

# 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

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##### 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/m<sup>2</sup> and dividing body weight by the square of the height(m<sup>2</sup>)

**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**

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## Person responsible for updating data

### Contact

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Islamic Azad University Of Rasht Branch

**Full name of responsible person**

Dr.Ramin Shabani

**Position**

PhD

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

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**City**

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**Postal code****Phone**

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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*