

The Role of Exercise in Cardiac Rehabilitation

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Cardiac rehabilitation is the use of exercise, education, as well as psychological and emotional support, to facilitate a patient's recovery from heart disease or heart surgery. The goal is to stabilize, slow down or even reverse the progression of cardiovascular disease. Cardiac rehabilitation addresses risk factors that lead to coronary heart disease, including high blood pressure, high cholesterol, obesity, diabetes, smoking, lack of physical activity, depression and other emotional health concerns. Adopting healthy lifestyle changes (increasing your physical activity, following a healthy diet, reducing risk factors for future heart problems and improving your emotional health), are major keystones in improving one's quality of life.

The cardiac rehab team may include doctors, nurses, exercise specialists (Biokineticists), physical and occupational therapists, dietitians or nutritionists, and psychologists or other mental health specialists.

This article will discuss the role of exercise in cardiac rehabilitation.

Benefits of Exercise in Cardiac Rehabilitation

Physical activity has many physical, psychological and spiritual benefits. In terms of cardiac rehabilitation, exercise is associated with the following benefits:

- Strengthening the heart muscle
- Increasing hemoglobin concentration in the blood
- Increasing stroke volume, thus making the heart pump more efficiently.
- Enlarging and increasing the number of arteries supplying the heart with blood, thus increasing oxygen supply and reducing the tendency for blood clots.
- Elevating the body's metabolism, thus assisting with weight loss. This is beneficial for overweight and obese individuals suffering from heart disease.
- Reducing and assisting with the control of cardiac risk factors, such as high blood pressure, high cholesterol and diabetes
- Improving muscle strength, flexibility and endurance.
- Reducing psychological stress

Phases of Cardiac Rehabilitation:

The ideal cardiac rehabilitation programme consists of 4 phases:

- In patient phase (in hospital and recuperation phase up to 6 weeks)
- Out patient phase (commences 6 – 8 weeks to 12 weeks)
- Long-term conditioning phase (commences 12 – 24 weeks to 6 months)
- Maintenance phase

Range of motion activities, intermittent sitting or standing, and walking, are initiated in Phase 1. The purpose of this phase is to reduce the de-conditioning that normally accompanies prolonged bed rest. During phase 2, exercise bouts are of low intensity and short duration. The patients commence with activities of equal intensity as normal daily activities. The patient progresses to a more advanced exercise programme during phase 3. Phase 4 (the maintenance phase) is reached after 4 – 6 months following the commencement of the cardiac rehabilitation programme.

Cardiac Exercise Programme

Before commencing with an exercise regime, it is important that a cardiac patient is screened and evaluated by a registered biokineticist. This will assist the biokineticist to safely design an individualized exercise programme for the patient.

Cardiac rehabilitation exercise programmes typically include a warm-up, aerobic exercises, muscle strengthening and flexibility exercises, and a cool down. Cardiac patients will be encouraged to do aerobic exercises, such as walking, cycling, rowing, climbing stairs, 3 to 5 days per week for 30 to 60 minutes, and muscle strengthening and flexibility activities 2 or 3 days per week. As the patient's functional capacity improves, their exercise programme will be updated.

It is advised that patients with heart disease or associated conditions exercise under the supervision of a qualified therapist and that their blood pressure and heart rate is monitored before, during and after exercise training 🏃‍♂️

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