

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Jun 2026

Mobility, Balance, and Muscle Strength Adaptations to Short Term Whole Body Vibration Training plus Oral Creatine Supplementation in Elderly Women

Protocol summary

Summary

The aim of this study was to investigate whether in short term whole body vibration (WBV) training and creatine supplementation could affect muscle strength, mobility, and balance in elderly women. The participants were 22 healthy older women aged 60 years and over, who were randomly divided into the following groups; 1) whole-body vibration and creatine (WBV + Cr), whole-body vibration and placebo (WBV + P), and control group. The whole-body vibration groups performed exercises for 10 days. The intensity, amplitude and work-rest ratio were 30-35 HZ, 5 mm, and 1:1 respectively. From the day 1 to day 5 subjects in WBV + Cr group consumed 20g per day oral creatine supplement. This was followed by consuming 5g of creatine per day for the next 5 days. Subjects in WBV + P group consumed equal amount of dexterosus as placebo. To assess mobility performance 30-meter walking and tandem gait tests were applied. Static and dynamic balance measured by Flamingo and Timed-Up and Go (TUG) tests. Muscle isometric and isotonic strength assessed by using dynamometer and leg extension tests.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014061517743N2**

Registration date: **2014-09-26, 1393/07/04**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2014-09-26, 1393/07/04

Registrant information

Name

Mostafa Rahimi Jounaghani

Name of organization / entity

Shahrekork University

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Recruitment status

Recruitment complete

Funding source

University of Social Welfare and Rehabilitation Sciences

Expected recruitment start date

2013-03-20, 1391/12/30

Expected recruitment end date

2013-03-20, 1391/12/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Mobility, Balance, and Muscle Strength Adaptations to Short Term Whole Body Vibration Training plus Oral Creatine Supplementation in Elderly Women

Public title

Vibration and Creatine Effects on Physical Fitness

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion Criteria: healthy female, 60 to 85 years old, Exclusion Criteria: taking medications affecting neuromuscular performance and fall risk, those with

implants in the lower extremity or the spine, had a current medical condition for which exercise is contraindicated; had participated regularly in resistance training or aerobic training in the last 2 years; women who had contraindications for participation in WBV (diabetes, neuromuscular and heart diseases, stroke, implant, bypass, stent, arthritis and other joint disease, epilepsy)

Age

From **60 years** old to **85 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **22**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double blinded

Blinding description**Placebo**

Used

Assignment

Factorial

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

University of Social Welfare and Rehabilitation Sciences

Street address

Kodakyar st, Vlengak, Tehran.

City

Tehran

Postal code**Approval date**

2012-05-21, 1391/03/01

Ethics committee reference number

91/801/t/1/7228

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

Healthy Older Woman

ICD-10 code

Z00-Z13

ICD-10 code description

Persons encountering health services for examination and investigation

Primary outcomes**1****Description**

Hand Isometric Strength

Timepoint

before and after 10 days of intervention

Method of measurement

Dynamometer

2**Description**

Leg Isometric Strength

Timepoint

before and after 10 days of intervention

Method of measurement

Dynamometer

3**Description**

Leg Dynamic Strength

Timepoint

before and after 10 days of intervention

Method of measurement

leg extension test

4**Description**

Static Balance

Timepoint

before and after 10 days of intervention

Method of measurement

Flamingo Test

5**Description**

Dynamic Balance

Timepoint

before and after 10 days of intervention

Method of measurement

Time Up and Go test

6**Description**

Mobility Performance

Timepoint

before and after 10 days of intervention

Method of measurement

30-meter walking and tandem gait tests

Secondary outcomes

empty

Intervention groups

1

Description

Vibration and Creatine group: physical training on vibration set and Creatine supplement

Category

Other

2

Description

Vibration group: physical training on vibration set

Category

Other

3

Description

Control: without intervention

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Amin Aging center at Broujen

Full name of responsible person

Maryam Izadi

Street address

Maryam Ezadi

City

Broujen

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Iranian Research Center on Aging

Full name of responsible person

Dr Robab Sahaf

Street address

Kodakyar st, Velenjak, Tehran

City

Tehran

Grant name

Grant code / Reference number

91/801/t/1/7228

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

Yes

Title of funding source

Iranian Research Center on Aging

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

Baqiyatallah University of Medical Science

Full name of responsible person

Mostafa Rahimi Jounaghani

Position

PhD Student of Exercise Physiology

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