

Clinical Trial Protocol

Iranian Registry of Clinical Trials

08 Jul 2026

Comparison the effect of a period combination resistance-endurance exercise training on body composition, blood lipid profile, and blood glucose homeostasis in overweight and obese high school girls

Protocol summary

Summary

The purpose of the present was to comparison of combined exercising on body composition and blood lipid profile of obese and overweight. The population of this research was includes high school students (13 to 15 years) that 40 subjects (20 obese and 20 have a greater score) were selected and were randomly divided into two groups of, experimental(10 people) and control group(10 people). Inclusion criteria are: Lack exercise training in one years a go; Maximum age 13-15 years. exclusion criteria are: Patients with Acute cardiovascular disease and Joint and bone diseases.Then the obese and overweight group randomly divided into two groups of 10 people, experimental and control group. Fasting blood samples were collected from each group in a week before starting an exercise program. The exercise conducted about 12 week for 90 minutes. Strength training started with 50% 1RM and increased to 80% 1RM and endurance training started from 50 percent and reached to 80 percent of maximum heart rate. Body composition and Blood samples such as Blood glucose homeostasis and lipid were evaluated before and after practice.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201512222498N6**
Registration date: **2016-08-02, 1395/05/12**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-08-02, 1395/05/12

Registrant information

Name

Ramin Shabani

Name of organization / entity

Islamic Azad University

Country

Iran (Islamic Republic of)

Phone

+98 13 3375 2715

Email address

shabani@iaurasht.ac.ir

Recruitment status

Recruitment complete

Funding source

Islamic Azad University, Rasht, Science and Research Branch

Expected recruitment start date

2015-03-15, 1393/12/24

Expected recruitment end date

2015-08-21, 1394/05/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison the effect of a period combination resistance-endurance exercise training on body composition, blood lipid profile, and blood glucose homeostasis in overweight and obese high school girls

Public title

Comparison the effect of a period combination resistance-endurance exercise training on body composition, blood lipid profile, and blood glucose homeostasis in overweight and obese high school girls

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria are: Lack exercise training in one years a go; Maximum age 13-15 years. exclusion criteria are: Patients with Acute cardiovascular disease and Joint and bone diseases

Age

From **13 years** old to **15 years** old

Gender

Female

Phase

1-2

Groups that have been masked

No information

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Randomization was performed using to sealed envelopes.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Islamic Azad University, Rasht, Science and Research Branch

Street address

Lakan Gate, Azad University, Rasht Branch, Rasht

City

Rasht

Postal code

4147654919

Approval date

2015-04-25, 1394/02/05

Ethics committee reference number

61321404932014

Health conditions studied

1

Description of health condition studied

Obesity

ICD-10 code

E66.0

ICD-10 code description

Obesity and other hyperalimentation

Primary outcomes

1

Description

fasting blood glucose (FBS)

Timepoint

before and after 12 weak exercise

Method of measurement

According mg/dl and Blood samples

2

Description

Insulin resistance

Timepoint

before and after 12 weak exercise

Method of measurement

It was measured with HOMA-IR index

3

Description

Insulin

Timepoint

before and after 12 weak exercise

Method of measurement

According mg/dl and Blood samples

4

Description

triglycerides

Timepoint

before and after 12 weak exercise

Method of measurement

According mg/dl and Blood samples

5

Description

Total Cholesterol

Timepoint

before and after 12 weak exercise

Method of measurement

According mg/dl and Blood samples

6

Description

High-density lipoprotein

Timepoint

before and after 12 weak exercise

Method of measurement

According mg/dl and Blood samples

7

Description

Low-density lipoprotein

Timepoint

before and after 12 weak exercise

Method of measurement

According mg/dl and Blood samples

8

Description

Glycosylated hemoglobin

Timepoint

before and after 12 weak exercise

Method of measurement

According mg/dl and Blood samples

Secondary outcomes

1

Description

Weight

Timepoint

before and after 12 weak exercise

Method of measurement

According to kilograms and by balance

2

Description

Body mass index

Timepoint

before and after 12 weak exercise

Method of measurement

According to Kg/m² and dividing body weight by the square of the height(m²)

3

Description

Subcutaneous fat

Timepoint

before and after 12 weak exercise

Method of measurement

By caliper

4

Description

Body Fat Percentage

Timepoint

before and after 12 weak exercise

Method of measurement

By caliper

Intervention groups

1

Description

The experimental group did combined training (strength and endurance). The exercise conducted about 12 week for 90 minutes. Endurance training was with Intensity 50

to 80 percent heart rate. Training did on bike and treadmill. Resistance training was with 50 to 70 percent heart rate.

Category

Lifestyle

2

Description

Control group was without practice

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Education

Full name of responsible person

Zohreh Jalali

Street address

Lakan, Rasht

City

Rasht

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Islamic Azad University, Rasht, Science and Research Branch

Full name of responsible person

Dr.Ramin Shabani

Street address

Lakan Gate, Azad University, Rasht Branch

City

Rasht

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, Islamic Azad University, Rasht, Science and Research Branch

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

Islamic Azad University, Rasht Branch

Full name of responsible person

Marzieh Nazari

Position

MA

Other areas of specialty/work**Street address**

Lakan gate, Azad University, Rasht Branch, Rasht,
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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

Marzieh Nazari

Position

MA

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Person responsible for scientific inquiries

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Full name of responsible person

Dr.Ramin Shabani

Position

PhD

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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