Clinical Trial Protocol
Iranian Registry of Clinical Trials

20 Sep 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. Thesubjects were not aware of the be on or off vibration , and the results were analyzed by someone else.
Participants/Inclusion and exclusion criteria
Non athletics 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
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Tehran University of Medical Sciences
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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 Seiences
Street address
Keshavarz Blv, Qudes Sreet
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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
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Enghlab Ave, Pich e Shemiran, Faculty of Rehabilitation
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Sponsors / Funding sources

1

Sponsor
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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
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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