Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison of the effect of static stretching exercises and vibration on postural stability indices in healthy women

Protocol summary

Summary

The purpose of this study was to compare the effects of static stretching exercises with vibration on postural stability indices in healthy women. This randomized clinical trial was performed in Zahedan University of Medical Sciences, in 2009. Forty-five healthy female students were selected through convenience sampling. Patients were selected based on following inclusion criteria: Age between 18 and 25, lack of pain in ankle joints, no specific sport activity during study, having no history of sensory and motor disturbances in lower extremities, no history of instances such as neuromuscular diseases, abnormal range of movement and deformity in lower extremities, vertigo, ankle joint injury, surgery, balance disorder and cardiac, neurologic, respiratory and rheumatologic diseases. Patients were excluded if they had pain sensation in ankle joint during study, inability to do pre and post intervention tests, doing effective exercises in order to improving balance and no completion of the treatment. Participants were randomly assigned to one of three equal groups: static stretching exercises, vibration, and control groups. The first group received 5 seconds duration static stretching exercises for 4 weeks, 5 sessions per week, and each session lasted 20 minutes. The second group received vibration with moderate pressure, high- frequency range, 2500 cycles per minute as the same dosage as the first group. Control group did not receive any intervention. Before and after intervention, overall, anteroposterior, and mediolateral stability indices were measured using Biodex Balance System in different positions.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201304221675N11**
Registration date: **2013-06-28, 1392/04/07**
Registration timing: **retrospective**
Last update:
Update count: **0**

Registration date

2013-06-28, 1392/04/07

Registrant information

Name

Asghar Akbari

Name of organization / entity

Zahedan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research of Zahedan University of Medical Sciences

Expected recruitment start date

2011-04-30, 1390/02/10

Expected recruitment end date

2011-12-31, 1390/10/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effect of static stretching exercises and vibration on postural stability indices in healthy women

Public title

The effect of stretching exercises and vibration on postural stability

Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria: Age between 18 and 25; lack of pain in ankle joints; no specific sport activity during study; having no history of sensory and motor disturbances in lower extremities; no history of instances such as neuromuscular diseases, abnormal range of movement and deformity in lower extremities, vertigo, ankle joint injury, surgery, balance disorder and cardiac, neurologic, respiratory and rheumatologic diseases. Exclusion criteria: Pain sensation in ankle joint during study; inability to do pre and post intervention tests; doing effective exercises in order to improving balance and no completion of the treatment.
Age
From **18 years** old to **25 years** old
Gender
Female

Phase
2
Groups that have been masked
No information
Sample size
Target sample size: **45**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features
Randomization: Subjects were randomly assigned into three groups by random draw.

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committe,Tehran Payam-e- Noor University
Street address
No 233, Cross of Sepand, Shahid nejatolahi St.,
City
Tehran
Postal code
Approval date
2011-04-26, 1390/02/06
Ethics committee reference number
15/11405/د

Health conditions studied

1

Description of health condition studied
Postural stability
ICD-10 code
Z50.1
ICD-10 code description
Other physical therapy

Primary outcomes

1

Description
Overall stability index
Timepoint
Before intervention,4 weeks after intervention
Method of measurement
Biodex Balance System

2

Description
Anteroposterior stability index
Timepoint
Before intervention,4 weeks after intervention
Method of measurement
Biodex Balance System

3

Description
Mediolateral stability index
Timepoint
Before intervention,4 weeks after intervention
Method of measurement
Biodex Balance System

Secondary outcomes

empty

Intervention groups

1

Description
Exercise group: The first group received 5 seconds duration static stretching exercises on plantarflexor and dorsiflexor muscles for 4 weeks, 5 sessions per week, and each session lasted 20 minutes.
Category
Rehabilitation

2

Description
Vibration group: The second group received vibration with moderate pressure, high- frequency range, 2500 cycles per minute on plantarflexor and dorsiflexor

muscles for 4 weeks, 5 sessions per week, and each session lasted 20 minutes.

Category

Rehabilitation

3

Description

Control group: No intervention

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Razmejo-Moghadam Physiotherapy Clinic

Full name of responsible person

Dr. Asghar Akbari

Street address

Dept. of Physiotherapy, School of Rehabilitation Sciences, Razmejo-Moghadam Laboratory, Ayatoallah Kafami St.

City

Zahedan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research of Zahedan University of Medical Sciences

Full name of responsible person

Dr. Hamidreza Mahmoudzadeh Sagheb

Street address

Deputy of Research, Zahedan University of Medical Sciences, Jannat Blvd., Dr. Hesabi Sq.

City

Zahedan

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice Chancellor for Research of Zahedan 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

Zahedan University of Medical Sciences

Full name of responsible person

Dr. Asghar Akbari

Position

Ph.D in Physiotherapy, Deputy of Education, School of Rehabilitation Sciences

Other areas of specialty/work

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Full name of responsible person

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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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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