

Maximum Wellness 9.16.2020

Cardiac Rehab Patients Benefit from High-Intensity Interval Training

It's no secret that moderate intensity, continuous training (MICT) – usually in the range of a rate of perceived exertion (RPE) of 11 to 13 on the Borg scale of 6 to 20 – has demonstrated significant improvement in cardiorespiratory fitness – for both healthy individuals and patients with coronary artery disease (CAD).

While high-intensity interval training (HIIT) is known to improve cardiorespiratory fitness (CRF), as measured by the maximum volume of oxygen consumption (VO₂Max), in a healthy population, its feasibility, safety, and long-term effects for improving CRF in patients with CAD is unclear.

Researchers from the Australia and the United Kingdom – reporting in the online September 2020 issue of JAMA (Journal of the American Medical Association) Cardiology - chose to compare HIIT with MICT for feasibility, safety, adherence, and efficacy of improving VO₂ peak in patients with CAD.

From May of 2016 to December of 2018, ninety-three CAD patients, age 18 to 80, enrolled in 4-weeks of supervised training in a private hospital cardiac rehabilitation program – continuing over 12 months with home-based training.

The HIIT group performed 4 x 4-minute high intensity intervals at an RPE of 15 to 18 with 3-minute active recovery intervals at an RPE of 11 to 13. The MICT group performed 40 minutes of moderate-intensity exercise at an RPE of 11 to 13.

Both groups were asked to complete three sessions per week – two supervised and one home-based over four weeks – followed by home-based training (three weekly sessions) for the remaining eleven months.

The pre and post program testing included VO₂ peak at baseline and four weeks – with further testing at 3, 6, and 12 months. Safety was ascertained throughout the study period, as was, “adherence to the exercise protocol, (which) was assessed as 70% attendance or higher at the recommended number of exercise sessions, when training at the prescribed exercise intensity during the exercise sessions.”

The study demonstrated, “that HIIT is superior to MICT for improving cardiorespiratory fitness during a 4-week hospital-based CR (cardiac rehab) program in patients with CAD; but offers similar improvements to MICT at 12 months.”

In short, the HIIT protocol was safe, feasible, and successfully implemented in a home-based environment with similar adherence to MICT over 12 months.

Before you attempt to set up your own home-based HIIT program, first check with your physician.