

If it is good for monkeys, it is probably good for mankind

More than 400 years ago Luigi Carnaro (1467-1566) demonstrated that calorie restriction increases your health span. I wrote about his story in my book, *The Anti-Aging Zone* (1), but here is short summary. A Venetian nobleman, he was near death at age 40 from a poor dietary lifestyle. He started to a rigorous calorie-restriction program and lived to be 99 when he passed not from any chronic disease, but simple old age when he died at age 99. Before he died, he had written three best-selling diet books starting at age 83.

Now a recent study has been published out to validate the impact of caloric restriction on species close to humans (2). The researchers used rhesus monkeys that shares 93% of genes and live for 30 years. Virtually all the earlier work has been done in worms and mice are not quite the same as humans. Furthermore, this was a 30-year experiment. If calorie restriction (without malnutrition) was started after the monkeys had reached maturity, they didn't live that much longer, but they significantly less cancer, heart disease, and insulin resistance than controls who had a normal diet. The authors state that there are clear parallels between humans and rhesus monkeys and that it is quite probable that the healthy effects of calorie restriction seen in monkeys will also be visible in humans.

The Advantages of a Calorie-Restricted Diet

To understand the real advantage of a calorie-restricted diet requires an understanding of the link between diet and inflammation. A calorie-restricted diet is also an anti-inflammatory diet. This means that chronic diseases with a strong inflammatory linkage such as obesity, diabetes, Alzheimer's, heart disease, and cancer to name just a few, can either be prevented or significantly managed following such an eating plan.

One would think following an anti-inflammatory diet should be the goal of health care reform. Couldn't this combat our continually rising healthcare costs especially since more of the expenses come in the last years of life when you are plagued with a wide number of chronic conditions? Today health care "reform" is to increase the size of your deductible before your health insurance actually kicks in. The best strategy to overcome such "reform" is simply not to get sick in the first place. That is the promise of calorie-restriction. The proof was in the above mentioned 30-year rhesus monkey study.

The Zone Diet- A Calorie Restricted Diet without Hunger and Fatigue

Of course, calorie-restriction is only possible if you are never hungry or fatigued. The Zone Diet was built upon the concept of caloric restriction without hunger or fatigue. It is a lifelong dietary program to treat heart disease and diabetes by reducing inflammation. The caloric ratio of the macronutrients (carbohydrates to protein to fat) is approximately 40 – 30 – 30 so that you can balance your to stabilize blood sugar and thus prevent hunger and fatigue while being adequate (if not excess if eating primarily non-starchy vegetables as your carbohydrate source) in essential nutrients including polyphenols and fermentable fiber (i.e prebiotics) for gut health. This is what makes it possible to follow the Zone Diet for a lifetime. If the guidelines of the above mentioned rhesus monkey study are followed, that would mean that an average adult male would consume 1,500 calories per day and an average female 1,200 calories per day. It doesn't sound like a lot a calories and without the correct balance of macronutrients, those decreased calorie levels would likely generate constant hunger and

fatigue, making it difficult to live the rest of your life for regardless of the health benefits. These were the recommendations I first put forward in *The Zone* in 1995 (3). A decade latter, those same recommendations were the foundation of the new dietary guidelines of the Joslin Diabetes Center at Harvard Medical School for treating obesity and diabetes (4), this year Joslin published their 5-year study on diabetic patients following such a dietary program (5)

How to Combat Hunger on a Calorie Restricted Eating Plan

Your first thought might be: How can I comply with this monkey food business, I'll surely die. I guarantee you that the monkeys didn't die following a calorie-restricted diet and neither will you. How? Well, the carbohydrate intake in the Zone Diet is limited to about 40% of total calories. This ensures that the brain gets its daily need for glucose, which is about 130 grams of glucose.

The Zone Diet contains 100 to 150 grams of carbohydrates or 400 to 600 calories, split over three meals and one or two snacks, which easily supplies that level of glucose for optimal brain function. However, if these carbohydrates were mostly composed of non-starchy vegetables then to consume 400 to 600 calories of carbohydrates would require you to eat approximately 4 pounds per day. Although this represents only about 50 – 67% of the total amount of carbohydrates our typical American diet, it is difficult to consume the required amounts because of the very low glycemic index of the carbohydrates.

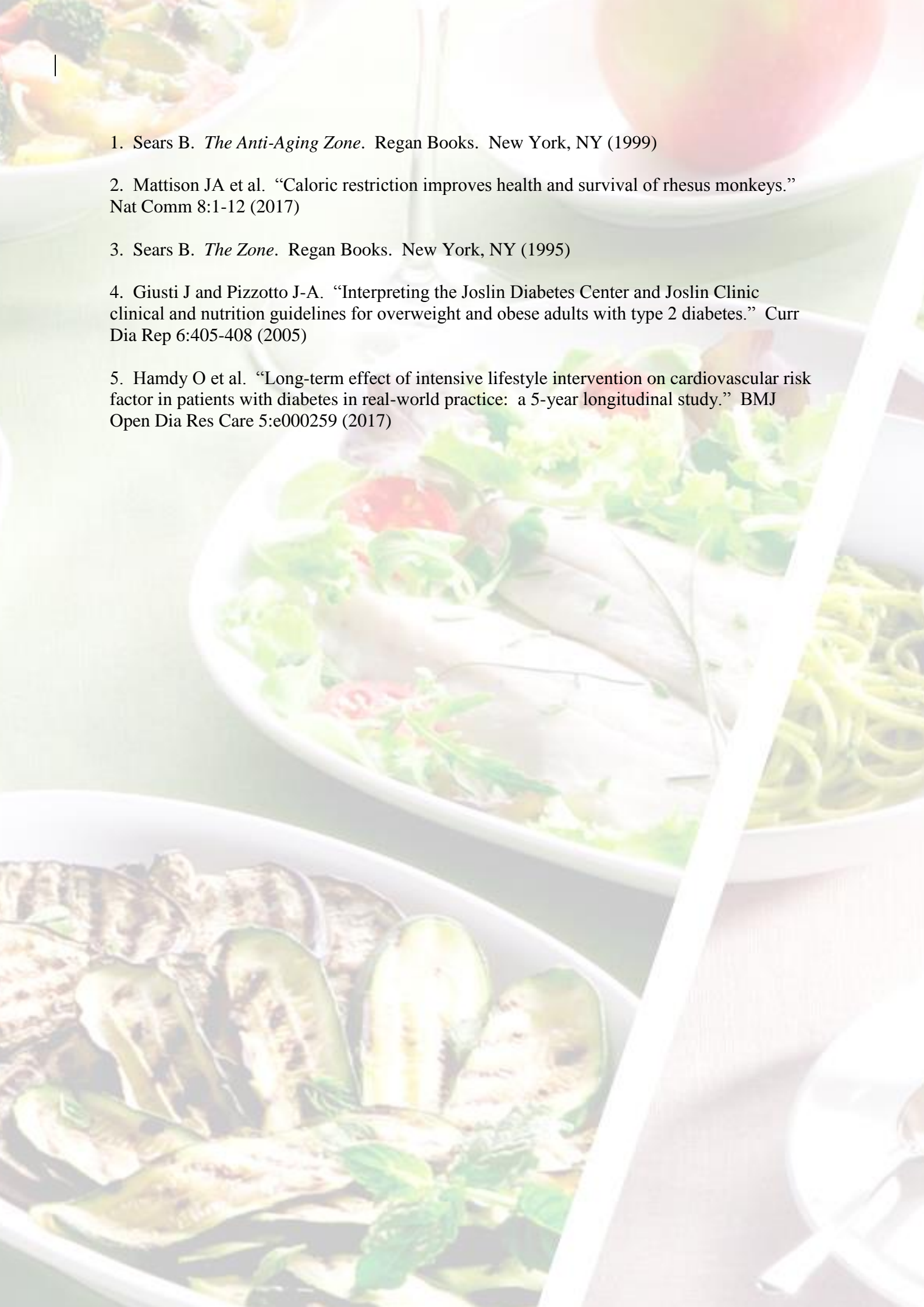
Furthermore, you never consume more than 30 to 40 grams of carbohydrates at any one meal as any greater amounts is going to generate excess insulin, which makes you hungry and fatigued by driving down blood glucose levels. The result is you are constantly hungry, searching for food all the time. The secret of the Zone Diet is that the glycaemic load of a meal or snack, is kept low by consuming primarily non-starchy vegetables as the primary source of carbohydrates but at the same time balancing them with adequate levels low-fat protein (25-30 grams) to help stabilize blood sugar levels and to release satiety hormones (like PYY and GLP-1) from the gut to tell the brain to stop eating.

The Zone Paradox and Other Misconceptions About The Zone Diet

Although you will consume far fewer calories on the Zone Diet, you will not be hungry or fatigued. There also exists a misconception that the Zone Diet is a high-protein diet. This is simply not true. Following the Zone Diet guidelines you still get the typical protein intake of most Americans because even though the percentage of protein (30% of total calories) is higher, the total number of calories consumed daily is restricted. Because of its calorie restriction, it is also a low fat diet in absolute terms. Finally since you always consume more carbohydrates than protein so it is difficult to refer to the Zone Diet as a high-protein, low-carbohydrate diet. It's simply not correct since you are always consuming more carbohydrates than protein at a meal... Thus the best description of the Zone Diet it is a calorie-restricted, protein-adequate, carbohydrate-moderate, and low fat dietary plan.

As Hippocrates said 2,500 years ago, "let food be your medicine and medicine your food". Luigi Carnaro demonstrated it works 400 years ago, and today the Zone Diet makes it possible to live better with the least amount of effort.

References

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