Effectiveness of a volunteer-delivered lifestyle modification program for reducing cardiovascular disease risk factors

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Abstract

Lifestyle modification has been demonstrated to effectively reduce the risk factors associated with cardiovascular disease, but there is a perception that it is costly to administer and resource. The present study examined the results achieved by a 30-day lifestyle modification program (Coronary Health Improvement Project) delivered by volunteers in a community setting. Changes in selected biometric measures of 5,070 participants in the Coronary Health Improvement Project programs delivered throughout North America (January 2006 to October 2009), were assessed. Overall, significant reductions ($p < 0.001$) were recorded in body mass (-3.2%), systolic and diastolic blood pressure (-4.9% and -5.3%, respectively), total cholesterol (-11.0%), low-density lipoprotein cholesterol (-13.0%), triglycerides (-7.7%), and fasting plasma glucose (-6.1%). Stratification of the data revealed more dramatic responses in those presenting with the greatest risk factor levels. Those presenting with cholesterol levels >280 mg/dl recorded an average reduction of 19.8%. A mean decrease of 16.1% in low-density lipoprotein levels was observed among those who entered the program with a low-density lipoprotein level >190 mg/dl. Individuals who presented with triglycerides >500 mg/dl recorded a mean reduction of 44.1%. The Framingham assessment forecast that approximately 70 cardiac events would be averted during the subsequent decade in the cohort because of the program. In conclusion, significant reductions in cardiovascular disease risk factors can be achieved in a 30-day lifestyle intervention delivered by volunteers, providing a cost-effective mode of administering lifestyle medicine.