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# Aerobic interval training versus continuous moderate exercise after coronary artery bypass surgery: a randomized study of cardiovascular effects and quality of life.

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## Abstract

BACKGROUND: Peak oxygen uptake (Vo(2peak)) strongly predicts mortality in cardiac patients. We compared the effects of aerobic interval training (AIT) versus moderate continuous training (MCT) on Vo(2peak) and quality of life after coronary artery bypass grafting (CABG). METHODS: Fifty-nine CABG patients were randomized to either AIT at 90% of maximum heart rate or MCT at 70% of maximum heart rate, 5 d/wk, for 4 weeks at a rehabilitation center. Primary outcome was Vo(2peak), at baseline, after rehabilitation (4 weeks), and after 6 months of home-based exercise (6 months). RESULTS: Vo(2peak) increased between baseline and 4 weeks in AIT (27.1 +/- 4.5 vs 30.4 +/- 5.5 mL.kg(-1).min(-1), P < .001) and MCT (26.2 +/- 5.2 vs 28.5 +/- 5.6 mL.kg(-1).min(-1), P < .001; group difference, not significant). Aerobic interval training increased Vo(2peak) between 4 weeks and 6 months (30.4 +/- 5.5 vs 32.2 +/- 7.0 mL.kg(-1).min(-1), P < .001), with no significant change in MCT (28.5 +/- 5.6 vs 29.5 +/- 5.7 mL.kg(-1).min(-1)). Quality of life improved in both groups from baseline to 4 weeks, remaining improved at 6 months. There were no changes in echocardiographic systolic and diastolic left ventricular function. Adiponectin increased between 4 weeks and 6 months in both groups (group differences, not significant). CONCLUSIONS: Four weeks of intense training increased Vo(2peak) significantly after both AIT and MCT. Six months later, the AIT group had a significantly higher Vo(2peak) than MCT. The results indicate that AIT and MCT increase Vo(2peak) similarly in the short term, but with better long-term effect of AIT after CABG.

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