Guidelines for Exercise Program Participation

Participation in outpatient cardiovascular disease prevention and rehabilitation and heart failure management programs may begin 1-2 weeks post discharge from hospital assuming the following indications and contraindications criteria are met.

Indications for Program entry

- Medically stable post myocardial infarction (MI)
- Stable angina
- Coronary artery bypass graft (CABG)
- Percutaneous coronary intervention (PCI) or other percutaneous procedure
- Compensated heart failure
- Cardiomyopathy
- Heart transplant
- Other cardiac surgery including valvular and pacemaker insertion (including ICD)
- Peripheral vascular disease (PVD)
- High risk cardiovascular disease ineligible for surgical intervention
- Sudden cardiac death syndrome
- At risk for CAD with diagnosis of risk factors for CVD
- Other patients who may benefit from structured exercise and/or education based on physician referral and consensus of the rehabilitation team

Entry should be a staff decision with approval of a medical officer. Unstable conditions such as unstable angina and decompensated heart failure are contraindicated.

NB: The table is a guide to assist clinical decision making. Exercise modifications should be made where appropriate to cater for and address all co-morbidities.

<table>
<thead>
<tr>
<th>Condition / Procedure</th>
<th>Barrier</th>
<th>Potential solution</th>
</tr>
</thead>
</table>
| Stable angina                          | Commence aerobic training, ROM & light resistance exercises 1-2 weeks post diagnosis / treatment if tolerated. a | • Monitor occurrence of symptom onset, frequency, duration, triggers and associated intensity  
• Modify intensity to remain below angina threshold  
• Consider longer warm-up  
• Carry anti-angina medication |
| Percutaneous procedures                 |                                                                        |                                                                                     |
| Angiogram                              |                                                                        |                                                                                     |
| PCI                                    |                                                                        |                                                                                     |
| Transcatheter aortic valve implantation (TAVI) | Commence aerobic training, ROM & light resistance exercises 1-2 weeks post procedure if tolerated. a Minimum 2-3 weeks before resistance training. b | • Monitor for signs and symptoms present prior to procedure  
• Observe percutaneous access site and modify exercise if wound or pain related issues |
<table>
<thead>
<tr>
<th>Condition / Procedure</th>
<th>Barrier</th>
<th>Potential solution</th>
</tr>
</thead>
</table>
| **Myocardial Infarction**                | Commence aerobic training, ROM & light resistance 1-2 weeks post procedure if tolerated. a Commence supervised endurance training 4 weeks post event. Minimum 5 weeks before commencing resistance training. b | • Monitor for signs and symptoms present prior to event/treatment  
• Consider ‘Angina’ guidelines  
• Consider ‘Percutaneous Procedures’ guidelines as above |
| **Cardiac Surgery**                      |                                                                                                                                                                                                        |                                                                                                               |
| Coronary artery bypass grafting (CABG)   | Commence aerobic training, ROM & light resistance exercises 1-2 weeks post procedure if tolerated. a Commence supervised endurance training 4 weeks post event. Minimum 5 weeks before commencing resistance training. b Progression of activities will be dependent upon sternal stability. |                                                                                                               |
| Valve Repair                             |                                                                                                                                                                                                        |                                                                                                               |
| Valve Replacement                        |                                                                                                                                                                                                        |                                                                                                               |
| **Implantable Devices**                  | Commence aerobic training 1-2 weeks post procedure. Avoid upper limb activities above the level of the shoulder on the implanted side for 4-6 weeks to prevent lead dislodgement. Commence and progress upper limb activities above shoulder level after 4-6 weeks or when cleared by the cardiologist. | • Identify reason for device and programmed settings  
• Check wound and seek medical advice if concerns  
• Requires 10% safety margin with HR upper limit at least 10bpm below programmed HR threshold for defibrillation  
• Avoid contact activities  
• Use pulse oximeter to monitor HR in preference to HR monitor |
| Permanent pacemaker (PPM)               |                                                                                                                                                                                                        |                                                                                                               |
| Implantable cardioverter defibrillator (ICD) |                                                                                                                                                                                                         |                                                                                                               |
| **Compensated Heart Failure (HF)**       | Commence aerobic training, ROM & light resistance 1-2 weeks post discharge if tolerated a (RPE 9-11 on 6-20 scale). Commencement of resistance training b will be determined by aetiology of HF and additional procedures. | • Initiate resistance training conservatively and progress slowly (RPE 9-13 with progression to 15 on 6-20 point scale)  
• Avoid isometric exercises  
• Monitor for signs and symptoms of decompensation or other adverse events including hypotension, sudden weight gain, SOB, peripheral oedema and unusual fatigue  
• Note increased potential for complex arrhythmias in these patients |

a 0.45kg up to 1.36kg hand weights/light free weights and elastic bands are appropriate  
b Resistance training defined as lifting 50% 1RM  

This information is a guide only. It does not replace clinical judgement.