INPLASY

# Effectiveness of Transcranial Alternating Current Stimulation for Controlling Chronic Pain

INPLASY2023120012
doi: 10.37766/inplasy2023.12.0012
Received: 03 December 2023
Published: 03 December 2023

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**ADMINISTRATIVE INFORMATION**

**Support -** None.

**Review Stage at time of this submission -** Completed but not published.

**Conflicts of interest -** None declared.

**INPLASY registration number:** INPLASY2023120012

**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 03 December 2023 and was last updated on 03 December 2023.

## INTRODUCTION

**Review question / Objective** The objective of this study is to examine prior research concerning the efficacy of tACS in the controlling of chronic pain and integrate their findings to formulate an all-encompassing conclusion regarding the therapeutic potential of tACS for alleviating pain.

**Condition being studied** Researchers and clinicians are exploring new effective treatment methods for chronic pain. Transcranial Alternating Current Stimulation (tACS) is a non-invasive technique for modulating the neural resonance of the brain, and some clinical trials have investigated whether tACS has an effect on reducing pain in patients with chronic pain. However, there is still insufficient research to draw definitive conclusions about the effects of tACS on the management of chronic pain.

## METHODS

**Participant or population** Patient with chronic pain.

**Intervention** Transcranial Alternating Current Stimulation(tACS).

**Comparator** Sham stimulation, placebo, or controlled stimulation.

**Study designs to be included** Not limited to specific types of study.

**Eligibility criteria** Inclusion criteria such as patients with chronic pain and TACS was applied for pain control and A follow-up assessment was conducted to evaluate the reduction of pain.

**Information sources** PubMed, Embase, Cochrane Library, and Scopus.

**Main outcome(s)** The Effects of tACS on the controlling of chronic pain.

**Quality assessment / Risk of bias analysis** The risk of bias of the studies were assessed using the criteria described in the "Cochrane Handbook for Systematic Reviews of Interventions" to evaluate potential bias.

**Strategy of data synthesis** After removing duplicate papers, two reviewers independently assessed potentially eligible studies. the papers were reviewed for eligibility based on their titles, abstracts and full texts, with any differences in opinion resolved through authors consensus.

**Subgroup analysis** Not applicable.

**Sensitivity analysis** Not applicable.

**Country(ies) involved** Republic of Korea.

**Keywords** Chronic pain, Transcranial alternating current stimulation, Migraine, Fibromyalgia, Lower back pain, , Treatment, Review.

**Contributions of each author**
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