An overview of reflexology

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Authors' objectives
To review the existing literature on reflexology.

Searching
MEDLINE (1966 to 1996) and CISCOM (dates not provided) were searched, using the following keywords: foot massage, foot reflexes, foot reflex therapy, reflexology, reflex points, reflex therapy, zone therapy. Books on reflexology, complementary medicine and related subjects were screened for additional articles. Professional organisations in the USA, UK, and Germany were asked to contribute original articles and experts in the field were consulted. The bibliographies of retrieved articles were searched for further relevant references.

Study selection
Study designs of evaluations included in the review
Controlled clinical trials.

Specific interventions included in the review
Reflexology. The regimens used in the included trials were: daily foot reflexology; foot reflexology plus conventional care; foot reflexology plus oral placebo; and ear, and hand and foot reflexology. The following were used as comparators: conventional care; daily reassurance for half hour (for patients with anxiety); arm massage plus oral flunarizin (for patients with headache); placebo reflexology; and no intervention.

Participants included in the review
Patients eligible to receive reflexology. Patients recruited in the included trials were those after cholecystectomy, those receiving post-operative care, those with signs of anxiety, headache, asthma, pre-menstrual syndrome (PMS), and type II diabetes.

Outcomes assessed in the review
No specific outcome measures were mentioned and these varied across the trials. The outcome measures used in the included trials were: changes in blood cortisol levels; self-assessed anxiety level; intensity and duration of headache; asthma symptoms as recorded in patients' diaries; use of asthma medication; objective parameters of pulmonary function; use of medication for improving bladder tone; score of 38 PMS symptoms recorded in patients' diary; and blood sugar levels.

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

Assessment of study quality
The authors did not describe a systematic method for assessing the validity of included trials. However, aspects of methodological quality such as blinding, validity of end point, statistical methods, and sample size were mentioned in the narrative description of trials.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.
Methods of synthesis
How were the studies combined?
The studies were described in a narrative.

How were differences between studies investigated?
The characteristics of each study were described and tabulated separately.

Results of the review
Seven trials were included, five of randomised design (214 participants overall).

All of the studies had methodological flaws, including small sample size.

Trial 1: No significant alterations in plasma cortisol levels occurred as a result of reflexology foot massage of the pituitary-adrenal zones.

Trial 2: Patients receiving daily foot reflexology for eight days reported a reduction in anxiety levels while those receiving daily reassurance or no intervention did not report reduced levels.

Trial 3: The intensity and duration of headaches were not significantly different between groups receiving regular foot reflexology plus oral placebo versus arm massage plus oral flunarizin at the end of the 2-3 month treatment period. Similar results were seen at three months follow-up.

Trial 4: No between-group differences were seen in patients receiving either foot reflexology plus conventional care or conventional care alone for symptomatic improvement of asthma. Follow-up was at six months.

Trial 5: One trial aimed to determine whether post-operative medication could be reduced through the adjunctive use of reflexology. Although fewer drugs were given in the reflexology group, no formal statistical evaluation was carried out.

Trial 6: Significantly fewer PMS symptoms were observed in women receiving ear, hand, and foot reflexology compared with those receiving placebo reflexology for two months. Two months after discontinuation of therapy, the between-group difference was still statistically significant.

Trial 7: Blood glucose levels and platelet aggregability in patients with type II diabetes were normalised in a group receiving daily foot reflexology for 30 days; no such effects were seen in those receiving no intervention.

Cost information
In the UK, the cost of one reflexology session is £14-£35. Since 6-8 sessions are usually recommended, the cost of one series of treatment could be up to £240. As patients tend to consult with chronic conditions requiring repeated attention throughout the year, an expenditure of £1,000 per patient per year for reflexology may not be exceptional.

Authors’ conclusions
There are few controlled trials on reflexology. Of those that have been published, all are methodologically flawed and their results are non-uniform. The effectiveness of reflexology is not supported by controlled clinical trials.

CRD commentary
Only basic selection criteria for primary studies were provided. The search strategy is appropriate for this topic area, however, it may have been useful to have accessed additional electronic databases. No language restrictions were reported for the search strategy or study selection, and one of the included studies was published in German. A systematic assessment of study validity was not included, however, the authors did give an unstructured commentary on individual study quality as part of the narrative summary of studies. Study details were provided in the text and in a table but results were not reported in terms of the numbers of patients involved for each outcome, or p-values for between-group comparisons. Given the obvious clinical heterogeneity of studies, the narrative summary was appropriate. Few details were provided regarding the review process (i.e. how many reviewers involved in selecting.
assessing, and data extracting papers, and how disagreements were resolved). This paper also covered other aspects of reflexology in addition to clinical effectiveness: definitions, mode of action, prevalence, healthcare professionals’ attitudes to reflexology, indications and contraindications, but these are not covered by this abstract.

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

**Practice:** The authors state that health professionals should be informed about the health implications of reflexology since patients are likely to enquire about it.

**Research:** The authors suggest two possible implications. One possibility could be to conduct proper research into reflexology in order to establish whether it has any specific effects. Alternatively, research could be confined to a detailed study of the non-specific effects of reflexology.

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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.