

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jul 2026

### The effect of 8 weeks of resistance training on new biomarkers of cardiovascular disease in obese adult males

#### Protocol summary

##### Summary

This study was conducted to evaluate the effect of 8 weeks of resistance training on new biomarkers of cardiovascular disease (Lipocalin2 (LCN2) and fatty acid binding protein (A\_FABP) in obese adult males. Some of the criteria inclusion was obese adults men with aged 25-35 years and without chronic diseases. Moreover, the criteria of exclusion were existence of any damage and uncontrolled intake of any supplement or drugs. Therefore, in semi-experimental study twenty four obese adults men randomly were allocated in two training and control groups in the winter 2014. Subjects of supplement group consumed 2gr ginseng capsules daily for one week, while other group consumed placebo for the same amount. The progressive resistance training performed three days a week with 50-80% IRM increase intensity for eight weeks. Venous blood samples were collected at pre and after training program. Moreover, body composition indicators were measured in both stages.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2017010810512N7**

Registration date: **2017-01-11, 1395/10/22**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2017-01-11, 1395/10/22

##### Registrant information

###### Name

Sirvan Atashak

###### Name of organization / entity

Islamic Azad University-Mahabad Branch

###### Country

Iran (Islamic Republic of)

###### Phone

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###### Email address

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###### Recruitment status

**Recruitment complete**

###### Funding source

Islamic Azad University of Mahabad

###### Expected recruitment start date

2014-12-22, 1393/10/01

###### Expected recruitment end date

2015-12-21, 1394/09/30

###### Actual recruitment start date

empty

###### Actual recruitment end date

empty

###### Trial completion date

empty

###### Scientific title

The effect of 8 weeks of resistance training on new biomarkers of cardiovascular disease in obese adult males

###### Public title

The effect of resistance training on biomarkers of cardiovascular disease in obese adult males

###### Purpose

Other

###### Inclusion/Exclusion criteria

Inclusion criteria: Males; young athletes; aged 25-35years; body mass index (BMI) equal or greater to 30; No current chronic health problems. Exclusion criteria: Smoking and alcohol; and uncontrolled intake of any supplement or drugs.

###### Age

From **25 years** old to **35 years** old

**Gender**

Male

**Phase**

N/A

**Groups that have been masked**

No information

**Sample size**

Target sample size: 24

**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**

Clinical Research Ethics Committee of the Mahabad Islamic Azad University

**Street address**

Islamic Azad University, Mahabad Branch, university Street, Mahabad, Iran

**City**

Mahabad

**Postal code****Approval date**

2014-12-06, 1393/09/15

**Ethics committee reference number**

93/915س

**Health conditions studied****1****Description of health condition studied**

cardiovascular disease risk factors

**ICD-10 code**

Z50.1

**ICD-10 code description**

other physical therapy

**Primary outcomes****1****Description**

Lipocalin2 (LCN2) concentration

**Timepoint**

At the beginning of the study and prior of training and after training program

**Method of measurement**

The Lipocalin2 biomarker concentration was measured with the autoanalyzer and Biovendor kites.

**2****Description**

fatty acid binding protein (A\_FABP)

**Timepoint**

At the beginning of the study and prior of training and after training program

**Method of measurement**

The fatty acid binding protein biomarker concentration was measured with the autoanalyzer and Biovendor kites.

**Secondary outcomes****1****Description**

body composition indices

**Timepoint**

At the beginning of the study and prior of training and after training program

**Method of measurement**

The Waist to hip ratio (WHR) was calculated as waist circumference divided by that of the hip and Fat density (fat mass) was predicted from the skin-fold measurements taken using a caliper at the triceps, abdominal, and super iliac sites.

**Intervention groups****1****Description**

In the training group participants were performed progressive resistance training three days a week with 50-80% 1RM for eight weeks.

**Category**

Lifestyle

**2****Description**

In the control group, participants were advised to maintain their normal lifestyle during the study

**Category**

Lifestyle

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Islamic Azad University of Mahabad

**Full name of responsible person**

Dr Sirvan Atashak

**Street address**

**City**

Mahabad

## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**

Islamic Azad University of Mahabad

**Full name of responsible person**

Dr. Worya Karimi

**Street address**

Islamic Azad University, Mahabad, West Azarbayejan

**City**

Mahabad

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

Islamic Azad University of Mahabad

**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**

Department of Physical Education & Sports Science,  
Azad University, Mahabad Branch

**Full name of responsible person**

Dr Sirvan Atashak

**Position**

Associate Professor

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## Person responsible for scientific

## inquiries

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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*