Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The Effects of Whole Body Vibration on Muscle Activity and Timing of the Upper Extremity Muscles

Protocol summary

Summary

The aim of this study is to determine the effects of Whole Body Vibration on muscle activity and timing of the Upper Extremity muscles in Modified Push Up position. Forty female students will be divided into Whole Body Vibration (WBV) and Control (no vibration) groups. Participants in the WBV group use an experimental vibration protocol of 5 × 30 seconds at 5 mm and 30 Hz, in a modified push up position. Surface EMG will be measured for the Upper Trapezius, Serratus Anterior, Biceps Brachii and Triceps Brachii Before, during and after the vibration. Measurements of Reaction Time (premotor and motor time) will be collected before and after the vibration using a digital electrogoniometer.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201105186521N1**
Registration date: **2011-06-14, 1390/03/24**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2011-06-14, 1390/03/24

Registrant information

Name

Zinat Ashnagar

Name of organization / entity

Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 8875 9469

Email address

zinat3012@yahoo.com

Recruitment status

Recruitment complete

Funding source

Govermental

Expected recruitment start date

2011-05-22, 1390/03/01

Expected recruitment end date

2011-07-06, 1390/04/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effects of Whole Body Vibration on Muscle Activity and Timing of the Upper Extremity Muscles

Public title

The Effects of Whole Body Vibration on Upper Extremity Electromyography

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria: age of 18 to 30 years; BMI between 20 to 24; Female; Right hand Dominancy; Having no Previous history of fractures, muscular, ligamentous or joint injury; They should be relatively sedentary and healthy who have not been participating in aerobic or resistance exercises more than once a week in the preceding year; able to do Push-Up exercise; non-smoker and do not drink Tea, Coffee or Coca Cola before test session; Having no contra-indications to Whole Body Vibration (i.e., diabetes, epilepsy, acute inflammation...); Having no previous history of surgery. Exclusion Criteria: consuming any drug which can affect motor and cognition performance; If the participant traumatized or injured during the test and couldn't continue; If the

participant do not like to continue the test or the Electromyography; signals not recorded properly.

Age
From **18 years** old to **30 years** old

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Tehran University of Medical Sciences

Street address
Physical Therapy Dept., Faculty of Rehabilitation,Tehran University of Medical Sciences, Piche shemiran, Enghelab street

City
Tehran

Postal code

Approval date
2010-09-23, 1389/07/01

Ethics committee reference number
260/93

Health conditions studied

1

Description of health condition studied
Normal subjects

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Muscle Activity

Timepoint
Before,during and after the Intervention

Method of measurement
Electromyography and Data Log Software

2

Description
Reaction Time

Timepoint
Before and After the Intervention

Method of measurement
Electromyography

3

Description
Premotor Time

Timepoint
Before and After the Intervention

Method of measurement
Electromyography

4

Description
Motor Time

Timepoint
Before and After the Intervention

Method of measurement
Electromyography

Secondary outcomes

empty

Intervention groups

1

Description
Intervention: 5 Sets of Vibration and each set lasts for 30 seconds.

Category
Rehabilitation

2

Description
Control group do not recieve any vibration.

Category
N/A

Recruitment centers

1

Recruitment center

Name of recruitment center
Faculty of Rehabilitation

Full name of responsible person

Street address

Physical Therapy Dept. Faculty of Rehabilitation, Tehran University of Medical Sciences, Piche shemiran, Enghelab street

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Faculty of Rehabilitation, Tehran University of Medical Sciences

Full name of responsible person

Dr. Azadeh Shadmehr

Street address

Physical Therapy Dept., Faculty of Rehabilitation, Tehran University of Medical Sciences, Piche shemiran, Enghelab street

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Faculty of Rehabilitation, Tehran University of Medical Sciences

Proportion provided by this source

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

2

Sponsor

Name of organization / entity

Physical Therapy Dept. Faculty of Rehabilitation, Tehran University of Medical Sciences

Full name of responsible person

Dr. Mohhamadreza Hadian

Street address

Piche-shemiran, Enghelab street

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Physical Therapy Dept. Faculty of Rehabilitation, Tehran University of Medical Sciences

Proportion provided by this source

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Faculty of Rehabilitation

Full name of responsible person

Zinat Ashnagar

Position

Postgraduate (MS.C) Student of Physiotherapy

Other areas of specialty/work

Street address

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Position

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Other areas of specialty/work

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Person responsible for updating data

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Name of organization / entity
Faculty of Rehabilitation

Full name of responsible person
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty

Study Protocol
empty

Statistical Analysis Plan
empty

Informed Consent Form
empty

Clinical Study Report
empty

Analytic Code
empty

Data Dictionary
empty