

Clinical Trial Protocol

Iranian Registry of Clinical Trials

12 Jul 2026

Comparison of the effects of resistance training with and without blood flow restriction on cardiovascular risk factors in overweight girls

Protocol summary

Summary

Objectives: The purpose of this study is to compare the effect of 8-week strength training with blood flow restriction and traditional strength training on some of the cardiovascular risk factors in overweight girls.

Design: A semi-experimental study and pretest and post test design with two experimental groups and a control group, 28 overweight and inactive girls 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. Blood samples were measured before and after the exercise training. **Participants** including major eligibility criteria were overweight and aged 18 through 24 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:** TG, TC, LDL, HDL.

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Iran (Islamic Republic of)
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Recruitment status
Recruitment complete
Funding source
investigator

Expected recruitment start date
2017-05-10, 1396/02/20
Expected recruitment end date
2017-08-06, 1396/05/15
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017090436061N1**
Registration date: **2017-11-01, 1396/08/10**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-11-01, 1396/08/10

Registrant information

Name

Amin Farzaneh Hesari

Name of organization / entity

Scientific title

Comparison of the effects of resistance training with and without blood flow restriction on cardiovascular risk factors in overweight girls

Public title

Comparison of the effects of resistance training with and without blood flow restriction on cardiovascular risk factors

Purpose

Other

Inclusion/Exclusion criteria

including major criteria: healthy; overweight; 18 to 24 years old excluding major criteria: illness; blood pressure above 14/10

Age

From **18 years** old to **24 years** old

Gender

Female

Phase
2

Groups that have been masked
No information

Sample size
Target sample size: 28

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
ethics committee of Sari Azad university

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

City
Sari

Postal code

Approval date
2017-05-28, 1396/03/07

Ethics committee reference number
IRIAU.SARI.REC.1395.3

Health conditions studied

1

Description of health condition studied
cardiovascular diseases

ICD-10 code
I10-I15

ICD-10 code description
Essential (primary) hypertension

Primary outcomes

1

Description
triglyceride

Timepoint
before and after of training

Method of measurement

enzymatic colorimetric method using Pars Azmoon
enzyme kits

Secondary outcomes

1

Description
cholesterol

Timepoint
before and after tarining

Method of measurement
enzymatic colorimetric method using Pars Azmoon
enzyme kits

2

Description
HDL

Timepoint
before and after tarining

Method of measurement
enzymatic colorimetric method using Pars Azmoon
enzyme kits

Intervention groups

1

Description
traditional strength training: 8 weeks and 3 times per
week, intensity of 65-80% 1RM, comprised of the
movements of leg extension, biceps, back-leg, triceps
and leg press.

Category
Other

2

Description
blood flow restriction strength training: 8 weeks and 3
times per week, intensity of 20-30% 1RM, comprised of
the movements of leg extension, biceps, back-leg,
triceps and leg press.

Category
Other

3

Description
control group: without intervention

Category
Other

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

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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

Farah Abad St, 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

Sari Azad University

Full name of responsible person

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Position

Assistant Professor

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