Acupuncture for treating erectile dysfunction: a systematic review
Lee MS, Shin BC, Ernst E

CRD summary
This review concluded that evidence was insufficient to suggest that acupuncture was an effective intervention for treating erectile dysfunction. In light of the small sample size and generally poor quality of included studies, the authors’ cautious conclusions are likely to be reliable.

Authors’ objectives
To assess the effectiveness of acupuncture in the treatment of erectile dysfunction.

Searching
MEDLINE, CINAHL, EMBASE, PsycINFO, The Cochrane Library, six Korean Medical Databases, and four Chinese medical databases (including conference proceedings) were searched without language restriction from inception to August 2008. Search terms were reported. Reference lists of retrieved publications were screened. Dissertations and abstracts were considered. The authors' personal files were handsearched.

Study selection
Prospective studies that evaluated needle acupuncture or auricular acupuncture, with or without electrical stimulation, in men with any type of erectile dysfunction were eligible for inclusion. Studies that assessed transcutaneous electrical nerve stimulation, moxibustion and laser acupuncture were excluded. Studies that compared two different forms of acupuncture were excluded, as were studies in which no clinical data were reported.

Included studies were conducted in Turkey, Austria and the Netherlands. The regimen of acupuncture varied between studies. Controls used in included randomised controlled trials (RCTs) were sham acupuncture, sham electro-acupuncture, hypnosis and oral placebo. Where reported, duration of erectile dysfunction of included patients ranged from two to 120 months. Included patients had psychogenic, non-organic or organic erectile dysfunction. The outcome reported in the review was rate of successful improvement of sexual function.

The authors did not report how many reviewers performed the study selection.

Assessment of study quality
Study quality was assessed using a modified version of the Jadad score, a five-point scale for evaluation of randomisation, blinding, withdrawal and allocation concealment.

Two reviewers independently performed validity assessment. Any disagreements were resolved by discussion or a third reviewer.

Data extraction
The data were extracted on number of patients who experienced an event and relative risks (RRs) and 95% confidence intervals (CIs) were calculated.

Two reviewers independently performed data extraction. Any disagreements were resolved by discussion or a third reviewer.

Methods of synthesis
Where appropriate, studies were combined in meta-analyses using a random-effects model. Pooled relative risks and 95% CIs were calculated. Statistical heterogeneity was assessed using the $T^2$, $X^2$ test and $I^2$ statistics.

Results of the review
Four studies (two RCTs and two uncontrolled trials) were included in the review (n=126). Sample sizes ranged from 16 to 60. Jadad scores ranged from 1 to 3; most studies were of poor quality.

Compared with sham acupuncture, acupuncture was associated with a non-significant increase on rate of successful improvement of sexual function (RR 2.73, 95% CI 0.42 to 17.78; two RCTs). Significant heterogeneity was observed in this pooled outcome ($I^2=72\%$).

One uncontrolled trial reported that acupuncture had positive effects on subjective response rate, but no effects on response of the partner. Another uncontrolled trial found that acupuncture improved sexual activity in patients with psychogenic erectile dysfunction.

No acupuncture-related adverse events were reported in the RCTs.

**Authors' conclusions**
Evidence was insufficient to suggest that acupuncture was an effective intervention for treating erectile dysfunction.

**CRD commentary**
The review addressed a clear question, supported by appropriate inclusion criteria. Relevant databases were searched. Efforts were made to find both published and unpublished studies without language restriction, thereby minimising potential for publication and language biases. Steps were taken to minimise the risk of reviewer error and bias by having more than one reviewer undertake validity assessment and data extraction. It was unclear whether the process of study selection was performed in duplicate. Relevant criteria were used to examine study quality. Statistical heterogeneity was assessed and appropriate methods were used to pool the results. In light of the small sample size and the generally poor quality of included studies, the authors' cautious conclusions are likely to be reliable.

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

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that further studies were required to assess whether there were specific benefits of acupuncture for men with erectile dysfunction. Future trials should have sufficiently large sample sizes and extended follow-up and treatment periods.

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