

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

An investigation of the acute effect of warm-up training on the static and dynamic balance indices in athletic and non-athletic university students

Protocol summary

Summary

Objectives: Warm-up training before sport activities has been used to increase functional performance and reduce the risk of sport injury. In spite of the stated effect of these training protocols before starting any sport activity, its effect on the balance indices has not been proven yet. This study has been designed to investigate the acute effect of warm-up training protocol on the static and dynamic balance indices. Design: Randomized cross sectional clinical trial study. Setting and conduct: Participants will be randomly allocated in one of the control (no warm-up training) and experimental (performing warm-up training) groups. Dynamic and static balance indices will be evaluated before and immediately after intervention. Participants including major eligibility criteria: Athletic (at least two regular sport activities in a week) and non-athletic (maximum one session sport activity in a week) female and male students of Semnan University of Medical Sciences will be participated in the study. They will be excluded from the study if there is musculoskeletal, neuromuscular, cardiovascular and respiratory diseases, a history of lower limb fracture for the last year, a history of severe trauma during last three months. Intervention: Performing five minutes warm-up training protocol by the experimental group. Main Outcome measure variables: Static and dynamic balance indices during unilateral and bilateral standing with open and closed eyes.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201111141254N8**

Registration date: **2012-01-10, 1390/10/20**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2012-01-10, 1390/10/20

Registrant information

Name

Amir Hoshang Bakhtiary Davijani

Name of organization / entity

Semnan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 23 1444 1983

Email address

amirbakhtiary@sem-ums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research of Semnan University of Medical Sciences.

Expected recruitment start date

2011-12-22, 1390/10/01

Expected recruitment end date

2012-02-20, 1390/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

An investigation of the acute effect of warm-up training on the static and dynamic balance indices in athletic and non-athletic university students

Public title

An investigation of the acute effect of warm-up training on the static and dynamic balance indices in athletic and non-athletic university students

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: Athletic and non-athletic female and male students of Semnan University of Medical Sciences.

Exclusion criteria: musculoskeletal, neuromuscular, cardiovascular and respiratory diseases; a history of lower limb fracture for the last year; a history of severe trauma during last three months.

Age

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

Gender

Both

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: **120**

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

The Ethical committee of Semnan University of Medical Sciences

Street address

Semnan University of Medical Sciences, Basije Blv.

City

Semnan

Postal code

Approval date

2011-12-26, 1390/10/05

Ethics committee reference number

90/16/17961

Health conditions studied

1

Description of health condition studied

The participants are healthy

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Static balance index with open and closed eyes

Timepoint

Before and immediately after intervention

Method of measurement

Using Biodex Balance System

2

Description

Dynamic balance index with open and closed eyes

Timepoint

Before and immediately after intervention

Method of measurement

Using Biodex Balance System

Secondary outcomes

empty

Intervention groups

1

Description

Control group: No warm-up exercise

Category

Prevention

2

Description

Experimental group: Warm-up training protocol including five minutes walk on the treadmill with 65% maximum heart rate.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Neuromuscular Rehabilitation Research Centre

Full name of responsible person

Dr Amir H Bakhtiary

Street address

Neuromuscular Rehabilitation Research Centre,
Ghods Avenue

City

Semnan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for Research, Semnan University of Medical Sciences

Full name of responsible person

Dr Raheb Ghorbani

Street address

Semnan University of Medical Sciences, Basij Blv.

City

Semnan

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, 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**

Neuromuscular Rehabilitation Research Centre,
Semnan University of Medical Sciences

Full name of responsible person

Amir H Bakhtiary

Position

Full Professor/PhD

Other areas of specialty/work**Street address**

Neuromuscular Rehabilitation Research Centre, Gods Avenue.

City

Semnan

Postal code**Phone**

+98 23 1332 8502

Fax**Email**

amirbakhtiary@sem-ums.ac.ir

Web page address**Person responsible for scientific inquiries****Contact****Name of organization / entity**

Neuromuscular Rehabilitation Research Centre,
Semnan University of Medical Sciences

Full name of responsible person

Amir Hoshang Bakhtiary

Position

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amirbakhtiary@sem-ums.ac.ir

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Semnan University of Medical Sciences

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Position

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Other areas of specialty/work**Street address**

Ghods Avenue

City

Semnan

Postal code**Phone****Fax****Email****Web page address****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