Nursing intervention for fatigue during the treatment for cancer

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CRD summary
This review concluded that exercise interventions delivered by nurses seem to be effective for preventing the worsening of cancer related fatigue during treatment. Evidence for other interventions was unclear. The review had methodological and reporting weaknesses and many included studies had a weak design and/or small sample size. These limitations suggest that the conclusions should be treated with caution.

Authors' objectives
To identify interventions that can be used by nurses to prevent or reduce fatigue during cancer treatment.

Searching
The authors searched PubMed and CINAHL from 1995 to February 2005. Search terms were reported.

Study selection
Studies of non-pharmacological interventions that could be applied by nurses to prevent or reduce cancer-related fatigue during treatment for cancer in adults were eligible for the review. Inclusion criteria for study designs were not stated. Included studies were randomised controlled trials (RCTs) or used a pre-test/post-test, longitudinal or crossover design. One qualitative study was included. Included interventions involved exercise, education and counselling, distraction and relaxation, and sleep promotion. Comparator groups received standard care. Participants in most studies were women who underwent chemotherapy for breast cancer. Fatigue was measured with a variety of scales, the most common was the Piper revised fatigue scale.

The first 100 of 192 abstracts retrieved by the search were screened by two reviewers with 100% agreement; the rest were screened, by one reviewer. Further details of study selection were not reported.

Assessment of study quality
The authors did not state that they assessed validity. The authors did, however, describe some aspects of quality, including sample size, use of a power calculation and potential sources of bias.

Data extraction
The authors stated neither how the data were extracted for the review nor how many reviewers performed the data extraction.

Methods of synthesis
Studies were synthesised in a narrative grouped by type of intervention (exercise, education and counselling, distraction and relaxation, and sleep promotion). Differences between studies were discussed in the text and presented in tables.

Results of the review
Eighteen studies were included in the review: 10 (n=475) assessed exercise; five (n=531) education and counselling; two (n=55) distraction/relaxation; and one (n=25) sleep promotion. Nine of the included studies were RCTs.

Most studies of exercise found a positive effect of the intervention in reducing fatigue. All five studies that compared exercisers with non-exercisers (rather than experimental versus control group) found a significant positive effect of exercise. Two studies of education/counselling reported a positive effect of the intervention, one found no effect and two a negative effect. Distraction/relaxation reduced fatigue in both studies that evaluated this intervention, but duration of the effect was uncertain. The one pre-test/post-test study that evaluated sleep promotion did not find a significant effect of the intervention.
Authors' conclusions
Exercise seemed to be an effective intervention for preventing the worsening of cancer-related fatigue during treatment.

CRD commentary
This review had generally clear inclusion criteria except that no inclusion criteria for study designs were stated. This meant that the review was not limited to the types of study best able to provide evidence of the effectiveness of interventions. The search was limited to two databases, so it was possible that some relevant studies were missed. It was unclear whether language restrictions were imposed, so the risk of language bias was unknown. Publication bias was not assessed. Validity of included studies was not formally assessed, although the authors did discuss some aspects of validity in the text. There was an attempt to ensure consistency in study selection, but this fell short of independent assessment by two reviewers. Methods used for data extraction were not reported, so the risk of errors or bias in the process was uncertain. The use of a narrative synthesis was appropriate in view of the wide range of interventions included. The authors' conclusions followed from the evidence presented, but the reliability of the evidence is uncertain (small number of included studies, many with a weak design and/or small sample size) and the conclusions should be treated with caution. Most of the included studies were of women with breast cancer who underwent chemotherapy and the review findings may not be generalisable to other groups.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that more research was needed to evaluate sleep promotion and education and counselling. They also stated that an individual plan involving a combination of interventions should be tested in an RCT.

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