

14. Wanscher, O., Clemmesen, J., Nielsen, A. (1951). Negative correlation between atherosclerosis and carcinoma. *Br J Cancer*, 5, 171-174.
15. Horne, R. *The Health Revolution* (4th edition), 1985, Southwood Press, N.S.W. Australia, 136-137.
16. Marmot, M.G. *et al.* (1975). Epidemiologic studies of coronary heart disease and stroke in Japanese men living in Japan, Hawaii and California. *Am J Epidemiol*, Vol. 102, 6, 514-6.
17. Trowell, H.C. and Burkitt, D.P. (Ed). (1981) *Western Diseases: their emergence and prevention*, 5 and 190.
18. Donnison, C.P. Blood pressure in the African native. *The Lancet*, Jan 5, 1929, 6-7.
19. Connor, W.E., and Connor, S.L. (1972). The key role of nutritional factors in the prevention of coronary heart disease. *Prev Med*, 1, 52.
20. Milton Crane. Personal communication.
21. Diehl, H.A. (1998). Coronary risk reduction through intensive community-based intervention: The Coronary Health Improvement Project (CHIP) experience. *Am J Cardiol*, 82, 83T-87T.
22. Esselstyne, C.B. (1999). Updating a 12-year experience with arrest and reversal therapy for coronary heart disease. *Am J Cardiol*, 84, 339-341.
23. Dean Ornish *et al.* (1998). Intensive lifestyle changes for reversal of coronary heart disease. *JAMA*, 280, 23, 2001-2007.
24. Puska, P., Vartiainen, E., Tuomilehto, J., Salomaa, V., Nissinen, A. Changes in premature deaths in Finland: successful long-term prevention of cardiovascular diseases. *WHO Bulletin*, 1998.

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## THE NATURAL CURE OF CORONARY HEART DISEASE

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### ABSTRACT

Following the development of coronary heart disease in 1989 I was introduced to an alumnus of the Pritikin Longevity Center in California and I adopted the regimen of diet and exercise. Within five months I was able to abandon all medication and was symptom free. My medical colleagues maintained that, because I had recovered, the Consultant's diagnosis must have been wrong—there can be no cure of coronary heart disease by lifestyle changes alone.

As a result of my experience I decided to review the literature to study the natural history of coronary heart disease. My findings strongly suggest that the increase in incidence in the last hundred years from virtually nil to epidemic proportions is due to lifestyle changes and that the disease can be reversed. I list a number of doctors who have influenced large numbers of people to change their lifestyles with great success. They have utilised mainly plant-based diets whose composition is the same or similar to that which Pritikin originally used and which is still extant at the Longevity Center.

I conclude by suggesting that the possibility of reversal of coronary heart disease has profound implications for its treatment with enormous potential savings for the National Health Service.

### INTRODUCTION

Nathan Pritikin, an American inventor and businessman was found, at the age of 42, to be suffering from myocardial insufficiency and was advised not to exert himself. He refused to accept this advice and began to experiment with his diet and with gradually increasing exercise. He finally chose a diet which was low in fat (5-10% of total calories) and low in protein (10-15%) and in which the carbohydrates (75-85%) were mostly unrefined. His exercise consisted solely of walking and later jogging, but he regarded the diet as more important. The doctors were subsequently astonished to observe on a further ECG that there was now no sign of myocardial ischaemia.

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After observing the beneficial effects of this diet and exercise regimen on friends and relations, he eventually established what he called the Pritikin Longevity Center in California, staffed by doctors, dieticians and physiotherapists. Since the first Center opened in 1976 over 70,000 people have been treated. People attend, usually for 26 days, with a variety of illnesses but mainly coronary heart disease (CHD)<sup>1,2</sup>. Even in this short time the results are extraordinary—people walking increasing distances without chest pain or medication. In one survey, 64 patients with CHD (documented by angiogram) had been recommended for cardiac surgery by their personal physicians but who opted instead to attend the Center. When followed up five years later over 75% had avoided the operation.<sup>3</sup> The success of the treatment is now such that some insurance companies in America will pay for attendance at the Center because it is a less expensive option than cardiac surgery.

For those unable to attend the Longevity Center, the details of the regimen are set out in his book (written with Patrick M. McGrady, Jr), *The Pritikin Program for Diet and Exercise*. It can be borrowed from the library. Such a rigorous diet might initially be difficult to stick to for anyone without symptoms, but for patients unable to walk without pain and with the ever present risk of a heart attack, the motivation can be high. There is, however, no hunger on the diet (unless trying to lose weight) because there is no restriction on the quantity of the permitted foods. On Pritikin's death, the post-mortem showed that he had arteries of a young person with no plaque whatever.<sup>4</sup>

In 1989 at the age of 65 I developed angina. I was prescribed Nifedipine with Glyceryl trinitrate as required and I took at least ten of these tablets each day. I then met an alumnus of the Pritikin Longevity Center and I adopted the regimen. After four months I was able to reduce the medication and after a further month I was able to abandon the tablets altogether. I have not had any cardiac medication in the last thirteen years. The diagnosis was made by a consultant cardiologist after an angiogram and exercise tolerance test but my medical colleagues insisted that, because I had recovered, his diagnosis must be wrong—there can be no cure of angina by lifestyle changes alone. The experience was real to me and I decided to survey the medical literature to study the natural history of CHD. This is what I found.

## DISCUSSION AND RESULTS

1. The incidence of CHD has reached epidemic proportions in this country but was practically unknown a hundred years ago.<sup>5</sup> This interval is too short for any genetic change.
2. The basic cause of CHD is a build-up of atheroma in the coronary arteries. In 1948 in Framingham, Massachusetts a total of 5,209 men and women were recruited and physically examined every two years.<sup>6</sup> All were initially free from circulatory disease. The Study was initially designed to last twenty years but is still continuing. In this Study, which has become

one of the cornerstones of cardiac epidemiology, serum cholesterol was found to be the most important factor in predicting heart disease.<sup>7</sup> It is a common mistake to confuse *average* with *normal*.<sup>8</sup> The average range of serum cholesterol in this country would be considered high in, say, rural China.<sup>9</sup> In considering what figure to regard as normal it is worth noting that, in the whole of the Framingham Study, no one with a cholesterol level consistently below 150 mg/dl has suffered a heart attack.

3. For men in their thirties and upwards the serum cholesterol concentration is increasingly dependent on the amount of fat in the diet, both saturated and unsaturated.<sup>10</sup> There is no dietary requirement for cholesterol and increasing the amount of fat in the diet causes the body to manufacture more cholesterol than it needs.
4. In more than 100 autopsies performed on American soldiers killed in South Vietnam, it was found that 50% showed evidence of medium to severe artery damage. The average age of these men was about 22 at the time of their deaths. By contrast, the coronary arteries of Japanese soldiers killed in Korea were clear.<sup>11</sup> These findings indicate that the development of atheroma is a pathological process and not an inevitable consequence of ageing.
5. The cholesterol content of atheroma varies between 30 and 70 per cent. In 1965 Bloch demonstrated, by means of isotope studies, that the cholesterol in the plaques was derived from the cholesterol in the serum and that the equilibrium was dynamic and not static.<sup>12</sup> This suggests that a reduction in the level of serum cholesterol will gradually reduce the size of the plaques.
6. Experimental atherosclerosis has been induced in animals by feeding them diets sufficiently rich in fat and cholesterol and in some animals the atheroma in the coronary arteries has been made to regress by dietary manipulation. Armstrong *et al* showed in 1970 that this phenomenon also occurs in the rhesus monkey, one of our closest relatives in evolutionary terms.<sup>13</sup>
7. In countries subject to rationing during the last war there was a dramatic fall in the death rates from CHD (in spite of the stress of air-raids) and a rise during the post-war years as food rationing came to an end.
8. Regression of atheroma occurs in patients dying from cancer compared with those dying from other diseases.<sup>14</sup> Regression was also found to have occurred in the post-mortems of people dying of starvation in the Nazi concentration camps.<sup>15</sup> The common feature appears to be cachexia and is further evidence of the lability of atheroma during life.
9. The incidence of CHD differs greatly in different countries. There is no cholesterol in any fruit, vegetable or cereal and the disease is rare or non-existent in many societies which have lived for generations on a plant-based diet. Lest it be thought that genetic factors play a significant part in this differential incidence between countries, it has been shown that if a person moves from a low- to a high-incidence country, that person

tends eventually to assume the high incidence of the disease.<sup>16</sup> Significantly, such a change does not occur with respect to height which is known to be largely genetically determined.

10. Hypertension is an accepted risk factor for CHD. In Britain blood pressure tends to rise with age and this is commonly thought to be an inevitable consequence of ageing. But the phenomenon appears rather to be a consequence of different lifestyles. No case of hypertension was reported in Kenya or Uganda until 1941.<sup>17</sup> In rural Africa the blood pressure of a man of forty-five was typically the same as it was at twenty and then it actually declined as he grew older.<sup>18</sup>
11. The Japanese are heavy smokers and also fond of salt. The rates of hypertension and strokes are understandably very high but the incidence of CHD is the lowest among the developed nations. Their diet in the years following the last war kept the average serum cholesterol below 150 mg/dl.<sup>19</sup>
12. The following doctors (in alphabetical order) have, like Pritikin, influenced many people to change their lifestyle. The striking feature of their work, so far as I have been able to determine, is a marked reduction in cholesterol levels often within a matter of weeks. All the diets (except (e) infra) are plant-based and have a composition similar to that which Pritikin used and which is still extant at the Longevity Center.
  - (a) Dr Milton G. Crane is Director of Medical Research at the Weimar Institute, California. He came to the Institute in 1982 and initiated what he called the *Newstart Program* with the aim of teaching people how to reverse arterial disease using a diet and exercise regimen.<sup>20</sup>
  - (b) Dr Hans A. Diehl is Director of the Lifestyle Medicine Institute in Loma Linda and chief sponsor of the *Coronary Health Improvement Project* (CHIP). These projects are designed to effect lifestyle changes in a whole community using a non-residential programme<sup>21</sup> and are now established in many American and Canadian towns.
  - (c) Dr Cauldwell Esselstyne is a cardiac surgeon at the Cleveland Clinic who became dissatisfied with the number of patients returning with restenosis and decided that, apart from emergencies, he could better help his patients by encouraging them to make lifestyle changes rather than by cardiac surgery.<sup>22</sup>
  - (d) Dr Dean Ornish, an American cardiologist, has persuaded a number of hospitals to adopt his regimen. This is set out in his book, *Reversing Heart Disease*. Dr Ornish has actually obtained angiographic evidence that atheroma can regress as a result of lifestyle changes.<sup>23</sup>
  - (e) Professor P. Puska, is Director of the North Karelia Project. He and his colleagues devised and implemented a community based long-term prevention strategy for cardiovascular disease with particular emphasis on promoting cholesterol-lowering dietary changes.<sup>24</sup>

## CONCLUSION

There is no doubt that the potential saving for the NHS of the Pritikin or similar regimen is enormous. For those on daily medication the cost of most drugs is not high but the burden on doctors is significant. I estimate that I have saved my GP over seven hours of his valuable time in the last thirteen years. Patients on the regimen would initially have to be monitored because the medication would need to be reduced as the atheroma regressed but ultimately the treatment, so long as it is followed, is without cost to the NHS. Patients on a waiting list for cardiac surgery could be given the option of this alternative treatment. There is no additional risk—they are waiting anyway.

I submit that this review of the literature strongly suggests that lifestyle and particularly diet are the cause and the cure of CHD. The proof will lie in persuading the cardiac patient to change his lifestyle *to the extent recommended* and observing the result.

## DEDICATION

This paper is dedicated to the memory of Nathan Pritikin who showed that coronary heart disease and other degenerative diseases could be cured by a regimen of diet and exercise and thereby improved the lives of many thousands of people throughout the world.

## REFERENCES

1. Barnard, R.J., *et al.* (1981). Effects of an intensive, short-term exercise and nutrition program on patients with coronary heart disease. *J Cardiac Rehab*, **1**, 99–104.
2. O'Brien, L.T. *et al.* Effects of a high-complex-carbohydrate low-cholesterol diet plus bran supplement on serum lipids. *Journal of Applied Nutrition* Vol. 3, **1**, 26–34.
3. Barnard, R.J. *et al.* (1983). Effects of an intensive exercise and nutrition program on patients with coronary artery disease: five-year follow-up. *J Cardiac Rehab*, **3**, 183–190.
4. Hubbard, J.D. *et al.* (1985). Nathan Pritikin's heart. *N Engl J Med*, July 4, page 52.
5. Logan, W.P.D. Mortality in England and Wales from 1848 to 1947. *Popul Stud* **1940**, **4**, 142.
6. Dawber, T.R., Meados, G.F., Moore, F.E. Jr. (1951). Epidemiological approach to heart disease: The Framington Study. *Am J Pub Health*, Vol. 41, 279–286.
7. Braunwald, E. The Shattuck Lecture. *N Eng J Med*, November 6, 1997, pages 1361–2
8. Kannel, W.B., Lipid profile and the potential coronary victim. *Am J Clin Nutr*, September 1971, 1076.
9. Campbell, T.C. *et al.* (1998). The Cornell China Study. *Am J Cardiol*, vol. 82.
10. Keys, A. (1953). Atherosclerosis: A Problem in Newer Public Health. *J Mt Sinai Hosp.*, page 136.
11. Enos, W.F. *et al.* (1955). Pathogenesis of coronary disease in American soldiers killed in Korea. *JAMA*, **158**, 912.
12. Broch, K. (1965). The biological synthesis of cholesterol. *Science*, **150**, 19–28.
13. Armstrong, M.L., Warner, E.D., Connor, W.E. Regression of coronary atheromatosis in rhesus monkeys. *Circulation Research*, Vol. XXVII, July 1970, 59–67.