

LIFESTYLE CHANGE AND DRUG THERAPY

This guideline on cardiac rehabilitation complements the SIGN guidelines on secondary prevention following MI and stable angina, which include the following recommendations for lifestyle modification and drug therapy for secondary prevention of coronary heart disease:

- Drug therapy**
 - Aspirin (75 mg/day) or clopidogrel
 - Statin (if total cholesterol ≥ 5 mmol/l)
 - Beta-blocker
 - ACE-inhibitor
- Hypertension**
 - Blood pressure lowering (if BP $\geq 140/90$)
- Smoking**
 - Brief supportive advice, reinforced regularly
 - Nicotine replacement therapy
- Diet**
 - Increase fruit & vegetables (5 portions/day)
 - Increase omega-3 fat intake
 - Reduce saturated fat increase
 - Weight loss if obese (BMI >30 kg/m²)
- Exercise**
 - Regular low to moderate intensity exercise (3-5) times per week)
- Diabetes**
 - Optimise glycaemic and BP control

LONG TERM FOLLOW UP

- A** **Structured care and follow up** in primary care should be provided for patients with coronary heart disease
CHD patients with **limiting symptoms** or **awaiting coronary revascularisation** should be considered for further comprehensive cardiac rehabilitation
- C** Encourage people with stable coronary disease to continue **regular moderate intensity aerobic exercise**
- Fitness instructors delivering maintenance exercise programmes should hold an S/NVQ Level 3 Instructor qualification

The Scottish Intercollegiate Guidelines Network (SIGN) support improvement in the quality of health care for patients in Scotland by developing national clinical guidelines containing recommendations for effective practice based on current evidence.

The recommendations are graded **A B C D** to indicate the strength of the supporting evidence.

Good practice points are provided where the guideline development group wish to highlight specific aspects of accepted clinical practice.

Details of the evidence supporting these recommendations and their application in practice can be found in the full guideline, available on the SIGN website: www.sign.ac.uk.

This guideline was issued in January 2002 and will be considered for review in 2005.

For more information about the SIGN programme, contact the SIGN executive or see the website.

SIGN Executive
Royal College of Physicians
9 Queen Street
Edinburgh EH2 1JQ

www.sign.ac.uk

Cardiac Rehabilitation

This Quick Reference Guide provides a summary of the main recommendations in the SIGN guideline on Cardiac Rehabilitation

Cardiac rehabilitation is the process by which patients with cardiac disease, in partnership with a multidisciplinary team of health professionals, are encouraged and supported to achieve and maintain optimal physical and psychosocial health.

Comprehensive cardiac rehabilitation consists of exercise training, behavioural change, education and psychological support to facilitate a return to normal living and to encourage patients to make lifestyle changes in order to prevent further events.

Educational and psychological support is also needed to deal with psychological distress, which is common following MI, and is associated with poorer outcome.

Every year, an estimated 8,000 people in Scotland survive a myocardial infarction (MI), 13,000 angina patients require admission to hospital, and 6,000 patients undergo coronary revascularisation. All of these people, together with around 6,000 patients with chronic heart failure, could potentially benefit from cardiac rehabilitation.

- A** **Comprehensive cardiac rehabilitation** is recommended:
 - Following **myocardial infarction**
 - Following **coronary revascularisation**
 - For patients with **stable angina** or **chronic heart failure** with limiting symptoms or after a new event

- B** **Women** and **older patients** should be included in comprehensive cardiac rehabilitation programmes



This guideline is supported and endorsed by the **British Association for Cardiac Rehabilitation (BACR)**

PSYCHOLOGICAL AND EDUCATIONAL INTERVENTIONS

- A** Comprehensive cardiac rehabilitation should include both **psychological and educational interventions**
- A** Comprehensive cardiac rehabilitation should be delivered using **established principles of adult education and behavioural change**
- B** **Target psychological and behavioural interventions** at the needs of individual patients with coronary heart disease
- B** Identify and address **health beliefs and cardiac misconceptions** with CHD patients
- A** Use the **Heart Manual*** to facilitate comprehensive cardiac rehabilitation
- * **Heart Manual Office:** heart.manual@genie.co.uk
- B** Screen patients for **anxiety and depression** using a validated assessment tool, such as the Hospital Anxiety and Depression (HAD) scale
- Screening should take place at discharge, 6-12 weeks post MI or following a decision on surgical intervention, and repeated at three month intervals if appropriate
This will allow measurement of baseline risk to assess prognosis and tailor treatment, and monitoring of improvement
- A** **Patients in whom anxiety or depression is diagnosed should be treated appropriately**
- Caution should be exercised in selecting an antidepressant which does not have significant cardiac side effects
- B** Patients with moderate to severe psychological difficulties should be treated by staff with specialist training in techniques such as **cognitive behavioural therapy**

PHASE 1

The inpatient stage or after a 'step change' in the patient's cardiac condition (MI, onset of angina, any emergency hospital admission for CHD, cardiac surgery or angioplasty, or first diagnosis of heart failure).

Includes medical evaluation, reassurance and education, correction of cardiac misconceptions, risk factor assessment, mobilisation and discharge planning.

PHASE 2

The early post discharge period, a time when many patients feel isolated and insecure. Psychological distress and poor social support are powerful predictors of outcome following MI, independent of the degree of physical impairment.

Support can be provided by home visiting, telephone contact, and by supervised use of the Heart Manual or an equivalent cognitive behavioural programme.

PHASE 3

Structured exercise training together with continuing educational and psychological support and advice on risk factors. All components can be undertaken safely and effectively in the community.

A menu-based approach recognises the need to tailor services to the individual and is likely to include specific education to reduce cardiac misconceptions, encourage smoking cessation and weight management; vocational rehabilitation to assist return to work or retirement; and referral to a psychologist, cardiologist, or exercise physiologist if appropriate.

Most patients will benefit from and should be encouraged to undertake at least low to moderate intensity exercise. However, patients with clinically unstable cardiac disease, complicating illness, or serious psychotic illness should be excluded from exercise training.

PHASE 4

Long term maintenance of physical activity and lifestyle change.

EXERCISE TRAINING

- A** **Exercise training** is a core element of cardiac rehabilitation and should be offered **at least twice a week for a minimum of eight weeks**
- D** **Clinical risk stratification** is sufficient for low to moderate risk patients undergoing low to moderate intensity exercise
Exercise testing and **echocardiography** are recommended for high risk patients and/or high intensity exercise (and to assess residual ischaemia and ventricular function where appropriate)
- D** **Functional capacity** should be evaluated before and on completion of exercise training using a valid and reliable measure (e.g. the shuttle walking test)
- B** **Aerobic, low to moderate intensity exercise** is recommended for most patients undergoing exercise training and can be undertaken **safely and effectively in the home or community**
- D** Training for **high risk patients or high intensity exercise** should be in hospital or a venue with full resuscitation facilities
- D** The ratio of patients to trained staff during exercise classes should be no more than **10:1**
Staff with **basic life support training** and the ability to use a defibrillator are required for **group exercise of low to moderate risk patients**.
Immediate access to on-site staff (hospital emergency team) with **advanced life support training** is required for **high risk patients** or classes offering **high intensity training**
- D** **Monitor exercise intensity** by perceived exertion using the Borg scale or a pulse monitor
- C** Low to moderate risk cardiac patients can undertake **resistance training**