[Physiotherapy and physical therapies for fibromyalgia syndrome: systematic review, meta-analysis and guideline]

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CRD summary
This review found strong evidence to support use of aerobic exercise and strength training for adults with fibromyalgia syndrome. Functional training and thermal baths were also recommended. Reporting and presentation issues made it difficult to appraise the review in detail. However, based on the methods used, the authors' conclusions and recommendations are likely to be reliable.

Authors' objectives
To assess evidence for the short- and long-term effects and risks of physiotherapy and therapy agents for the treatment of fibromyalgia syndrome (FMS) and produce evidence-based guideline recommendations.

Searching
PubMed, PsycINFO, Scopus and The Cochrane Library were searched to December 2010. Search terms were reported. ClinicalTrials.gov was searched. German publications not included in the databases were reviewed if they were considered relevant. There were no language restrictions.

Study selection
Eligible trials were randomised controlled trials (RCTs) that evaluated single therapy procedures in adults diagnosed with fibromyalgia syndrome according to defined criteria. For therapy procedures often used in Germany, non-randomised controlled studies or case series were used if no RCTs were available. Eligible interventions were physiotherapy and therapy agent treatments (defined as passive treatments such as hot/cold packs, massage, electrotherapy, laser and ultrasound). Primary efficacy outcomes were pain, sleep, fatigue and quality of life.

Included studies covered a wide range of interventions as detailed in the report and accompanying tables. Study selection was performed by the guideline coordinator and working group leaders. Disagreements were resolved by a majority vote.

Assessment of study quality
Internal validity was assessed based on randomisation, allocation concealment, blinding and use of intention-to-treat analysis. Criteria for external validity were inclusion of common somatic comorbidity of fibromyalgia syndrome and inclusion of common mental disorders. It appeared that quality was assessed by the guideline secretary and checked by work group members. Discrepancies were resolved by consensus.

Data extraction
Data were extracted to derive the standardised mean difference (or relative risk for dichotomous outcomes) between treatment and control groups and its associated 95% confidence interval. Data were extracted by the guideline secretary and checked by workgroup members. Discrepancies were resolved by consensus.

Methods of synthesis
Meta-analysis was performed where at least two RCTs with at least 50 participants were available. Random-effects models were used for most meta-analyses. Heterogeneity was assessed using I². Evidence was considered sufficient if at least four studies with more than 200 participants were available. Levels of evidence were assigned according to the Oxford classification and quality of evidence was rated as high, moderate or low based on assessment of methodological quality and external validity.

Results of the review
Numbers of included trials and participants and results of meta-analyses were reported separately for each intervention. Most information was presented in tables.
Interventions were classified as strongly recommended (aerobic exercise and strength training), recommended (functional training and thermal baths), no recommendation possible (physiotherapy, craniosacral therapy, hydroalvaniac bath, lymphatic drainage and heat treatment with water-filtered mild infrared A radiation) and not recommended (chiropractic, hyperbaric oxygen, cold chamber, laser therapy, TENS/transcutaneous electrical nerve stimulation and transcranial direct current stimulation). Strong negative recommendations were given for operative quadrant intervention and massage.

Authors' conclusions
There was strong evidence to support the use of aerobic exercise and strength training. Functional training and thermal baths were also recommended. Low-quality evidence suggested that massage was ineffective and operative quadrant interventions should not be performed because of the potential risks of the procedure.

CRD commentary
This guideline was supported by a systematic review which (where reported) used standard methods to identify, appraise and synthesise the relevant evidence. The results were presented as guideline recommendations. Most of the evidence was presented in appendices. Some aspects of the review methods were not reported which, together with the large number of interventions included, made it difficult to appraise the review in detail. However, based on the methods used, the authors' conclusions and recommendations are likely to be reliable. The guideline was intended for the German healthcare system and this should be borne in mind in interpreting the conclusions.

Implications of the review for practice and research
Practice: Numerous implications for practice were identified (details in the report).

Research: The authors did not state any implications for further research.

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AccessionNumber
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.