The effects of massage therapy in improving outcomes for youth with cystic fibrosis: an evidence review
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CRD summary
This review included studies of massage therapy in children and adults with cystic fibrosis and other lung conditions. The authors concluded that there is preliminary evidence supporting the use of massage therapy in young people and adults with lung conditions. The small number of studies found and their methodological limitations mean that the authors' conclusions may not be reliable.

Authors' objectives
To determine whether massage therapy (MT) is effective in reducing pain and improving health outcomes in young people with cystic fibrosis (CF).

Searching
The authors searched the Cochrane Library, MEDLINE (via Ovid), PubMed, CINAHL, and databases provided by EBSCO and OhioLINK for publications in the English language; the search terms were specified. The search covered the last 20 years but the search date was not reported.

Study selection
No inclusion criteria for study designs were specified.

Specific interventions included in the review
Studies of MT were eligible for inclusion. In the included studies, MT was given by a parent or by a physical therapist, typically for 20 minutes. Control groups were read to by a parent, received progressive muscle relaxation or continued with their normal daily routine; one included study compared connective tissue massage with simple surface massage.

Participants included in the review
Studies of patients with CF or other respiratory conditions were eligible for inclusion. The authors stated that the review focused on children but was expanded to include adults because of the small number of studies found. The participants in the included studies were children with CF or asthma and adults with chronic lung disease or moderately severe asthma.

Outcomes assessed in the review
The inclusion criteria specified that studies had to report clinical outcomes. The outcomes assessed in the included studies were measures of lung function and anxiety; some studies assessed anxiety in the parents as well as the children.

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

Assessment of study quality
Quality was assessed using an 11-item checklist (developed from the criteria of Jadad et al.) and expressed as a percentage score. The authors did not state how many reviewers performed the quality assessment.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data
Methods of synthesis
How were the studies combined?
The studies were discussed narratively with emphasis on their methodological strengths and weaknesses.

How were differences between studies investigated?
Differences between the studies were discussed in the text.

Results of the review
Three randomised controlled trials (n=64), one of which used a crossover design, and one non-randomised crossover study (n=10) were included.

The quality scores of the included studies ranged from 45 to 73%. Compared with controls, patients treated with MT showed significant improvements in anxiety (2 studies), peak air flow at day 30 (2 studies) and forced vital capacity after 2 weeks or 30 days (2 studies). Two studies reported significant decreases in parental anxiety. The study that compared two types of MT did not find any significant differences.

Authors’ conclusions
There is preliminary evidence supporting the use of MT in young people and adults with lung conditions. The provision of MT to children and adolescents with CF has the potential to improve theirs and their families' quality of life.

CRD commentary
The review addressed a clear question. The inclusion criteria could have been more clearly defined and were quite broad. In addition, the majority of the included studies did not include young people with CF. The authors searched a number of databases; some of the sources listed were information providers rather than databases, so it was unclear how many databases were actually searched. The search was limited to papers published in English language and publication bias was not assessed, so the risk of publication and language bias cannot be ruled out. The review methods were not reported in detail, thus it was difficult to assess the risk of bias and errors being introduced during the review process. Quality was assessed using standard criteria and the results were taken into account.

Some relevant details of the primary studies were presented, but the results were not given in detail; this makes it difficult for readers to assess the studies. A narrative synthesis was appropriate in view of the heterogeneity of the included studies. The authors’ conclusions should be treated with caution, particularly as they relate specifically to children with CF, because of the small number of studies found and their methodological limitations.

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

Research: The authors stated that there is a need for rigorous randomised controlled trials of MT using consistent interventions and outcome measures. They also stated that research should evaluate the role of parents in treating CF and the long-term effects of early massage interventions.

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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.