CRD summary
This review found no convincing evidence that internal qigong (a form of controlled breathing with specific slow body movements and relaxation) was beneficial for pain management. Overall this was a well-conducted review that highlighted the limitations of the evidence in this area of complementary medicine.

Authors' objectives
To assess the effectiveness of internal qigong (a form of controlled breathing with specific slow body movements and relaxation) as a treatment for pain conditions.

Searching
The authors searched seven Western and 11 non-Western medical databases from inception up to February 2009. No language restrictions were applied. Full details of databases and search terms were reported. Experts were contacted particularly for unpublished research. References of all located articles, relevant published book chapters and departmental files were handsearched.

Study selection
Eligible studies needed to be prospective controlled trials of internal qigong compared to any control intervention. Trials that used qigong as an adjunct to conventional treatment were eligible. Trials that included qigong as part of a complex treatment intervention or trials that used both internal and external qigong were excluded. Trials were excluded if pain was not a central symptom of the condition under investigation.

The authors did not state how many reviewers were involved in the selection of studies for the review.

Across the studies, treated conditions included low back pain, neck pain, fibromyalgia, cancer pain, labour pain and shoulder pain. One study focused on children. The other studies had adult participants with ages that ranging from 18 to 71 (where stated). Trials were from both Western and non-Western countries. Outcome measures were 100mm visual analogue scales and Likert scales. The number of qigong sessions ranged from four to about 24. Supervised interventions ranged from one to seven sessions weekly with a duration of 15 to 60 minutes per session. Control groups participated in a range of interventions including electromyography biofeedback, exercise, chemotherapy or were placed on a waiting list or received no treatment.

Assessment of study quality
The authors used a modified Jadad scale to assess quality that allowed for the fact that practitioners could not be blinded for this intervention. Points were awarded up to a maximum of 4 for reporting of randomisation, appropriateness of randomisation method, blinding of evaluator and description of withdrawals and dropouts. Trial validity was also assessed on the Oxford Pain Validity Scale (OPVS) of eight criteria to award up to 16 points for blinding, size, statistics, dropouts, credibility of statistical significance and authors' conclusions, baseline measures and outcomes.

Data on study quality were extracted independently by two of the authors. Discrepancies were resolved by discussion or by recourse to a third reviewer.

Data extraction
Data were extracted independently by two of the authors who used a specifically designed data extraction form. Discrepancies were resolved by discussion or recourse to a third reviewer.

Methods of synthesis
Studies were combined in a narrative synthesis broadly grouped by condition.
Results of the review
Seven trials were included in the review (n=669): four randomised controlled trials (RCTs) and three controlled trials (CCTs). Methodological quality was variable and trials gained between 1 and 3 points on the Jadad quality scale. Four RCTs described randomisation methods and none reported assessor blinding. Details of withdrawals and dropouts were described in three RCTs and two CCTs. Three RCTs used intention-to-treat analysis. Three trials reported allocation concealment details and all methods were deemed adequate. Scores for OPVS ranged from 6 to 11 out of 16; most points were lost for lack of blinding or small sample size.

One RCT found no significant reduction in low back pain when internal qigong was compared to electromyographic feedback. Two RCTs found no significant difference in neck pain relief when internal qigong was compared to exercise therapy or waiting list control. One RCT compared internal qigong to aerobic exercise in patients with fibromyalgia and showed statistically significantly better results with aerobic exercise. Compared to chemotherapy alone in patients with breast cancer, addition of qigong significantly reduced pain in one CCT. One of the remaining CCTs showed statistically significant effects of qigong on shoulder pain reduction when compared to no treatment. One CCT failed to show effects of qigong in labour pain.

Adverse events were assessed in two trials. One reported no events and the other reported events including nausea (qigong two and exercise one), aching muscles (two each for qigong and exercise) and muscle tension (qigong one and exercise two).

Authors' conclusions
There were only a small number of trials in this area and there was no convincing evidence that internal qigong was beneficial for pain management.

CRD commentary
This review had defined inclusion criteria for intervention, outcome and study design and broadly defined criteria for participants. Searching encompassed a range of both Western and on-Western databases and was not restricted by language or publication status, which minimised the likelihood of missed studies. Data extraction and validity assessment involved more than one reviewer, which reduced the possibility of bias; it was unclear whether study selection methods were conducted similarly. Study details were provided. It appeared that given the diversity of the studies a narrative synthesis was appropriate. Study results were presented in the context of their quality and susceptibility to bias. Overall this was a well-conducted review that highlighted the limitations of the evidence in this area of complementary medicine.

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

Research: The authors stated that future RCTs of qigong for pain conditions should adhere to accepted standards of trial methodology and include assessor blinding and allocation concealment. Future studies should design adequate control interventions.

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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.