

Transcutaneous electrical nerve stimulation and acupuncture-like transcutaneous electrical nerve stimulation for chronic low back pain.

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BACKGROUND: Transcutaneous electrical nerve stimulation (TENS), originally based on the gate-control theory of pain, is widely used for the treatment of chronic low back pain. Despite its wide use and theoretical rationale, there appears at first glance little scientific evidence to support its use. This Cochrane review examines the available evidence on TENS for the treatment of chronic back pain through an exhaustive search of the literature. **OBJECTIVES:** Transcutaneous electrical nerve stimulation (TENS) and acupuncture-like transcutaneous electrical nerve stimulation (ALTENS) for chronic low back pain management have experienced a tremendous growth over the past 25 years. The objective of this review was to assess the effects of TENS and ALTENS for reducing pain and improving function in patients with chronic back pain. **SEARCH STRATEGY:** We searched MEDLINE up to November 1997, EMBASE from 1985 to September 1995, Amed and Ciscom to January 1995, reference lists of the retrieved articles, proceedings of conferences and contacted investigators in the field. **SELECTION CRITERIA:** Randomised trials comparing TENS or ALTENS therapy to placebo in patients with chronic low back pain. **DATA COLLECTION AND ANALYSIS:** Two reviewers independently assessed trial quality and extracted data on pain reduction, range of movement, functional and work status. **MAIN RESULTS:** Six trials were included. The trials included 288 participants with an average age range of 45 to 50 years and approximately equal numbers of women and men. The overall odds ratio for improvement in pain for each comparison was: TENS/ALTENS versus placebo 2.11 (95% confidence interval 1.32 to 3.38), ALTENS versus placebo 7.22 (95% confidence interval 2.60 to 20.01) and TENS versus placebo 1.52 (95% confidence interval 0.90 to 2.58). The odds ratio for improvement in range of motion on ALTENS versus placebo was 6.61 (95% confidence interval 2.36 to 18.55). **REVIEWER'S CONCLUSIONS:** There is evidence from the limited data available that TENS/ALTENS reduces pain and improves range of motion in chronic back pain patients, at least in the short term. A large trial of ALTENS and TENS is needed to confirm these findings.

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