Cardiac rehabilitation can improve both physical and psychosocial wellbeing in people with cardiovascular disease – yet fewer than half of patients access it.

Improving wellbeing with cardiac rehabilitation

Evidence for the effectiveness of cardiac rehabilitation

Elements of cardiac rehabilitation programmes

Requirements for delivering rehabilitation programmes

5 key points

1. Cardiac rehabilitation can improve the health and wellbeing of patients with cardiovascular disease.

2. Programmes should be tailored to individual needs and enable patients to set achievable goals.

3. Successful cardiac rehabilitation requires multi-agency, multiprofessional collaboration to identify and refer patients.

4. Services should be delivered by competent, skilled practitioners.

5. Audit and evaluation are crucial to ensure patients receive evidence-based care.

Cardiovascular disease (CVD) remains the highest cause of mortality in the UK (Scarborough et al, 2011), accounting for a third of all deaths in adults. In 2009 it resulted in around 180,000 deaths, of which 80,000 were due to coronary heart disease (CHD).

The mortality rate from CHD has been declining in the UK due to several factors: the development of a national service framework (Department of Health, 2000), improved interventions and drug therapies, and primary and secondary prevention strategies on an individual level and through public health measures such as the ban on smoking in public buildings (Meyers, 2009).

Despite this decline in mortality, there is likely to be an increase in morbidity as more people survive acute cardiac events and go on to live with long-term cardiac conditions. Cardiac conditions negatively affect physical, psychological and social wellbeing. Many patients experience higher levels of anxiety and stress and lose confidence after a cardiac event, and many do not return to their previous role within society (Shibeshi et al, 2007).

Cardiac rehabilitation can address secondary prevention of CVD and the physical, social and psychological impact.

Cardiac rehabilitation

The benefits of exercise on the heart was first noted by Heberton in 1772. It is now recognised as an integral component of cardiac patient care (National Institute for Health and Clinical Excellence, 2011; 2007).

It is defined by the British Association for Cardiovascular Prevention and Rehabilitation (2012) as: “The coordinated sum of activities required to influence favourably the underlying cause of cardiovascular disease, as well as to provide the best possible physical, mental and social conditions, so that the patients may, by their own efforts, preserve or resume optimal functioning in their community and, through improved health behaviour, slow or reverse progression of disease.”

Despite being embedded in national policies and guidance that address the prevention and management of CVD (NICE, 2011; 2010; 2009; 2007), fewer than 50% of eligible patients access cardiac rehabilitation; reasons include a lack of services, timing of classes, transport problems and family commitments (University of York, 2011). This means many are being denied an evidence-based treatment that can improve their health and quality of life.

A strong body of evidence demonstrates a reduction in cardiac mortality of 26-36% and overall mortality of 13-26% following cardiac rehabilitation (Heran et al, 2011; Lawler, 2011). It improves quality of life and...
Cardiac rehabilitation service are as follows:

- Health behaviour change and education;
- Lifestyle risk factor management;
- Psychosocial health;
- Medical risk factor management;
- Cardioprotective therapies;
- Long-term management;
- Audit and evaluation (BACPR, 2012).

These components provide positive outcomes from cardiac rehabilitation, with patients receiving an evidence-based service. Each component must be delivered by trained, competent staff and tailored to meet individual needs. Programmes should be delivered in collaboration with the multidisciplinary team, and work towards national guidance (NICE, 2010; 2007; Joint British Societies, 2005).

The multidisciplinary team usually consists of nurse specialists, a cardiologist, a physiotherapist, exercise professionals, occupational therapists, clinical psychologists, a dietitian, a pharmacist, and clerical and support staff (BACPR, 2012).

Health behaviour change and education
Cardiac rehabilitation is about changing behaviour, self-management and increasing confidence and wellbeing.

The BACPR (2012) recommends a biopsychosocial evidence-based approach, working with patients and families using health behaviour change interventions (Michie et al, 2008). Any cardiac misconceptions should be addressed that may hinder progression (French et al, 2006) to achieve goals.

Lifestyle risk factor management
This should incorporate physical activity and exercise, a healthy diet, avoidance of obesity and smoking cessation, working towards national guidance targets (NICE, 2010; 2007).

Psychosocial health
Many patients with CVD have altered psychosocial health (Shibeshi et al, 2007) that, if untreated, can lead to poor outcomes, so assessment of anxiety, depression, illness perception and quality of life should be undertaken using validated tools. Some patients may need to be able to access psychosocial practitioners (Michie et al, 2008).

Medical risk factor management
Controlling lipids, blood pressure and glucose will improve patients’ outcomes (NICE, 2012; 2007), so programmes should involve assessing and addressing these issues through education, lifestyle advice and pharmacological therapy as required. Assessment of health beliefs will identify cardiac misconceptions and make it clear what support the patient may need.

Cardioprotective therapies
Management of CVD is changing and today patients are managed with drug therapy and cardiac devices, both implantable cardiac defibrillators and cardiac resynchronisation therapy. Patients who have these devices are known to benefit from cardiac rehabilitation and should be offered rehabilitation (NICE, 2010).

Cardioprotective drugs include: antiplatelets; lipid-lowering drugs; beta-blockers (post myocardial infarction); ACE inhibitors/angiotensin receptor blockers; aldosterone antagonists; calcium channel blockers; anticoagulants; and diuretic therapies. Rehabilitation provides the opportunity to assess the patients’ understanding of and adherence to medication and to titrate medication appropriately.

Long-term management
Patients undertaking cardiac rehabilitation are living with a long-term condition. When they complete the programme, they should have a clear understanding of their...
Traditionally, cardiac rehabilitation has been referred to in four phases:
» Inpatient;
» Early after discharge;
» Structured programmed;
» Long-term maintenance.

Today, a more integrated programme of prevention, behaviour change and education offers patients greater choice, with the ability to select components using a menu-type approach. The DH (2010) has developed a cardiac rehabilitation pathway to support commissioners (Box 3).

Patients go through each stage but may spend different times within each one. The pathway can be complex as it crosses traditional boundaries, but it facilitates the delivery of a truly menu-based, individualised cardiac rehabilitation pathway.

Conclusion
Cardiac rehabilitation is often considered in terms of the components of exercise, education and stress management. A combination of these, as part of an integrated service, delivered by skilled and competent practitioners has an evidence base. These services should be accessible to all patients.

Cardiac rehabilitation staff are required to give care while at the same time ensuring services continue to develop, thereby enabling patients to have access to treatment that will improve their health. NT

References
Association of Chartered Physiotherapists in Cardiac Rehabilitation (2009) Standards for Physical Activity and Exercise in the Cardiac Population. tinyurl.com/ACPCR-cardiac-activity
Heron BS et al (2011) Exercise-based cardiac rehabilitation for coronary heart disease. Cochrane Database of Systematic Reviews; issue 7; art no: CD008100.DOI:10.1002/14651858.CD008100.pub2

Audit and evaluation
These core components assist the development of patient care and service.

Referral and recruitment
To increase uptake cardiac rehabilitation programmes need a clear referral pathway, which should facilitate referrals from hospital or primary care.

A Cochrane review (Davies et al, 2010) showed that referral processes and engagement from medical staff and nurse specialists increase uptake and completion of cardiac rehabilitation. There should be no restrictions on the basis of age, gender or ethnicity as cardiac rehabilitation benefits all groups. While it is effective for a wide range of conditions (Box 2), many services have resource constraints and restrict services to priority groups. The DH (2010) suggests these include patients with acute coronary syndrome, stable heart failure or who have undergone revascularisation.

Assessment and delivery
Patient assessment should be carried out before, during and after rehabilitation. The initial assessment should identify needs across all the core components and identify physical, psychological, psychosocial and health behaviour requirements.

The assessment will also include a risk stratification (Association of Chartered Physiotherapists in Cardiac Rehabilitation, 2009), which incorporates an assessment of ventricular function, arrhythmias, symptoms and functional capacity to ensure an appropriate programme.

BOX 2. CONDITIONS IMPROVED BY CARDIAC REHABILITATION
- Acute coronary syndrome
- Following revascularisation
- Stable heart failure
- Stable angina
- Following implantation of implantable cardiac defibrillator or cardiac resynchronisation therapy
- Heart valve repair/replacement
- Grown-up congenital heart disease
- Heart transplant and left ventricular assist device
- Other atherosclerotic disease

Source: BACPR (2012)

BOX 3. PATIENT PATHWAY

Stage 0: Identify and refer patients
Stage 1: Manage referral and recruit patient
Stage 2: Assess patient
Stage 3: Develop care plan
Stage 4: Deliver comprehensive cardiac rehabilitation programme
Stage 5: Conduct final cardiac rehabilitation assessment
Stage 6: Discharge and transition to long-term maintenance

Source: DH (2010)