Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 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)

Phone
+98 21 8288 5053

Email address
s.boozari@modares.ac.ir

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

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

City
Tehran

Province
Tehran

Postal code
1411713116

Phone
+98 21 8288 5051

Fax
+98 21 8800 6544

Email
s.boozari@modares.ac.ir

Web page address
http://ptmodares.ir/

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Tarbiat Modares University

Full name of responsible person
yaghoub fathollahi

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

City
Tehran

Province
Tehran

Postal code
1411713116

Phone
+98 21 8288 2009

Fax
+98 21 8288 3101

Email
Res@modares.ac.ir

Web page address
https://res.modares.ac.ir/

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

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

City
Tehran

Province
Tehran

Postal code
1411713116

Phone
+98 21 8288 5052

Fax
+98 21 8800 6544

Email
maryam_nazari@modares.ac.ir

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity
Tarbiat Modares University

Full name of responsible person
Sahar Boozari

Position
Assistant Professor

Latest degree
Ph.D.

Other areas of specialty/work
Physiotherapy

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

City
Tehran

Province
Tehran

Postal code
1411713116

Phone
+98 21 8288 5053

Fax
+98 21 8800 6544

Email

s.boozari@modares.ac.ir

Web page address

https://www.modares.ac.ir/pro/academic_staff/sboozari

Person responsible for updating data

Contact

Name of organization / entity

Tarbiat Modares University

Full name of responsible person

Sahar Boozari

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

Street address

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

City

Tehran

Province

Tehran

Postal code

1411713116

Phone

+98 21 8288 5053

Fax

+98 21 8800 6544

Email

s.boozari@modares.ac.ir

Web page address

https://www.modares.ac.ir/pro/academic_staff/sboozari

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

Sahar Boozari Jalal al Ahmadi Highway, Tarbiat Modares University 009802182885053 s.boozari@modares.ac.ir

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