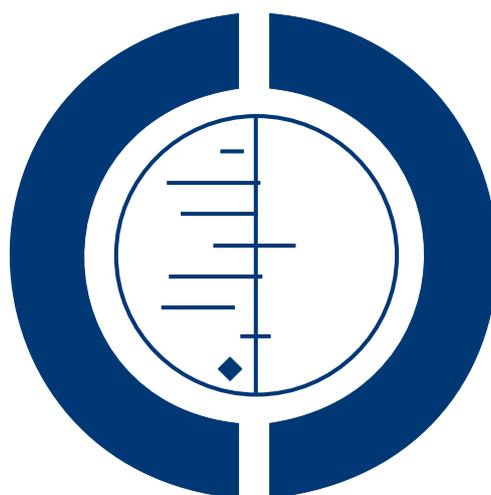


Promoting patient uptake and adherence in cardiac rehabilitation (Review)

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[Intervention Review]

Promoting patient uptake and adherence in cardiac rehabilitation

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ABSTRACT

Background

Cardiac rehabilitation is an important component of recovery from coronary events but uptake and adherence to such programs are below recommended levels. In 2010, our Cochrane review identified some evidence that interventions to increase uptake of cardiac rehabilitation can be effective but there was insufficient evidence to provide recommendations on intervention to increase adherence. In this review, we update the previously published Cochrane review.

Objectives

To determine the effects, both harms and benefits, of interventions to increase patient uptake of, or adherence to, cardiac rehabilitation.

Search methods

We performed an updated search in January 2013 to identify studies published after publication of the previous systematic review. We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (Issue 12, 2012), MEDLINE (Ovid), EMBASE (Ovid), CINAHL EBSCO, Conference Proceedings Citation Index - Science (CPCI-S) on Web of Science (Thomson Reuters), and National Health Service (NHS) Centre for Reviews and Dissemination (CRD) databases (Health Technology Assessment (HTA) and Database of Abstracts of Reviews of Effects (DARE)) on *The Cochrane Library* (Issue 4, 2012). We also checked reference lists of identified systematic reviews and randomised controlled trials (RCTs) for additional studies. We applied no language restrictions.

Selection criteria

Adults with myocardial infarction, coronary artery bypass graft, percutaneous transluminal coronary angioplasty, heart failure, angina, or coronary heart disease eligible for cardiac rehabilitation and RCTs or quasi-randomized trials of interventions to increase uptake or adherence to cardiac rehabilitation or any of its component parts. We only included studies reporting a primary outcome.

Data collection and analysis

At least three authors independently screened titles and abstracts of all identified references for eligibility and obtained full papers of potentially relevant trials. At least two authors checked the selection. Three authors assessed included studies for risk of bias.

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Main results

The updated search identified seven new studies (880 participants) of interventions to improve uptake of cardiac rehabilitation and one new study (260 participants) of interventions to increase adherence. When added to the previous version of this review, we included 18 studies (2505 participants), 10 studies (1338 participants) of interventions to improve uptake of cardiac rehabilitation and eight studies (1167 participants) of interventions to increase adherence. We assessed the majority of studies as having high or unclear risk of bias. Meta-analysis was not possible due to multiple sources of heterogeneity. Eight of 10 studies demonstrated increased uptake of cardiac rehabilitation. Successful interventions to improve uptake of cardiac rehabilitation included: structured nurse- or therapist-led contacts, early appointments after discharge, motivational letters, gender-specific programs, and intermediate phase programs for older patients. Three of eight studies demonstrated improvement in adherence to cardiac rehabilitation. Successful interventions included: self monitoring of activity, action planning, and tailored counselling by cardiac rehabilitation staff. Data were limited on mortality and morbidity but did not demonstrate a difference in cardiovascular events or mortality except for one study that noted an increased rate of revascularization in the intervention group. None of the studies found a difference in health-related quality of life and there was no evidence of adverse events. No studies reported on costs or healthcare utilization.

Authors' conclusions

We found only weak evidence to suggest that interventions to increase the uptake of cardiac rehabilitation are effective. Practice recommendations for increasing adherence to cardiac rehabilitation cannot be made. Interventions targeting patient-identified barriers may increase the likelihood of success. Further high-quality research is still needed.

PLAIN LANGUAGE SUMMARY

Promoting patient uptake and adherence in cardiac rehabilitation

Background

Cardiac rehabilitation programs aid recovery from cardiac events such as heart attacks, coronary stent placement, and bypass surgery and reduce the likelihood of further illness. Cardiac rehabilitation programs vary, but usually include one or more of the following: exercise, education, and psychological counselling/support. Despite the benefits of cardiac rehabilitation, not everyone agrees to participate and, of those who do, many people do not adhere to the program recommended. This review updates a previously published Cochrane review that evaluated trials of strategies to promote the uptake of or adherence to cardiac rehabilitation.

Study characteristics

We searched a wide variety of scientific databases for randomised controlled trials (studies that allocate participants to one of two or more treatment groups in a random manner) in adults (over 18 years of age) who had a heart attack, coronary artery bypass graft (a surgical procedure that diverts blood around narrowed or clogged sections of the major arteries to improve blood flow and oxygen supply to the heart), percutaneous transluminal coronary angioplasty (a procedure that opens up blocked coronary arteries), heart failure, angina, or coronary heart disease who were eligible for cardiac rehabilitation. The search was current to January 2013.

Key results

We found 18 trials that were suitable for inclusion (10 trials of interventions to improve uptake and eight trials of interventions to improve adherence). The studies evaluated a variety of techniques to improve uptake or adherence and, in many studies, a combination of strategies was employed.

Strategies to increase uptake were generally effective and included regular nurse- or therapist-led visits, early appointments after discharge, motivational letters, gender-specific programs, and intermediate phase programs for older patients. We assessed few studies as having low risk of bias (low risk of arriving at wrong conclusions because of favoritism by the researchers). Only a small number of studies demonstrated an improvement in adherence with effective interventions including: daily self monitoring of activity, action planning, and adherence facilitation by cardiac rehabilitation staff. However, the risk of bias in these studies was high. We found no evidence that these interventions improved health-related quality of life or reduce cardiovascular events or total mortality. We found no evidence to suggest that interventions to promote uptake or adherence to cardiac rehabilitation cause harm. We found no studies providing information about costs or resource implications.

Quality of the evidence

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There was only weak evidence to suggest that interventions to increase uptake of cardiac rehabilitation were effective. Practice recommendations for increasing adherence to cardiac rehabilitation cannot be made. Further high-quality research is needed, particularly in under-represented groups of people such as women, ethnic minorities, older patients, patients with heart failure, and people with comorbidities (presence of one or more diseases or conditions other than those of primary interest).