

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Sep 2026

The comparison of different intensities of transcranial direct current stimulation on balance in healthy young adults

Protocol summary

Study aim

The Comparison of Different Intensities of Transcranial Direct Current Stimulation on Balance in Healthy Young Adults

Design

Randomized clinical trial, prospective, double blind, parallel group

Settings and conduct

The place of the study is the Research Center of Rehabilitation Faculty of Isfahan University of Medical Sciences. The participants are divided into four groups and each group receives 1, 2 or 3 milliamperes current intensity or placebo stimulation of tDCS. Before and after the intervention, the balance is evaluated with the the force plate. The participants and the assessor are blinded to the type of stimulation

Participants/Inclusion and exclusion criteria

Exclusion criteria: History of neurological or orthopedic diseases Treated with any medication that affected the CNS and balance History of epilepsy, seizures, frequent headaches, brain injury or brain tumor, use of a pacemaker or implanted metal devices in the head, pregnancy body mass index >30 Participation in professional sports activities Inclusion criteria: Age 18_35

Intervention groups

The first to fourth groups receive 1, 2 and 3 milliamperes tDCS and placebo stimulation

Main outcome variables

Excursion, total path length and velocity of center of pressure

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230523058270N1**

Registration date: **2023-07-12, 1402/04/21**

Registration timing: **registered_while_recruiting**

Last update: **2023-07-12, 1402/04/21**

Update count: **0**

Registration date

2023-07-12, 1402/04/21

Registrant information

Name

Elham Rahimi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 31 5759 3784

Email address

e.rahimi999999@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-06-10, 1402/03/20

Expected recruitment end date

2023-09-20, 1402/06/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The comparison of different intensities of transcranial direct current stimulation on balance in healthy young adults

Public title

The comparison of different intensities of tDCS on balance

Purpose

Basic science

Inclusion/Exclusion criteria

Inclusion criteria:
Age 18_35

Exclusion criteria:
History of neurological or orthopedic diseases Treated with any medication that affected the CNS and balance
Participation in professional sports activities BMI>30
History of epilepsy, seizures, frequent headaches, brain injury or brain tumor, use of a pacemaker or implanted metal devices in the head, pregnancy

Age
From **18 years** old to **35 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size
Target sample size: **80**

Randomization (investigator's opinion)
Randomized

Randomization description
This study has three intervention groups and one control group. Participants are randomly assigned to one of four groups (tDCS stimulation with intensity of 1, 2 or 3 mA or placebo group). Participants are allocated using a web-based randomization system (<http://www.randomization.com>) and based on a block randomization method in which the block size is 8 and the number of blocks is 20.

Blinding (investigator's opinion)
Double blinded

Blinding description
The participants and the person who evaluates the balance are blinded to the placebo or the real stimulation and its current intensity

Placebo
Used

Assignment
Parallel

Other design features
prospective

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Isfahan University of Medical Sciences

Street address

rehabilitation school Isfahan university of medical science, hezar jarib street

City

isfahan

Province

Isfahan

Postal code

8174673461

Approval date

2023-05-21, 1402/02/31

Ethics committee reference number

IR.MUI.REC.1402.006

Health conditions studied

1

Description of health condition studied

healthy young adults

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

excursion of center of pressure (balance index)

Timepoint

before and after

Method of measurement

force plate

2

Description

total path length of center of pressure (balance index)

Timepoint

before and after

Method of measurement

force plate

3

Description

velocity of center of pressure (balance index)

Timepoint

before and after

Method of measurement

force plate

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: transcranial direct current stimulation with intensity of 1 mA

Category

Rehabilitation

2

Description

Intervention group 2: transcranial direct current stimulation with intensity of 2 mA

Category

Rehabilitation

3

Description

Intervention group 3: transcranial direct current stimulation with intensity of 3 mA

Category

Rehabilitation

4

Description

Control group: sham stimulation

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Rehabilitation school

Full name of responsible person

Dr javid mostamand

Street address

Rehabilitation school, Isfahan university of medical science, hezar jarib street

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81746-73461

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Esfahan University of Medical Sciences

Full name of responsible person

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Esfahan University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Esfahan University of Medical Sciences

Full name of responsible person

Dr Javid Mostamand

Position

professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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Person responsible for updating data

Contact

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Latest degree
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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

some data will be published

When the data will become available and for how long

6 month after publishing the articles

To whom data/document is available

academic staff

Under which criteria data/document could be used

for reserch

From where data/document is obtainable

e.rahimi999999@gmail.com

What processes are involved for a request to access data/document

sending an email to corresponding person

Comments