

COVID-19 Information[Public health information \(CDC\)](#)[Research information \(NIH\)](#)[SARS-CoV-2 data \(NCBI\)](#)[Prevention and treatment information \(HHS\)](#)[Español](#)

Notice of Scheduled eRA Maintenance: Please note that eRA systems will be undergoing scheduled maintenance from 10am until 10pm Eastern US time on April 24, 2021. During this window, eRA-dependent services such as MyBibliography and Grant Reporting may be unavailable. More information is available on the [eRA website](#).

FULL TEXT LINKS



Review > [Cochrane Database Syst Rev.](#) 2013 Aug 26;(8):CD004251.

doi: 10.1002/14651858.CD004251.pub5.

Electrotherapy for neck pain

Peter Kroeling¹, Anita Gross, Nadine Graham, Stephen J Burnie, Grace Szeto, Charles H Goldsmith, Ted Haines, Mario Forget

Affiliations

PMID: 23979926 DOI: [10.1002/14651858.CD004251.pub5](#)

Abstract

Background: Neck pain is common, disabling and costly. The effectiveness of electrotherapy as a physiotherapeutic option remains unclear. This is an update of a Cochrane review first published in 2005 and previously updated in 2009.

Objectives: This systematic review assessed the short, intermediate and long-term effects of electrotherapy on pain, function, disability, patient satisfaction, global perceived effect, and quality of life in adults with neck pain with and without radiculopathy or cervicogenic headache.

Search methods: We searched CENTRAL, MEDLINE, EMBASE, MANTIS, CINAHL, and ICL, without language restrictions, from their beginning to August 2012; handsearched relevant conference proceedings; and consulted content experts.

Selection criteria: Randomized controlled trials (RCTs), in any language, investigating the effects of electrotherapy used primarily as unimodal treatment for neck pain. Quasi-RCTs and controlled clinical trials were excluded.

Data collection and analysis: We used standard methodological procedures expected by The Cochrane Collaboration. We were unable to statistically pool any of the results, but we assessed the quality of the evidence using an adapted GRADE approach.

Main results: Twenty small trials (1239 people with neck pain) containing 38 comparisons were included. Analysis was limited by trials of varied quality, heterogeneous treatment subtypes and conflicting results. The main findings for reduction of neck pain by treatment with electrotherapeutic modalities were as follows. Very low quality evidence determined that pulsed electromagnetic field therapy (PEMF) and repetitive magnetic stimulation (rMS) were more

FOLLOW NCBI

Follow NLM

National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

[Copyright](#)[FOIA](#)[Privacy](#)[Help](#)[Accessibility](#)[Careers](#)

NLM NIH HHS USA.gov

effective than placebo, while transcutaneous electrical nerve stimulation (TENS) showed inconsistent results. Very low quality evidence determined that PEMF, rMS and TENS were more effective than placebo. Low quality evidence (1 trial, 52 participants) determined that permanent magnets (necklace) were no more effective than placebo (standardized mean difference (SMD) 0.27, 95% CI -0.27 to 0.82, random-effects model). Very low quality evidence showed that modulated galvanic current, iontophoresis and electric muscle stimulation (EMS) were not more effective than placebo. There were four trials that reported on other outcomes such as function and global perceived effects, but none of the effects were of clinical importance. When TENS, iontophoresis and PEMF were compared to another treatment, very low quality evidence prevented us from suggesting any recommendations. No adverse side effects were reported in any of the included studies.

Authors' conclusions: We cannot make any definite statements on the efficacy and clinical usefulness of electrotherapy modalities for neck pain. Since the evidence is of low or very low quality, we are uncertain about the estimate of the effect. Further research is very likely to change both the estimate of effect and our confidence in the results. Current evidence for PEMF, rMS, and TENS shows that these modalities might be more effective than placebo. When compared to other interventions the quality of evidence was very low thus preventing further recommendations. Funding bias should be considered, especially in PEMF studies. Galvanic current, iontophoresis, EMS, and a static magnetic field did not reduce pain or disability. Future trials on these interventions should have larger patient samples, include more precise standardization, and detail treatment characteristics.

Update of

[Electrotherapy for neck pain.](#)

Kroeling P, Gross A, Goldsmith CH, Burnie SJ, Haines T, Graham N, Brant A.

Cochrane Database Syst Rev. 2009 Oct 7;(4):CD004251. doi: 10.1002/14651858.CD004251.pub4.

PMID: 19821322 **Updated.** Review.

Related information

[Cited in Books](#)

[MedGen](#)

LinkOut - more resources

Full Text Sources

[Wiley](#)

Other Literature Sources

[scite Smart Citations](#)

Medical

[MedlinePlus Health Information](#)