Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative study of the effect of whole body vibration and subjects' position on hamstring flexibility in subjects with hamstring shortness.

Protocol summary

Summary

The objective of this randomized trial is to investigate the effect of Whole Body Vibration and subjects' position on hamstring flexibility in subjects with hamstring shortness . In this study 72 subjects who meet the inclusion/exclusion criteria will be recruited and randomly assigned into one of the 4 intervention or 2 control groups. The subjects in the intervention group 1 will receive stretching of both hamstrings simultaneously, with WBV.The subjects in the intervention group 2 will receive stretching of hamstrings individually with WBV. The subjects in the intervention group 3 will receive firstly WBV, then stretch will be perform for both hamstrings simultaneously . The subjects in the intervention group 4 will receive firstly WBV, then stretch will be perform for individual hamstrings separately.The subjects in control group 1 will receive stretching of both hamstrings simultaneously, without WBV. The subjects in control group 2 will receive stretching of hamstrings individually, without WBV. Intervention lasts for 4 weeks.Limitation of hamstring muscle range of motion of all participants will be measured before intervention, immediately after and 1 month after the intervention, and will be compared among 6 groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201207194203N5**
Registration date: **2012-08-16, 1391/05/26**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2012-08-16, 1391/05/26

Registrant information

Name
Atefeh Aminian Far
Name of organization / entity
Semnan University of Medical Sciences
Country
Iran (Islamic Republic of)
Phone
+98 23 1335 4180
Email address
aminianfar@razi.tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Deputy of Research, Semnan University of Medical Sciences (Governmental source)

Expected recruitment start date

2012-07-22, 1391/05/01

Expected recruitment end date

2012-10-22, 1391/08/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative study of the effect of whole body vibration and subjects' position on hamstring flexibility in subjects with hamstring shortness.

Public title

Hamstring muscle stretching and Whole body vibration

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:Presence of hamstring shortness confirmed with 90-90 test. Female students Exclusion criteria: Orthopedic and neurological disorders, previous

history of lower limb surgery, lower limb fracture, hamstring strain during last year, disease like arthritis, ligament and meniscus injury, previous history of spinal surgery, spinal trauma, previous history of regular sport activity during last year, previous history of aerobic program during last 6 months, previous history of cardiovascular and respiratory disease.

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

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **72**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Deputy of Research, Semnan University of Medical Sciences

Street address
Bassij Blvd, Semnan University of Medical Sciences, Deputy of Research, Semnan, Iran.

City
Semnan

Postal code
3519899951

Approval date
2012-07-11, 1391/04/21

Ethics committee reference number
185247/91

Health conditions studied

1

Description of health condition studied
Muscle contracture

ICD-10 code
M62.4

ICD-10 code description
Contracture of muscle

Primary outcomes

1

Description
Knee range of motion limitation

Timepoint
Before Intervention, 4 weeks following the intervention, 1 month following end of intervention

Method of measurement
through goniometry by 90-90 test

Secondary outcomes

empty

Intervention groups

1

Description
Control (1): Stretching of both hamstrings simultaneously, without WBV. Stretch will be perform in 5 sets of 30 seconds with 20 s rest interval. Stretches will be done 3 times per week for 4 weeks..

Category
Rehabilitation

2

Description
Intervention (1): Stretching of both hamstrings simultaneously, on WBV platform when it is on. Stretch will be perform in 5 sets of 30 seconds with 20 s rest interval. The parameters of WBV are as follows: High amplitude and frequency of 30 Htz. Stretches will be done 3 times per week for 4 weeks.

Category
Rehabilitation

3

Description
Intervention (2): Stretching of hamstrings individually on WBV platform when it is on. Stretch will be perform in 5 sets of 30 seconds with 20 s rest interval, separately. The parameters of WBV are as follows: High amplitude and frequency of 30 Htz. Stretches will be done 3 times per week for 4 weeks.

Category
Rehabilitation

4

Description
Intervention (3): The subject firstly will receive WBV for 5 sets of 30 seconds with 20 s rest interval in squat position. After receiving WBV, stretch will be perform for both hamstrings simultaneously, for 5 sets of 30 seconds with 20 s rest interval. Stretches will be done 3 times per

week for 4 weeks.

Category

Rehabilitation

5

Description

Intervention (4): The subject firstly will receive WBV for 5 sets of 30 seconds with 20 s rest interval in squat position. After receiving WBV, stretch will be perform for individual hamstrings separately, for 5 sets of 30 seconds with 20 s rest interval. Stretches will be done 3 times per week for 4 weeks.

Category

Rehabilitation

6

Description

Control (2): Stretching of hamstrings individually without WBV. Stretch will be perform in 5 sets of 30 seconds with 20 s rest interval, separately Stretches will be done 3 times per week for 4 weeks..

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Clinics under supervision of Semnan University of Medical Sciences

Full name of responsible person

Dr. Atefeh Aminian Far

Street address

Kilometer 5 Damghan road, Semnan University of Medical Sciences

City

Semnan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Deputy of Research, Semnan University of Medical Sciences

Full name of responsible person

Dr. Raheb Ghrbani

Street address

Bassij Blvd, Semnan University of Medical Sciences, Deputy of Research, Semnan, Iran.

City

Semnan

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Deputy of Research, Semnan University of Medical Sciences

Proportion provided by this source

100

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

Semnan University of Medical Sciences

Full name of responsible person

Dr. Atefeh Aminian Far

Position

Ph.D of Physiotherapy/ Assistant Professor

Other areas of specialty/work

Street address

Kilometer 5 Damghan road, Semnan University of Medical Sciences

City

Semnan

Postal code

1439957181

Phone

+98 23 1335 4182

Fax

Email

aminfar@sem-ums.ac.iraminfar83@yahoo.com

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Dr. Atefeh Aminian Far

Position

Ph.D of Physiotherapy/ Assistant Professor

Other areas of specialty/work

Street address

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aminfar@sem-ums.ac.iraminfar83@yahoo.com

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Person responsible for updating data

Contact

Name of organization / entity
Semnan University of Medical Sciences

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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