



Physical activity in older people with cardiac co-morbidities

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The World Health Organisation (WHO) launched a global action plan on physical activity to provide a framework of policy actions to increase physical activity in June 2018. Physical activity is an effective intervention for prevention and management of non-communicable diseases including cardiac disease, regardless of age. We hoped this letter would remind readers of the importance of physical activity in older people, particularly those with cardiac co-morbidities.

The WHO recommendations for physical activity in older people do not differ from younger adults, which include a minimum of 10 min duration of aerobic exercises per session of at least 150 min of moderate intensity or at least 75 min of vigorous intensity or an equivalent combination both per week. Strength or resistance exercises should also be incorporated into the exercise regimen and performed at least twice weekly. Older people who are unable to meet these recommendations due to health should perform physical activity to the best of their abilities as tolerated.^[1]

Older adults with chronic cardiac diseases or after an acute cardiac event should also be enrolled in a cardiac rehabilitation programme, which has been shown to improve their functional capacity and the quality of life. This involves a multidisciplinary approach; prescribed physical activity is a core component in addition to medical assessment, cardiac risk factor management and psychosocial interventions.^[2]

Cardiac rehabilitation consists of four phases, started within five days of admission with close monitoring for cardiac decompensation. The interventions aim to counteract negative effects after a cardiac event, with close monitoring for cardiac decompensation. After discharge, patients are supported to adopt an active lifestyle and commence activity after hospitalisation. In phase three, individualised

exercises are offered with psychological support and continued patient education six weeks after the initial cardiac event. The final phase involves maintenance of lifestyle changes, including physical activity for cardiac protection and secondary prevention.^[2]

Despite these recommendations, physical activity may be under-prescribed for older people with cardiac co-morbidities due to concerns regarding safety. A Cochrane review found ‘no evidence to suggest that exercise training programmes cause harm in terms of an increase in the risk of all-cause death in either the short or longer term’ for patients with stable chronic heart failure [New York Heart Association (NYHA) Class 1–3].^[3] In cardiac rehabilitation settings, the risk of a cardiovascular event was shown to be low after both moderate-intensity and high-intensity exercise in patients with coronary heart disease.^[4] Therefore, physical activity should be a prescribed intervention within these controlled settings, with medically stable disease and monitoring.

There is evidence to support why the physical activity guidelines would be beneficial for people with cardiac co-morbidities. When patients with coronary artery disease were randomised to high intensity versus moderate intensity exercise, the aerobic capacity represented by peak oxygen uptake was significantly higher in the high-intensity group. As improved aerobic capacity is associated with reduction in all-cause and cardiovascular disease mortality, this suggests the benefit of higher intensity exercises in improving training-induced adaptation.^[5]

A study comparing resistance training to yoga and breathing exercises in disabled older female cardiac patients found that the intense resistance training programme over six months improved physical capacity. This was consistently shown over a range of household activities assessed by the Continuous Scale Physical Functional Performance test. In addition to strength, there were also improvements in endurance, balance, coordination and flexibility.^[6]

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There are additional benefits to enrolling cardiac patients in formal programmes such as cardiac rehabilitation. A cohort study identified that while a nurse-led post-discharge reviews or an exercise programme was effective for reducing readmission with cardiac failure, the reduced odds of readmission were larger in those including the exercise programme.^[7] A systematic review and meta-analysis found that patients participating in cardiac rehabilitation were more likely to increase their physical activity level and remain physically active compared to control groups.^[8] Maintenance of physical activity after the programme was also more likely if patients participated longer in the Phase II and Phase III components of cardiac rehabilitation.^[9]

For patients who decline cardiac rehabilitation, they should still be encouraged to perform physical activity. Measures to increase physical activity include self-monitoring, setting specific goals, identifying barriers and developing plans for relapse prevention. For cardiac patients who did not receive rehabilitation, unsupervised home-based interventions were still effective in physical activity outcomes when accompanied by follow-up prompts, general encouragement, setting specific goals and self-monitoring.^[10]

In conclusion, older adults including those with cardiac co-morbidities should be encouraged to perform physical activity and enrolled in a cardiac rehabilitation programme, as these interventions are safe, beneficial and improves their quality of life.

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