

Coronary risk reduction through intensive community-based lifestyle intervention: the Coronary Health Improvement Project (CHIP) experience

Diehl HA. 1998. "Changing the paradigm in communities: coronary risk reduction through an intensive community-based lifestyle intervention program—the CHIP experience." *Am J Cardiol*, 82, 83-87T.

Abstract

Vigorous cholesterol lowering with diet, drugs, or a combination has been shown to slow, arrest, or even reverse atherosclerosis. Residential lifestyle intervention programs have successfully lowered serum cholesterol levels and other coronary risk factors, but they have the disadvantages of high cost and difficulty with long-term adherence. Community-based risk-reduction programs have the potential to effect change at low cost and improve long-term adherence. To assess the effectiveness of, and to develop a model for, such programs, the community-based Coronary Health Improvement Project (CHIP) was developed in Kalamazoo, Michigan. In the intensive (30-day, 40-hour), hospital-based educational program, participants are encouraged to exercise 30 minutes a day and to embrace a largely unrefined plant-food-centered diet that is high in complex carbohydrates and fiber; very low in fat, animal protein, sugar, and salt; and virtually free of cholesterol. A total of 304 enrollees in the first program were at elevated risk of coronary artery and related diseases: 70% were $\geq 10\%$ above their ideal weight, 14% had diabetes, 47% had hypertension, and 32% had a history of coronary artery disease. Of the enrollees, 288 "graduated" from the program (123 men, 165 women; mean age was 55 \pm 11 years). Various markers of disease risk, including serum blood lipids and fasting blood glucose concentrations, were measured before and after the program. At 4 weeks, overall improvements in the participants' laboratory test results, blood pressures, weights, and body mass indexes were highly significant ($p < 0.001$). Triglyceride levels decreased significantly ($p < 0.05$) in participants who had elevated triglyceride levels (>200 mg/dL in men, 200-299 mg/dL in women).