Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effect of strength training and short term detraining on muscle mass in post menopausal women

Protocol summary

Summary

The aim of this study was to determine the effects of resistance training and detraining on muscle mass in Tehranian women. Twenty post-menopausal women aged over 50 years old were enrolled. After matched for weight, they were randomly assigned into control and resistance training group. The experimental designed program consisted of 12 weeks of resistance training and four weeks of detraining. Resistance training program was performed three times a week (non-consecutive session), three sets of 10 repetitions for 10 movements at least for 60 min. The exercise testing equipment used in this investigation was Thera-Band tubing. The resistance exercise program was designed for each participant, based on 80%, 85%, and 100% 10-repetition maximum. Control group received no intervention. Skin fold thickness was determined by caliper at baseline and 12 and 16 weeks after the intervention. Percentage of body fat was estimated from skin fold thickness (triceps and subscuplar) by McArdle method. Fat mass and fat free mass were calculated. Range of motion for trunk flexion and extension was determined.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201111121058N2**
Registration date: **2012-01-01, 1390/10/11**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2012-01-01, 1390/10/11

Registrant information

Name

Arash Ghanbarian

Name of organization / entity

Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences

Expected recruitment start date

2010-12-20, 1389/09/29

Expected recruitment end date

2011-03-20, 1389/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of strength training and short term detraining on muscle mass in post menopausal women

Public title

Strength Training and Prevention of Sarcopenia

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion Criteria: post menopausal woman; age over 50 years old. Exclusion Criteria: taking hormone replacement therapy (HRT); use of medications like β-adrenergic blockers, β-agonists, Ca2+ channel blockers and corticosteroids; having diabetes, Parkinson’s disease

and peripheral neuropathy.

Age
From **50 years** old to **65 years** old

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **20**

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
Research Institute for Endocrine Sciences

Street address
#24, Parvaneh st., Yemen st, Chamran Exp.

City
Tehran

Postal code
193954763

Approval date
2010-09-23, 1389/07/01

Ethics committee reference number
ec344

Health conditions studied

1

Description of health condition studied
Sarcopenia

ICD-10 code
M62.5

ICD-10 code description
Muscle wasting and atrophy, not elsewhere classified

Primary outcomes

1

Description
Muscle Weakness

Timepoint
At baseline, After 12 weeks, After 16 weeks

Method of measurement
Caliper

Secondary outcomes

1

Description
Rang of Motion

Timepoint
At baseline, After 12 weeks, After 16 weeks

Method of measurement
Sit and Reach

Intervention groups

1

Description
The experimental designed program consisted of 12 weeks of resistance training and four weeks of detraining. Resistance training program was performed three times a week (non-consecutive session), three sets of 10 repetitions for 10 movements at least for 60 min. The exercise testing equipment used in this investigation was Thera-Band tubing. The resistance exercise program was designed for each participant, based on 80%, 85%, and 100% 10-repetition maximum.

Category
Prevention

2

Description
Without any Intervention in Control Group

Category
N/A

Recruitment centers

1

Recruitment center

Name of recruitment center
Health Club

Full name of responsible person
Dr. Arash Ghanbarian

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Research Institute for Endocrine Sciences, #24 Parvaneh st., Yemen st, Chamran Exp.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Research Institute for Endocrine Sciences
Full name of responsible person
Dr. Fereidoun Azizi
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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
Research Institute for Endocrine 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
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Research Institute for Endocrine Sciences
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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