Nonpharmacological approaches to the management of chronic pain in community-dwelling older adults: a review of empirical evidence

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CRD summary
This review concluded that some non-pharmacological interventions relieved chronic pain in older adults, but the most appropriate intervention was unknown. Further research was necessary. These conclusions should be treated with some caution given limitations in the conduct of the review.

Authors' objectives
To investigate the efficacy of non-pharmacological interventions for the management of chronic pain in community-dwelling older adults

Searching
MEDLINE (from 1965), CINAHL (from 1937) and PsycINFO (from 1965) were searched for articles published in English in peer-reviewed journals up to February 2011. Search strategies were available. Reference lists of identified articles were checked for additional studies.

Study selection
Randomised controlled trials (RCTs) of participants aged 65 and older living in the community were eligible for the review. Non-pharmacological interventions were eligible, which included both physical and psychosocial interventions. Primary outcome was non-cancer chronic pain. Studies of patients currently diagnosed with cancer, acute major trauma or infection were excluded.

Mean age of included participants ranged from 62.8 to 86 across the study treatment groups. Most patients reported pain at one specific site or at various sites. Exclusion of patients with comorbid conditions and cognitive impairment varied across the studies. Most common interventions were acupuncture (alone or combined with other interventions), exercise treatments (alone or combined with other physical interventions) and self-management education. Pain and mobility measures also varied.

Two reviewers were involved in the selection of studies for the review with any disagreements resolved by consensus.

Assessment of study quality
The authors did not state that they assessed quality.

Data extraction
Two reviewers independently extracted data from the studies with any disagreements resolved by consensus.

Methods of synthesis
Studies were combined in a narrative synthesis grouped by intervention.

Results of the review
Twenty-eight studies were included in the review (3,669 participants). Sample size ranged from 20 to 570. Lack of reliable sham treatment of controls and inadequate blinding were reported. Follow-up was insufficient in most studies to determine maintenance of any intervention effect. The lack of reporting of variables that might influence the effect of an intervention was identified as a problem.

Twenty-one of 28 studies demonstrated statistically significant differences between non-pharmacological treatment groups and no intervention or sham intervention; those who received non-pharmacological interventions reported lower pain intensity.

Eighteen studies focused on physical interventions whereas ten considered psychosocial interventions. Seven of 10
psychosocial interventions showed efficacy of the intervention for pain and/or disability.

Results were also reported by intervention.

**Authors’ conclusions**
Some non-pharmacological interventions relieve chronic pain in older adults but the most appropriate intervention was unknown. Further research was necessary.

**CRD commentary**
This review was based on defined inclusion criteria and underpinned by searching a small range of sources of information. Only articles published in English were eligible, so language and publication biases were possible. Study quality was not formally assessed so the reliability of included studies was unclear. A narrative synthesis was appropriate given the diversity of the evidence. Two reviewers were involved in the review process which helps to minimise bias and error. The conclusions should be treated with some caution given these limitations.

**Implications of the review for practice and research**

**Practice**: Non-pharmacological interventions may have been useful for those patients who could not tolerate pain medications, those who wished to reduce multiple medications and those who were seeking alternative methods of relieving chronic pain.

**Research**: Larger studies of interventions shown to be effective (acupuncture and exercise) should be conducted. More studies were needed to determine the best format, intensity, duration and content of interventions. Future research should take the form of rigorous RCTs with sufficient follow-up. They should recruit diverse groups of older adults with disability, cognitive impairment and multiple comorbidities and examine relevant geriatric outcomes. Research was needed in groups from various race and ethnicity.

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