

Clinical Trial Protocol

Iranian Registry of Clinical Trials

01 Aug 2026

Effect of Whole Body Vibration on the Musculoskeletal Performance in Healthy Subjects during Jumping

Protocol summary

Study aim

Effect of Interaction Between Whole Body Vibration Frequency and Body Position in Static and Dynamic Squat on Jump Performance in Healthy Women

Design

Clinical trial on a group of 15 healthy individuals. Applying protocols will be in a random order. Not blinded.

Settings and conduct

The test will be held in the Movement Disorders Research Center, Department of Physiotherapy, Tarbiat Modares University. In one session, subjects will be familiarized with the whole body vibration device and learn how to jump. In the next session, subjects will be randomly subjected to 4 different whole body vibration protocols. Before and after each protocol, subjects performed jumping and their body biomechanical information will be recorded.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Healthy women aged 18 to 35 years old with a normal body mass index. Exclusion criteria: pregnancy; any orthopedic, neurological, rheumatological or surgical injury to the lower back or lower limb that has been resulted in permanent damage to the lower back or lower limb; pain in the back or lower limbs on the day of the test; cardiovascular-respiratory problems

Intervention groups

The study has one group that will be subjected to different protocols of the whole body vibration device (different combinations of frequencies of the whole body vibration device with different body positions on the device). Before and after applying any vibration protocol, subjects will perform the jump test and their body performance will be studied.

Main outcome variables

Variables related to the performance of the musculoskeletal system such as jump height; force; power; duration of foot contact with the ground; flight duration; rate of force development; body viscoelastic

variables

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20201128049511N1**

Registration date: **2021-01-09, 1399/10/20**

Registration timing: **prospective**

Last update: **2021-01-09, 1399/10/20**

Update count: **0**

Registration date

2021-01-09, 1399/10/20

Registrant information

Name

Sahar Boozari

Name of organization / entity

Tarbiat Modares University

Country

Iran (Islamic Republic of)

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-02-19, 1399/12/01

Expected recruitment end date

2021-09-22, 1400/06/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Whole Body Vibration on the Musculoskeletal Performance in Healthy Subjects during Jumping

Public title

Effect of Whole Body Vibration on the Performance of Healthy Subjects during Jumping

Purpose

Supportive

Inclusion/Exclusion criteria**Inclusion criteria:**

All healthy women aged 18 to 35 years old. Having a Normal Body Mass Index

Exclusion criteria:

Pregnancy Any orthopedics, neurology, rheumatology, or surgery on the lower back or lower back that have been resulted in permanent damage or dysfunction to the lower back or lower limb Pain in the lower back or lower extremities during the study Cardiovascular-respiratory problems

Age

From **18 years** old to **35 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **15**

Randomization (investigator's opinion)

N/A

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**

Ethics Committee of Tarbiat Modares University

Street address

Tarbiat Modares University, Jalal al Ahmad Highway, Nasr Bridge, Tehran, Iran

City

Tehran

Province

Tehran

Postal code

1411713116

Approval date

2020-11-28, 1399/09/08

Ethics committee reference number

IR.MODARES.REC.1399.129

Health conditions studied**1****Description of health condition studied**

Healthy subjects

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Body kinetics related to the performance of the musculoskeletal system during the jump

Timepoint

Before and after each protocol of whole body vibration

Method of measurement

Accelerometer

2**Description**

Body kinematics related to the performance of the musculoskeletal system during the jump

Timepoint

Before and after each protocol of whole body vibration

Method of measurement

Accelerometer

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: Healthy women which will be subjected to 4 protocol of whole body vibration. Each protocol consists of different device frequencies and body positioning.

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

Movement Disorders Research Center, Department of

Physiotherapy, Tarbiat Modares University

Full name of responsible person

Sahar Boozari

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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Full name of responsible person

yaghoub fathollahi

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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

Tarbiat Modares University

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

Name of organization / entity

Tarbiat Modares University

Full name of responsible person

Maryam Nazari Gendeshmin

Position

MSc student of physiotherapy

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Unidentifiable data can be shared.

When the data will become available and for how long

Start the access period 6 months after printing the results

To whom data/document is available

Data will be available to researchers working in academic and scientific institutes.

Under which criteria data/document could be used

To carry out scientific projects

From where data/document is obtainable

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What processes are involved for a request to access data/document

Submitting the project plan and After the full review of the individuals and the organization carrying out the project will be sent upon confirmation

Comments