Health information

GUARDIAN
exercise rehabilitation

Exercise Recommendations Post Myocardial Infarction

Myocardial Infarctions (MI) - commonly referred to as heart attacks - have a high prevalence in Australia and throughout the world. An MI generally occurs due to a blockage in a coronary artery, as a result of a blood clot. Following an MI, it is likely that there will be some pharmacological intervention to assist with management of cholesterol, blood pressure and heart rate response. Another strategy that is widely and successfully implemented for recovery post-MI is Cardiac Rehabilitation (CR).

So, what is Cardiac Rehabilitation (CR)?

CR is a holistic intervention focused on the importance of establishing a healthy and active lifestyle through exercise, education, and psychological assistance.

Research demonstrates that those individuals who participate in exercise-based CR have:

- Reduction in reinfarction
- Reduction in all-cause mortality
- Reduced systolic blood pressure, cholesterol and triglycerides
- Reduced levels of depression and anxiety
- Independent completion of activities of daily living (ADL)
- Positive effects on left ventricular remodeling
- Reduction in cardiac and cardiovascular mortality
- Increased exercise tolerance and muscular strength

There is not a worldwide consensus on the best frequency and/or intensity for CR, with some conjecture in the literature around safety and efficacy of exercise intensity and modality of exercise. The below table summarises the recommendations.

Type of exercise	Intensity	Duration	Frequency
Aerobic (circuit training, cycling and walking) Incorporation of stretching and flexibility - to be used in prolonged warm-up/cool-down.	Light-Moderate: 55% HRmax RPE 11-14	150 minutes per week	On most, or all days of the week
Resistance Many ADLs require muscular strength and endurance to complete. Most CR programs include use of resistance bands and light weights in the early stages. Ensuring normal breathing patterns (avoiding the valsava maneuver) and isometric based exercises is essential to avoid increases in mean arterial pressure.			
Factors to Monitor with Exercise • Heart Rate • Blood Pressure • BORG Ratings of Perceived Exercise (RPE) 6-20 scale	• Signs and symptoms such as; shortness of breath, extreme fatigue, chest pain and light headedness. • Symptoms pre and post exercise session		

Adopting routine exercise is a positive lifestyle behavioural change which will positively affect physical, physiological and psychological wellbeing following MI.

References:

Adams, J., et al. (2006). Importance of Resistance Training for Patients After a Cardiac Event. Baylor University Medical Center Proceedings

Haykowsky, M., et al.. (2011). A Meta-analysis of the effects of Exercise Training on Left Ventricular Remodeling Following Myocardial Infarction: Start early and go longer for greatest exercise benefits on remodeling. Trials

Lawler, P., et al. (2011). Efficacy of exercise-based cardiac rehabilitation post–myocardial infarction: A systematic review and meta-analysis of randomized controlled trials. American Heart Journal