

MEDICAL SCIENCE

Lifestyle Changes Reverse Coronary Heart Disease

THE LIFESTYLE HEART TRIAL

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RESULTS

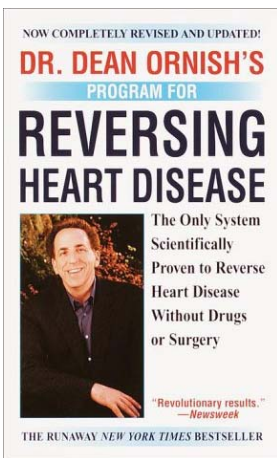
Overall, 82% of experimental-group patients had an average change towards regression. Comprehensive lifestyle changes may be able to bring about regression of even severe coronary atherosclerosis after only one year, without use of lipid-lowering drugs.

METHODS

Blood samples for measurement of serum lipids were drawn (after 14 hr fast) at baseline, after 6 months and after one year. Total cholesterol, HDL, LDL and triglycerides were taken.

The intervention began with a week-long retreat to teach lifestyle intervention to the experimental group. Patients then attended regular group support meetings for 4 hours twice each week.

Experimental-group patients were asked to eat a low-fat vegetarian diet for at least a year. No animal products were allowed except egg white and one cup per day of non-fat milk or yogurt. The diet contained approximately 10% of calories as fat (polyunsaturated/ saturated ratio greater than 1), 15-20% protein and 70-75% complex carbohydrates. Cholesterol was limited to 5 mg/day or less. Salt was restricted only for Hypertensive patients. Caffeine was eliminated and alcohol was limited to no more than 2 units per day. Patients were individually prescribed exercise according to baseline treadmill test results. Patients were asked to exercise for a minimum of 3 hours per week and spend a minimum of 30 minutes per session within target heart rates.



DISCUSSION

This clinical trial has shown that a heterogeneous group of patient with coronary heart disease can be motivated to make comprehensive changes in lifestyle for at least a year outside the hospital. The lifestyle intervention seems safe and comparable with other treatments of coronary heart disease.

After a year, patients in the experimental group showed significant overall regression of coronary atherosclerosis as measured by arteriography. Since coronary atherosclerosis occurs over a period of decades, one would not expect to find larger changes in only a year.

In the experimental group, total cholesterol fell by 24.3% and LDL by 37.4%. These changes in lipid levels are similar to those seen with the use of cholesterol lowering drugs.

Those who made the greatest changes, showed the biggest improvement. Since degree of stenosis change was correlated with extent of lifestyle change across its whole range, small changes in lifestyle may slow the progression of atherosclerosis, whereas substantial changes in lifestyle may be required to halt or reverse coronary atherosclerosis.

Summary - Lancet 1990; 336 129-33