Physical activity as a supportive care intervention in palliative cancer patients: a systematic review

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CRD summary
The review concluded there was insufficient evidence to evaluate the efficacy of physical activity as a supportive care intervention in palliative cancer patients. This conclusion reflected the limited data available and is likely to be reliable.

Authors' objectives
To evaluate physical activity as a supportive care intervention in palliative cancer patients.

Searching
The authors stated that 14 electronic databases, three journals, and two conference proceedings were searched, without reporting any further details (other than there were no language restrictions). Study authors were also contacted to identify further studies.

Study selection
Studies of physical activity interventions in palliative cancer patients (aged 18 years or older) were eligible. Studies had to report at least one of the (patient-reported) primary outcomes of quality of life, physical functioning, or fatigue.

Half the included studies were of aerobic exercise interventions; half were of both aerobic exercise and resistance training. Most studies were hospital-based. Intervention frequency ranged from bi-weekly to daily sessions. Durations of treatment ranged from four to 52 weeks. Patients with a range of cancers were included. A variety of outcome tools and scores were used.

Two reviewers independently selected studies for inclusion, with disagreements resolved by consensus or by a third reviewer.

Assessment of study quality
Two reviewers independently evaluated study quality using the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies 2003, which assessed criteria (and rated them as being strong, moderate, or weak) for selection bias, study design, confounders, blinding, data collection methods, and withdrawals and drop-outs.

Data extraction
Two reviewers independently extracted data.

Methods of synthesis
Statistical pooling was not possible due to clinical heterogeneity, so a narrative synthesis was presented, grouped by outcome.

Results of the review
Six studies were included in the review (n=84 patients). The studies included one randomised controlled trial (RCT, n=38 patients), two non controlled trials (n=43 patients), and three case reports (n=3 patients). All studies were pilot studies and were of poor methodological quality.

Three studies reported an increase in patient-reported quality of life scores.

The RCT reported that patients receiving the home-based exercise programme had a significantly slower decline in total well-being scores and a slower rate of increase in fatigue than the control group.

All three case studies reported an increase in work capacity and physical fitness measures after exercise.
Authors' conclusions
There was insufficient evidence to evaluate the efficacy of physical activity as a supportive care intervention in palliative cancer patients.

CRD commentary
The review addressed a clear question supported by broad eligibility criteria. Several methods were used to identify relevant studies in any language, although details of databases searched and the search dates and terms used were not reported. Independent duplicate methodology was used to minimise the risk of reviewer error and bias throughout the review processes.

Study quality was assessed, but was of limited use as all studies were pilot studies. Sufficient primary study details were presented and an appropriate narrative synthesis was conducted.

The authors' conclusions reflected the limited data available and are likely to be reliable.

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

Research: The authors stated that further studies are needed to develop and refine standardised outcome assessments for physical activity interventions. They also stated that future pilot studies should determine the physical activity behaviour, determinants, interests and preferences of patients before developing physical activity interventions. They added that methodologically rigorous studies with larger sample sizes and appropriate comparison groups are warranted.

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