Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 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.

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

Sari Azad University

Country

Iran (Islamic Republic of)

Phone

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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

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
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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
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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