Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 dexterous 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

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Mostafa Rahimi Jounaghani
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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
befor and after 10 days of intrvention

Method of measurement
Dynamometer

2

Description
Leg Isometric Strength

Timepoint
befor and after 10 days of intrvention

Method of measurement
Dynamometer

3

Description
Leg Dynamic Strength

Timepoint
befor and after 10 days of intrvention

Method of measurement
leg extension test

4

Description
Static Balance

Timepoint
befor and after 10 days of intrvention

Method of measurement
Flamingo Test

5

Description
Dynamic Balance

Timepoint
befor and after 10 days of intrvention

Method of measurement
Time Up and Go test

6

Description
Mobility Performance

Timepoint
befor and after 10 days of intrvention

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

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Name of organization / entity
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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