad spectrum of other illnesses can be prevented, even cured. Assuming that this message is effectively communicated, I estimate that at least 75% of contemporary health care costs could easily be saved. Sparing the side effects (often death) of the existing system would be a very large additional bonus.

It is now time to replace the current medical-based disease care system with a diet-based health care system as Hippocrates prompted us to think about two and a half thousand years ago. We face some extraordinary problems, health improvement, health care costs, serious environmental disarray, unforgiving violence and political polarization and discord. We are entitled to despair but only if we continue to rely on the same medical and health strategies that got us to this place. Based on the extraordinarily positive responses that I personally receive in my hundreds of lectures and the millions of readers of our books, I am optimistic. All we need to do is 1) honestly demonstrate this effect to the public and 2) develop affordable and convenient programs to facilitate transition and I am confident that exceptional progress can be made.

For the skeptics of this information, I say try it. You will see for yourself. Far more evidence for this opinion is available in <u>The China Study</u> (2005) (5) and in <u>Whole</u> (2013) (37) and also: Esselstyn, C. J. *Prevent and reverse heart disease*. (Avery Publishing, Penguin Group, 2007), Ornish, D. *et al.* "Can lifestyle changes reverse coronary heart disease?" *Lancet* 336, 129-133 (1990) and essays and books at

<a href="http://www.drmcdougall.com/health">http://www.drmcdougall.com/health</a> 10 day program.html</a>. See also the

websites: http://www.pcrm.org/,www.chiphealth.com/, andhttp://www.healthpromoting.com.

Footnote: Also, an online course on this topic (with 30 Category I CME and CEU credits) is available at **nutritionstudies.org**.

#### References

- 1 Baker, S. L. U.S. national health spending, 1960-2011. (2013). <U.S. National Health Expenditures>.
- 2 French, R. Michigan's education time bomb: costly, loophole-ridden retirement system threatens public schools. (2007).
- 3 Anonymous. ObamaCare facts: facts on the Obama health care plan, <ObamaCare Facts: Facts on the Obama Health Care Plan> (2013).
- 4 Auerback, D. I. & Kellermann, A. L. A decade of health care cost growth has wiped out real income gains for an

everage US family. Health Affairs 30, 1630-1636 (2011)

- 5 Campbell, T. C. & Campbell, T. M., II. The China Study, Startling Implications for Diet, Weight Loss, and Long-Term Health. (BenBella Books, Inc., 2005).
- 6 Committee on Diet Nutrition and Cancer. Diet, Nutrition and Cancer. (National Academy Press, 1982).
- 7 Expert Panel. Food, nutrition and the prevention of cancer, a global perspective. (American Institute for Cancer Research/World Cancer Research Fund, 1997).
- 8 Gotzsche, P. C. & Jorgensen, K. J. Screening for breast cancer with mammography. Cochrane Database of Systematic Reviews, doi:10.1002/14651858.CD001877.pub5 (2013).
- 9 Blennerhassett, M. Breast cancer screening: an ethical dilemma, or an opportunity for openness? Qual. Prim. Care 21, 39-42 (2013).
- 10 Erpeldinger, S. et al. Is there excess mortality in women screened with mammography: a meta-analysis of non-breast cancer mortality. Trials 14, 368 (2013).
- 11 Anonymous. Drug discovery & development < About Us | Drug Discovery & Development> (2013).
- 12 Stribley, L., Egbuonu-Davis, L. & Fritz, P. The federal government's key role in healthcare innovation.
- 13 Lindpaintner, K. Genetics in drug discovery and development: challenge and promise of individualizing treatment in common complex diseases. Brit. Med Bull. 55, 471-491 (1999).
- 14 Anonymous. Personalized medicine. Wikipedia (2013). And Chaufan and Joseph (2013) <u>The 'Missing</u>

  <u>Heritability'of Common Disorders: Should Health Researchers Care?</u> International Journal of Health Services

  43: 281 303
- 15 Starfield, B. Is US health really the best in the world? JAMA 284, 483-485 (2000).
- 16 Campbell, T. N. Personal communication. (2012-13).
- 17 Esselstyn, C. B. J., Gendy, G., Doyle, J., Golubic, M. & Roizen, M. F. Treating the cause of coronary artery disease (to be published). J Family Practice (2014).
- 18 Doll, R. & Peto, R. The causes of cancer: Quantitative estimates of avoidable risks of cancer in the Unites States today. J Natl Cancer Inst 66, 1192-1265 (1981).
- 19 Esselstyn, C. B., Jr. Updating a 12-year experience with arrest and reversal therapy for coronary heart disease (an overdue requiem for palliative cardiology). Am. J. Cardiol. 84, 339-341 (1999).
- 20 Morrison, L. M. Diet in coronary atherosclerosis. JAMA 173, 884-888 (1960).
- 21 Ornish, D. et al. Can lifestyle changes reverse coronary heart disease? Lancet 336, 129-133 (1990).
- 22 Fulkerson, L. **Forks over Knives**; referring to Esselstyn patients 92 min (Monica Beach Productions, Santa Monica, CA, 2011).
- 23 Esselstyn, C. J. Personal communication. (2011-2013).
- Barnard, N., Cohen, J. & Ferdowsian, H. A low-fat vegan diet and a conventional diabetes diet in the treatment of type 2 diabetes: a randomized, controlled, 74-wk clinical trial. Am. J. Clin. Nutr. 89, 1588S-1596S (2009).

- 25 Franz, M. J. et al. Evidence-based nutrition principles and recommendations for the treatment and prevention of diabetes and related complications. Diabetes Care 26, S51-S61 (2003).
- Hildenbrand, G. L. G., Hildenbrand, L. C., Bradford, K. & Cavin, S. W. Five-year survival rates of melanoma patients treated by diet therapy after the manner of Gerson: a retrospective review. Alternative Therapies in Health and Medicine 1, 29-37 (1995).
- 27 Frattaroli, J. et al. Clinical events in prostate cancer lifestyle trial: results from two years of follow-up. Urology 72, 1319-1323 (2008).
- 28 Swank, R. L. Effect of low saturated fat diet in early and late cases of multiple sclerosis. Lancet 336, 37-39 (1990).
- 29 Campbell, T. C. Chemical carcinogens and human risk assessment. Fed. Proc. 39, 2467-2484 (1980).
- 30 Madhavan, T. V. & Gopalan, C. The effect of dietary protein on carcinogenesis of aflatoxin. Arch. Path. 85, 133-137 (1968).
- 31 Youngman, L. D. & Campbell, T. C. Inhibition of aflatoxin B1-induced gamma-glutamyl transpeptidase positive (GGT+) hepatic preneoplastic foci and tumors by low protein diets: evidence that altered GGT+ foci indicate neoplastic potential. Carcinogenesis 13, 1607-1613 (1992).
- 32 Meeker, D. R. & Kesten, H. D. Experimental atherosclerosis and high protein diets. Proc. Soc. Exp. Biol. Med. 45, 543-545 (1940).
- 33 Meeker, D. R. & Kesten, H. D. Effect of high protein diets on experimental atherosclerosis of rabbits. Arch. Pathology 31, 147-162 (1941).
- Foo, S. Y. et al. Vascular effects of a low carbohyrdate high protein-diet. Proc. National Acad. Sci 106, 15418-15423 (2009).
- Vandenplas, Y., Steenhout, P., Planoudis, Y., Grathohl, D. & Althera Study Group. Treating cow's milk allergy: a double-blind randomized trial comparing two extensively hydrolysed formulas with probiotics. Acta Paediatr. 102, 990-998 (2013).
- 36 Katz, A., Virk H., N., Yuan, Q. & Shreffler, W. Cows' milk allergy: a new approach needed? J. Pediatr. 163, 620-622 (2013).
- 37 Campbell, T. C. Whole. Rethinking the science of nutrition. (BenBella Books, 2013).