Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison of blood flow restriction strength training and traditional strength training on myostatin, muscle mass and some physiological factors in middle-age women

Protocol summary

Summary

Objectives: The purpose of this study is to compare the effect of strength training with blood flow restriction and traditional strength training on myostatin, muscular mass and some related-muscle physiological factors in middle-age women. Design: A semi-experimental study and pretest and post test design with two experimental groups and a control group, 29 healthy middle-age female voluntarily participated in study. Setting and contact: Subjects were randomly assigned into three groups: blood flow restriction strength training, traditional strength training and control. The training program performed for eight weeks and three times per week. Strength, muscular mass and blood samples were measured before and after the exercise training. Participants including major eligibility criteria were physical healthy and aged 45 through 55 and excluding major eligibility criteria were illness and blood pressure above 14/10. Intervention: 8 weeks of strength training with blood flow restriction and traditional strength training. Main outcome measures: myostatin, muscular mass, stretgh.

General information

Acronym

Effect of strength training with and without blood flow restriction on myostatin and some physiologi

IRCT registration information

IRCT registration number: **IRCT2017092736459N1**
Registration date: **2017-11-06, 1396/08/15**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-11-06, 1396/08/15

Registrant information

Name

Amin Farzaneh Hesari

Name of organization / entity

Sari Azad University

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

investigator

Expected recruitment start date

2016-06-21, 1395/04/01

Expected recruitment end date

2016-08-31, 1395/06/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of blood flow restriction strength training and traditional strength training on myostatin, muscle mass and some physiological factors in middle-age women

Public title

Comparison of two strength training on some muscular factors in middle-age women

Purpose

Other

Inclusion/Exclusion criteria

Including major criteria: healthy; 45 to 55years old.
Excluding major criteria: illness; blood pressure.

Age
From **42 years** old to **50 years** old

Gender
Female

Phase
2

Groups that have been masked
No information

Sample size
Target sample size: **29**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features
The subjects were randomly divided in two experimental groups and a control group by random number table.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
ethics committee of Sari Azad university

Street address
48161-19318, Sari Azad University, Farah Abad Rd, Sari

City
Sari

Postal code

Approval date
2016-11-03, 1395/08/13

Ethics committee reference number
IRIAU.SARI.REC.1395.8

Health conditions studied

1

Description of health condition studied
healthy related factors

ICD-10 code
Z00-Z13

ICD-10 code description
Factors influencing health status and contact with health services

Primary outcomes

1

Description
Myostatin

Timepoint
before and after of training

Method of measurement
Human Myostatin kits, ELIZA

2

Description
muscular mass

Timepoint
before and after of training

Method of measurement
measuring of thigh circumference

Secondary outcomes

1

Description
muscular strength

Timepoint
before and after tarining

Method of measurement
one repetition maximum

Intervention groups

1

Description
traditional strength training: 8 weeks and 3 times per week, intensity of 65-80% 1RM.

Category
Other

2

Description
blood flow restriction strength training: 8 weeks and 3 times per week, intensity of 20-30% 1RM.

Category
Other

3

Description
control group: without intervention

Category
N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Sari Azad University

Full name of responsible person

Amin Farzaneh Hesari

Street address

49161-19318, Azad University, Farah Abad Rd, Sari

City

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Sari Azad University

Full name of responsible person

Mohammad Farsi

Street address

Sari Azad University, Farah Abad Rd, Sari

City

Sari

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice chancellor for research, Sari Azad University

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

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Full name of responsible person

Amin Farzaneh Hesari

Position

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Other areas of specialty/work

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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