Pre-operative education for the patient having coronary artery bypass surgery

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Authors' objectives
To establish whether pre-operative education benefits patients following coronary artery bypass surgery (CABG), and to identify the outcomes affected.

Searching
MEDLINE, CINAHL, PsycLIT and the Cochrane Library were searched using the subject headings 'surgery', 'patient education', 'pre-operative care' and 'education'.

Study selection
Study designs of evaluations included in the review
Only randomised controlled trials (RCTs) were eligible for inclusion.

Specific interventions included in the review
The review did not specify clearly the types of interventions to be reviewed, but those included in the review were of pre-operative education. This took various forms: booklets, slide shows, video telephone or other. The content also varied but included information on, for example, tests, procedures, anatomy, possible complications, and physiotherapy. These were listed in the review.

Participants included in the review
Patients preparing to undergo cardiac surgery. Although the review specified CABG, some studies included patients undergoing cardiac valve surgery as well as those undergoing CABG.

Outcomes assessed in the review
The outcome measures of interest were not specified in advance of the review. The following outcomes were reported in the included studies: anxiety; knowledge; chest drain removal; satisfaction; progress; length of stay in the hospital; well-being; mood; hypertension; preparedness for operation; level of exercise; satisfaction with teaching; self-efficacy beliefs; post-operative ambulation; incentive spirometry; and speed of recovery. The outcomes for which data were available were anxiety, well-being (mood and emotions), knowledge and length of stay in the hospital.

How were decisions on the relevance of primary studies made?
The author does not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality
The quality of the studies was assessed using a published checklist for RCTs (see Other Publications of Related Interest). The quality checklist was used by the author and checked blind by a second person.

Data extraction
The author does not state how the data were extracted for the review, or how many of the reviewers performed the data extraction. The categories of data extracted were: bibliographic details; the type of surgery; the number of patients; content of the education; the outcomes measured; and results (summary data).

Methods of synthesis
How were the studies combined?
The studies were combined narratively. Seven studies that both included patients undergoing CABG and incorporated
a trial design, were described in some detail in the text.

How were differences between studies investigated?
The studies were grouped by CABG and outcome.

**Results of the review**
Seven studies (n=577) were included in the review.

The outcomes for which data were available were analysed; there was little evidence to suggest that pre-operative education benefits patients in the post-operative phase following CABG. This was particularly evident in relation to anxiety. There were significant positive effects in respect of well-being and knowledge in some studies. Only one study produced a shortened length of stay, although the authors of the study reported that this finding might have been due to different hospital practices.

**Authors’ conclusions**
There was limited evidence to suggest that pre-operative education benefits the patients' recovery from CABG. However, this finding should be considered with caution as this body of research suffered from weak design and there were limited data available.

**CRD commentary**
This review addressed an appropriate question but the criteria for the inclusion of the studies were ill-defined. It is therefore possible that the study selection was subject to bias. The literature search was fairly comprehensive in terms of electronic databases, but no handsearches were conducted and there was no search for unpublished material. The methodology in terms of, for example, the number of reviewers and independent checking, was not reported clearly. The quality of the studies was assessed and the results of the assessment were presented in the review. A good level of detail of the seven individual studies was provided. The synthesis of the data was limited, consisting only of a list of summary statistics and a brief statement. The conclusions of the review are supported by the findings presented but, given the very general nature of the conclusions, the individual studies are currently a better source of information on this topic.

**Implications of the review for practice and research**
Practice: The author states that a range of pre-operative education is used, which provides a wide range of information. She concludes that all these aspects of care and treatment are relevant for the patient undergoing coronary artery surgery, and the provision of this type of information might be expected to increase the patients' knowledge.

Research: The author states that this review suggests that the position for people having CABG is far from clear. Further research to examine different education programmes, variations in timing whilst awaiting operation, the influence of the severity of the patient's disease and longer term effects, would be useful.

**Bibliographic details**

**PubMedID**
11369146

**Other publications of related interest**
Indexing Status
Subject indexing assigned by NLM

MeSH
Coronary Artery Bypass; Humans; Patient Education as Topic; Preoperative Care; Randomized Controlled Trials as Topic

AccessionNumber
12001001543

Date bibliographic record published
31/10/2002

Date abstract record published
31/10/2002

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.