CARDIAC REHABILITATION GUIDELINE

- Comprehensive cardiac rehabilitation programmes have been shown to reduce mortality from coronary heart disease, re-infarction rates and hospital admissions and improve quality of life for the patient and their family.
- The main goals of cardiac rehabilitation are:
  - To prevent further cardiovascular events by empowering patients to initiate and maintain lifestyle changes
  - To improve quality of life through the identification and treatment of psychological distress
  - To facilitate the patient's return to a full and active life by enabling the development of their own resources.
- Prior to hospital discharge, all eligible patients should be referred to attend a comprehensive cardiac rehabilitation programme.
- The main components of a comprehensive cardiac rehabilitation programme are:
  - Empowering patients to make lifelong changes
  - Exercise programmes
  - Nutrition management
  - Weight management
  - Smoking cessation
  - Managing psychosocial aspects of life
  - Pharmacotherapy
  - Ongoing personal follow-up and support.
- Cardiac rehabilitation provides the opportunity to coach and encourage positive lifestyle behaviours and increases compliance with medication use.
- For personal behaviour change, several key elements need to be present:
  - A belief that change is possible
  - Motivation to make the change
  - A support network and personal capacity to enact and sustain change.
- Physical activity improves functional capacity, risk factors and significantly reduces cardiovascular disease and total mortality. The benefits of regular, moderate physical acitivity are likely to outweigh any small increased risk of sudden death associated with vigorous exercise.
- A cardioprotective dietary pattern reduces cardiovascular and total mortality and is recommended. Modification of dietary fat should not be considered in isolation from a whole diet approach.
- All patients with coronary heart disease should be strongly encouraged to stop smoking and to avoid second-hand smoke.
- Up to 1 in 4 patients will experience a disabling level of anxiety or depression following a myocardial infarction. Psychosocial interventions are recommended.
- Pharmacotherapy with aspirin, a beta blocker, an ACE inhibitor and a statin can provide substantial benefits and these medications should be considered in all patients.
- Cardiac rehabilition should be viewed as a continuum from initial admission through to long-term follow-up. This requires integration between primary and secondary care.
- Audit, evaluation and patient feedback are integral aspects of quality improvement.
- Specific groups may require special consideration. Patients requiring extra support or varied options may include women, the elderly, the socioeconomically disadvantaged and those living in rural areas. People with diabetes are at particularly high risk and warrant priority.
- Ensuring Māori and Pacific peoples access to cardiac rehabilitation programmes is important and will help reduce disparities in cardiovascular disease outcomes. Existing programmes may need reorientation to increase responsiveness to Māori and Pacific peoples needs.

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CARDIAC REHABILITATION GOALS

GOALS	INTERVENTION
Psychosocial management:	Assess level of social support needed. Monitor symptoms of depression and anxiety. Advise on return to vocational activity, driving and return to sexual activity. Refer to home or hospital based comprehensive cardiac rehabilitation programme.
Smoking goal: Complete cessation	Assess tobacco use. Strongly encourage patient and family to stop smoking and avoid smoke. Facilitate counselling, pharmaco therapy and cessation programmes as appropriate.
Physical activity goal: At least 30 minutes on most days of the week	Assess exercise risk, preferably with exercise test to guide prescription. A gradual increase to periods of physical activity of at least 30 minutes most days of the week and an increase in daily lifestyle activities is advised. Vigorous exercise is not routinely recommended. The benefits of regular moderate physical activity overall, considerably outweigh any risk of sudden death.
Nutrition management goal: Adoption of a cardioprotective dietary pattern	This dietary pattern includes: • Large servings of fruit, vegetables and whole grains • Low fat dairy products • Small servings of unsalted nuts and seeds regularly • Fish or legumes frequently in place of fatty meat and full fat dairy products • Small lean meat servings.
Weight management goal:	For overweight or obese patients, an individually planned nutritionally balanced diet may be considered. The initial goal of weight loss should be to reduce the patient's weight by 10%. Encourage exercise and nutrition goals.
Lipid lowering medication goals: Total cholesterol < 4 mmol/L LDL cholesterol < 2.5 mmol/L	Ensure cardioprotective dietary change. Promote exercise and weight management. Assess fasting lipid profile. Start drug therapy (statin generally most appropriate; consider adding fibrate if low HDL or high TGL).
BP control goal: <120-140 / 80-90 or lower if diabetes	Ensure lifestyle measures. Add BP medication individualised to patient characteristics.
Antiplatelet agents	Continue aspirin indefinitely. If aspirin contraindicated, consider warfarin.
Beta blockers	Continue betablockers indefinitely unless contraindicated.
ACE inhibitors	Continue ACE inhibitor indefinitely in high-risk, post MI patients (anterior MI, previous MI, LV dysfunction or CHF). Consider chronic therapy in other patients.

For more detailed information on the evidence base to these recommendations, or lists of cardiac rehabilitation services, refer to the summary of the cardiac rehabilitation guidelines, or the full text of the guideline available from www.nzgg.org.nz or www.heartfoundation.org.nz These guidelines have been endorsed by:

Cardiac Rehabilitation Association of New Zealand

The Royal New Zealand College of General Practitioners

The Cardiac Society of Australia and New Zealand

Te Hotu Manawa Māori

The Royal Australasian College of Physicians New Zealand

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