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Nutrition

Bill Clinton's Diet

Harriet Hall on November 23, 2010

Post

Bill Clinton loved hamburgers from McDonald's. He used to eat a typical American high calorie, high fat, meat-based diet. No more. He had a heart attack and a quadruple bypass in 2004. Recurrent blockages required placement of two stents in February 2010. This got his attention and he went on a strict new diet, losing 24 pounds to get back down to what he weighed in high school.

He is now a vegan.

> "I live on beans, legumes, vegetables, fruit. I drink a protein supplement every morning — no dairy, I drink almond milk mixed in with fruit and a protein powder so I get the protein for the day when I start the day up.
>
> I did all this research, and I saw that 82 percent of the people since 1986 who have gone on a plant-based, no dairy, no meat of any kind, no chicken, no turkey — I eat very little fish, once in a while I'll have a little fish — if you can do it, 82 percent of people have begun to heal themselves.

Dean Ornish

The 82% apparently refers to this 1998 study by Dean Ornish. He started with 48 patients with angiographically documented coronary artery disease and randomized 28 of them to an experimental group (a 10% fat vegetarian diet, stopping smoking, stress management training, and moderate exercise) and 20 to a usual-care group. Only 20 experimental and 15 control patients completed the 5 year study. The diameter of the coronary arterial stenoses improved by 3.1 percent in the experimental group and worsened by 11.8 percent in the usual care group. Overall, 82% of experimental-group patients had an average change towards regression. They had about half as many cardiac events: 25 in the experimental group versus 45 in the usual care group. None of

cardiac events: 20 in the experimental group versus 40 in the usual care group. None of the experimental subjects were on any cholesterol-lowering medication, but the usual care group allowed cholesterol-lowering prescriptions, and after 5 years the LDL levels of both groups were the same. In short, only 20 patients were on the diet, and it was not a trial of diet alone, but of intensive lifestyle management involving several other interventions. The study has not been replicated.

T. Colin Campbell

In addition to Ornish, Clinton's other gurus are T. Colin Campbell (author of *The China Study*), and Caldwell Esselstyn, author of *Prevent and Reverse Heart Disease.*

Campbell did not study any interventions. He collected epidemiologic data from China and based on those observations, his own laboratory studies, and his own interpretation of the medical literature, he claimed that we could prevent or cure most disease (heart disease, cancer, diabetes, autoimmune diseases, bone, kidney, eye and other diseases) by eating a whole foods plant-based diet, drastically reducing our protein intake, and avoiding meat and dairy products entirely. Critics have questioned whether the data support his conclusions and a re-examination of his raw data found serious flaws in his methodology and his reasoning.

Caldwell Esselstyn

Esselstyn did an ***uncontrolled*** interventional study of patients with angiographically documented severe coronary artery disease who were not hypertensive, diabetics, or smokers. He wanted to test how effective one physician could be in helping patients achieve a total cholesterol level of 150 mg/dL or less, and what effect maintaining that level would have on coronary disease. Patients agreed to follow a plant-based diet with <10% of calories derived from fat. They were asked to eliminate oil, dairy products (except skim milk and no-fat yogurt), fish, fowl, and meat. They were encouraged to eat grains, legumes, lentils, vegetables, and fruit. Cholesterol-lowering medication was individualized.

There were originally 24 patients: 6 dropped out early on, 18 maintained the diet, one of these 18 died of an arrhythmia and 11 completed a mean of 5.5 years followup. Repeat angiography showed that of 25 coronary artery lesions, 11 regressed and 14 remained

angiography showed that of 28 coronary artery lesions, 11 progressed and 11 remained stable. At 10 years, 11 patients remained: 6 continued the diet and had no further coronary events; 5 resumed their pre-study diet and reported 10 coronary events.

In a 12 year followup report, the 6 who had maintained the diet at 10 years and the 5 who had gone off it and had coronary events had apparently somehow morphed into 17 patients who had remained adherent to the diet and who had had no coronary events. I couldn't understand the discrepancy in numbers; perhaps readers can explain it to me if I missed something.

Esselstyn has claimed that

> A plant-based diet with less than 10% fat will prevent coronary disease from developing, halt the progress of existing disease, and even reverse the disease in many patients.

He also says

> If you eat to save your heart, you eat to save yourself from other diseases of nutritional extravagance: from strokes, hypertension, obesity, osteoporosis, adult-onset diabetes, and possibly senile mental impairment, as well. You gain protection from a host of other ailments that have been linked to dietary factors, including impotence and cancers of the breast, prostate, colon, rectum, uterus, and ovaries.

To accomplish this astounding feat, here are the rules. You must not eat:

- anything with a mother or a face (no meat, poultry, or fish)
- dairy products (but subjects in his original study were allowed skim milk and non-fat yogurt!?)

- oil of any kind, not a drop, not even olive oil
- nuts or avocados

You can eat a wonderful variety of delicious, nutrient-dense foods:

- all vegetables (leafy green vegetables, root vegetables, veggies that are red, green, purple, orange, and yellow and everything in between)
- all legume *beans, peas, and lentils of all varieties)
- all whole grains and products, such as bread and pasta, that are made from them — as long as they do not contain added fats
- all fruits (except avocado)

His website claims:

> "It works. In the first continuous twelve-year study of the effects of nutrition in severely ill patients, which I will describe in this book, those who complied with my program achieved total arrest of clinical progression and significant selective reversal of coronary artery disease.

That's misleading. He was not studying diet alone; his patients were also taking cholesterol-lowering medication. With no control group, how do we know the results were due to the diet rather than to other factors, like the intensive counseling or the medications they were taking? Statin therapy alone has been shown to cause regression of coronary lesions. I would like to see controlled studies comparing statins to diet to a combination of both, or comparing Esselstyn's strict diet to another, less strict, diet that controls calories, ensures good nutrition, and produces weight loss.

He says

> "Campbell et al., in the Cornell-China study, reports hundreds of

> Campbell et al., in the Cornell-China study, reports hundreds of thousands of rural Chinese going years without a single coronary event.

But that doesn't tell us anything.

Esselstyn's book allegedly

> …explains, with irrefutable scientific evidence, how we can end the heart disease epidemic in this country forever by changing what we eat. Here, Dr. Esselstyn convincingly argues that a plant-based, oil-free diet can not only prevent and stop the progression of heart disease, but also reverse its effects.

No, not irrefutable. Not convincing. Hype that goes far beyond the evidence.

What Does It All Mean?

Ben Goldacre, in *Bad Science*, said:

> The most important take-home message with diet and health is that anyone who ever expresses anything with certainty is basically wrong, because the evidence for cause and effect in this area is almost always weak and circumstantial…

Ornish, Campbell, and Esselstyn are all certain that they have found a dietary solution for coronary artery disease, but they have not found the *same* solution. If you look closely you will realize that their programs are far from identical. And the evidence to support any of their programs is pretty skimpy. And others disagree strongly: Gary Taubes wrote the huge, extensively referenced tome *Good Calories, Bad Calories* to

debunk the alleged certainty that dietary fat has anything to do with cardiovascular disease, and also to expose the colorful history of nutrition science and how surprisingly little good diet research has actually yet been done.

A systematic review found that

> 3 dietary strategies are effective in preventing CHD: substitute nonhydrogenated unsaturated fats for saturated and trans-fats; increase consumption of omega-3 fatty acids from fish, fish oil supplements, or plant sources; and consume a diet high in fruits, vegetables, nuts, and whole grains and low in refined grain products. However, simply lowering the percentage of energy from total fat in the diet is unlikely to improve lipid profile or reduce CHD incidence.

A 2010 systematic review concluded

> The evidence base for multifactorial lifestyle interventions is weak.

Most sources of diet advice agree that eating more fruits and vegetables, less red meat, and fewer calories is a good idea. Total avoidance of meat is not supported by any reliable evidence. Esselstyn quotes Roberts, agreeing with him that **the only true risk factor for coronary artery disease is a total cholesterol above 150 mg/dl**. This is debatable to say the least! It would throw The International Network of Cholesterol Skeptics into conniption fits, and most science-based doctors would disagree vehemently. What about smoking, diabetes, and family history, for a start? The evidence shows that LDL cholesterol is more significant than total cholesterol. Opinions vary on whether LDL cholesterol can be adequately lowered with diet alone, whether statins are the only practical solution, or whether diet and statins should be used together.

Such drastic diet restrictions must be tested more carefully before any widespread adoption can be recommended. Are these people getting adequate nutrition? Does the diet increase the risk of other diseases? Is the benefit worth the difficult lifestyle modifications? What is the number needed to treat (NNT) to prevent one heart attack? What NNT would compensate for giving up the enjoyment of favorite foods for the rest of your life? Never again tasting ice cream? Or a juicy steak? Or an avocado?

I think Bill Clinton's diet is based more on hope and desperation than on solid scientific evidence. I have to admire his self-discipline in sticking to a difficult diet; I only wish he had displayed the same level of self-discipline in his encounters with White House interns.

Post

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