

Role of resistance training in heart disease [Clinical Supplement: Cardiology]

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ABSTRACT

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Since the mid-1980s resistance training has become an accepted part of the exercise rehabilitation process for patients eligible for traditional cardiac rehabilitation programs. A growing number of studies have demonstrated the safety of resistance training in Phase III/IV programs (Phase III-community based, beginning 6-12 wk posthospital discharge; a typical patient would be clinically stable with a functional capacity of ≥ 5 METs; Phase IV-long-term maintenance) and more recently in Phase II (beginning within 3 wk posthospital discharge and lasting up to 3 months). Evidence is consistent that this form of training provokes fewer signs and symptoms of myocardial ischemia than aerobic testing and training, perhaps because of a lower heart rate (HR) and higher diastolic pressure combining to produce improved coronary artery filling. **The major role of resistance training in heart disease patients is to promote increased dynamic muscle strength.** Increases in muscular strength have been associated with increased **peak exercise performance, improved submaximal endurance, and reduced ratings of perceived leg effort.** Two studies show that resistance training may result in improved self-efficacy for strength and exercise tasks and improved quality of life parameters such as total mood disturbance, depression/dejection, fatigue/inertia, and emotional health domain scores. The data on risk factor modification are somewhat equivocal. Studies on blood lipid profiles have mostly been contaminated by confounders, and the effects on blood pressure (BP) are inconsistent. There are encouraging reports that resistance training may increase glucose tolerance and insulin sensitivity, independent of changes in body fat or aerobic capacity. Future studies are needed in patients with congestive heart failure and orthotopic heart transplantation; muscle weakness is common in these groups and makes them excellent candidates to benefit from this form of exercise.

<http://www.acsm-msse.org/pt/re/msse/abstract.00005768-199810001-00008.htm;jsessionid=J21THvcfNYyyLyDmd39IIgDqBIQyQpy5crqbyY23522ly0H27Glt!-1046349743!181195628!8091!-1>