

Article Title: Network meta-analysis of acupuncture for tinnitus

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Overview: This article examined the relative effectiveness of different acupuncture-based treatments for tinnitus using a network meta-analysis of 36 randomized controlled trials, totaling 2575 patients.

Background: Tinnitus is the perception of sound without an external source and affects 10-15% of adults worldwide. It is often linked with hearing loss, sleep problems, depression, anxiety, irritability, and restlessness. Conventional western medical treatment for tinnitus (CBT, counseling, hearing aids, pharmacologic interventions) have inconsistent benefit. Acupuncture has been around for centuries, commonly used to treat chronic pain, headaches, and stress. This practice involves the insertion of very thin, sterile needles into specific anatomical points to balance energy flow (qi) and promote healing. Modern research suggests that acupuncture can influence auditory and emotional brain networks, but the exact mechanism is still unclear.

Method: A total of 36 RCTs involving 2575 patients with primary/idiopathic tinnitus were analyzed and compared using a network meta-analysis. The treatments studied included different types of acupuncture, such as traditional acupuncture, moxibustion (cupping), electroacupuncture, acupoint injection (injecting small amount of substances like vitamins or herbs), warm acupuncture, and combinations of these methods. Some groups received acupuncture alone, while others received acupuncture along with conventional Western medical treatments, and these were compared with Western medical treatment alone. The primary outcome was overall treatment response rate.

Findings: The most effective treatments were combinations of acupuncture methods rather than single therapies. Acupoint injection combined with warm acupuncture ranked highest in improving overall treatment response. Warm acupuncture alone and acupoint injection combined with Western medical treatment also showed strong benefits.

Limitations:

- High variability in patients in terms of their comorbidities and duration and severity of tinnitus
- Small sample size
- No data on AE of acupuncture
- Tinnitus is a subjective symptom with no objective measurement tool, hence reports may be skewed