

Cardiovascular Fitness with a Comprehensive Weight-Loss Program vs Exercise Alone: A Randomized Intervention

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Introduction: Lack of physical activity is a risk factor for coronary heart disease (CHD). This study evaluated the changes in cardiovascular fitness from a comprehensive weight-loss program that includes a balanced energy deficit diet, activity plan and group support (Weight Watchers; WW) compared to exercise alone.

Methods: Fifty-eight overweight and obese individuals enrolled in a 12-week weight-loss study and were randomly assigned into one of two groups. One group, Exercise Only (EO) received an exercise prescription from an exercise physiologist in line with the Surgeon General's recommendations for physical activity (mean age 41.0 ± 6.8 years; $n=27$). In the second group, (WW) participants were enrolled in a comprehensive weight-loss program that includes both structured diet and exercise components and weekly meetings. (mean age 41.4 ± 6.1 years; $n=31$). The exercise component for the WW group was comparable to the exercise prescription given to the EO group.

Results: VO_{2max} significantly increased in the WW group (23.75 ± 5.74 vs 25.55 ± 6.35 ml/kg/min; $p<0.001$), but not in the EO group (25.57 ± 7.20 vs 25.65 ± 6.51 ml/kg/min; $p=NS$). Weight also decreased significantly in the WW group (182.58 ± 24.14 vs 173.64 ± 23.08 lbs, $p<0.05$) but not in the EO group (173.33 ± 21.45 vs 172.42 ± 20.07 lbs, $p=NS$).

Discussion: Cardiovascular fitness, as measured by VO_{2max} , is a predictor of CHD mortality in both healthy and diseased individuals. The small, but significant increase in VO_{2max} seen in the WW group after 12 weeks is likely to provide a degree of cardioprotection that is superior to exercise alone. The fact that VO_{2max} increased in the WW group only might suggest better compliance to the protocol, facilitated by the group structure and support system inherent in the program.

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