

Clinical Trial Protocol

Iranian Registry of Clinical Trials

03 Jul 2026

The prophylactic effects of local vibration on quadriceps muscle fatigue in 18-25 years old men

Protocol summary

Study aim

Assessment of prophylactic effect of local vibration on fatigue

Design

A concealed, randomized, blinded, sham controlled clinical trial with 30 patients, enrolled between October 2016 and September 2017.

Settings and conduct

The experiment was conducted at the Faculty of Rehabilitation, Shahid Beheshti University of Medical Sciences. The subjects were not aware of the on or off vibration, and the results were analyzed by someone else.

Participants/Inclusion and exclusion criteria

Non athletic and healthy men 18- 25 years old

Intervention groups

Using of Local vibration with 50 frequency in 2 minutes

Main outcome variables

Electromyography findings: Median Frequency, Root Mean square

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20090228001719N7**

Registration date: **2018-07-20, 1397/04/29**

Registration timing: **retrospective**

Last update: **2018-07-20, 1397/04/29**

Update count: **0**

Registration date

2018-07-20, 1397/04/29

Registrant information

Name

khadije Otadi

Name of organization / entity

Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2017-06-20, 1396/03/30

Expected recruitment end date

2018-06-20, 1397/03/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The prophylactic effects of local vibration on quadriceps muscle fatigue in 18-25 years old men

Public title

Effect of vibration on prevention of fatigue

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Healthy- non athletic subjects age: 18-25

Exclusion criteria:

Disorders or surgery in lower limb Athletic subjects

Age

From **18 years** old to **25 years** old

Gender

Male

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: 30

Randomization (investigator's opinion)

Randomized

Randomization description

A simple randomization by removing sealed envelopes that inside the envelopes written " vibration" or " no vibration" word, and people were asked to remove one of the envelopes. If the envelope was removed had the word "without vibration", the person in the placebo group And vice versa.

Blinding (investigator's opinion)

Single blinded

Blinding description

Participant were blinded and they did not know what to do if they were effected by vibration or not.

Placebo

Used

Assignment

Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tehran University of Medical Sciences

Street address

Keshavarz Blv, Qudes Sreet

City

Tehran

Province

Tehran

Postal code

1419934146

Approval date

2017-12-31, 1396/10/10

Ethics committee reference number

IR.TUMS.FNM.REC.1396.4093

Health conditions studied

1

Description of health condition studied

Healthy- non athletic persons

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

MVC: Maximum Voluntary contraction and Electromyography Findings

Timepoint

Immediately after intervention

Method of measurement

With dynamometer and electromyography measurement

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: The local vibration was used at a 50 Hz for 2 minutes on the quadriceps muscle, while the EMG activity of the muscle was recorded.

Category

Prevention

2

Description

"Control group:" In this group, local vibration used in placebo manner over the quadriceps and simultaneously electromyography activity recorded.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Faculty of Rehabilitation of Shahid Beheshti Medical sceince

Full name of responsible person

Khadijeh Otadi

Street address

Enghlab Ave, Pich e Shemiran, Faculty of Rehabilitation

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Dr. Amirali Sohrabpour

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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

Tehran 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

Tehran University of Medical Sciences

Full name of responsible person

Khadijeh Otadi

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no further information

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available