

Clinical Trial Protocol

Iranian Registry of Clinical Trials

04 Jul 2026

The Comparison of endurance and resistance training effectiveness on Adipokine levels(Lipocalin-2) among non-athlete students .

Protocol summary

Summary

The purpose of this study is to examine the effect of 8 weeks resistance versus endurance training on plasma Lipocalin2 in male students. Thirty healthy male students, that no participate in any period of training in the last 6 months, who are not suffering from cardiovascular and metabolic diseases with will be randomly allocated into three groups: control group (n = 10), resistance training group (n =10) and endurance training group (n = 10). Initially the percentage of fat, plasma lipocalin2 concentrations, waist to hip ratio and blood pressure will be measured in all these subjects. Then the resistance training will be performed 3 days per week at an intensity corresponding to 65-80% of one-repetition maximum, 8-12 repetitions and 2-4 sets for 8 weeks, Endurance training group, also, underwent an 8-week intervention, with a frequency of 3 days per week at an intensity corresponding to 65 - 80% maximum heart rate for 20 - 34 min. At the end of the interventions fat content, plasma concentrations lipocalin2, waist to hip ratio and blood pressure will be measured again and compared between the three groups. Comparisons will be made before and after the interventions in each group as well.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201207024188N2**
Registration date: **2012-07-30, 1391/05/09**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2012-07-30, 1391/05/09

Registrant information

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Name of organization / entity

Islamic Azad University

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research, Islamic Azad University, Gachsaran Branch

Expected recruitment start date

2011-12-22, 1390/10/01

Expected recruitment end date

2012-02-29, 1390/12/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Comparison of endurance and resistance training effectiveness on Adipokine levels(Lipocalin-2) among non-athlete students .

Public title

Effects of exercise training on plasma lipocalin-2

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:1-Age between 21 and 27 years 2-No history of cardiac or metabolic disease 3- Subjects have not been in physical training in the last 6 month before

the study begins. Exclusion criteria: 1- Uncooperative participants 2- Exacerbation of breathing problems

Age

From **21 years** old to **27 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

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

Islamic Azad University Gachsaran Branch

Street address

Islamic Azad University Gachsaran Branch, Gachsaran
Iran

City

Gachsaran

Postal code

Approval date

2011-11-22, 1390/09/01

Ethics committee reference number

51492900112004

Health conditions studied

1

Description of health condition studied

Plasma Protein

ICD-10 code

R77

ICD-10 code description

Other abnormalities of plasma proteins

Primary outcomes

1

Description

Body fat percent

Timepoint

Prior to intervention , After the intervention

Method of measurement

Caliper

2

Description

Plasma Lipocalin Concentration

Timepoint

Prior to intervention , After the intervention

Method of measurement

ELISA kits

3

Description

Wasit to Hip Ratio(WHR)

Timepoint

Prior to intervention , After the intervention

Method of measurement

Tape Meter

Secondary outcomes

1

Description

Blood Pressure

Timepoint

Prior to intervention , After the intervention

Method of measurement

Mercury Barometer

Intervention groups

1

Description

Endurance training:In this study Endurance training performed an 8-week intervention, with a frequency of 3 days per week at an intensity corresponding to 65 - 80% maximum heart rate for 20 - 34 min.

Category

Lifestyle

2

Description

Resistance training will be performed 3 days per week at an intensity corresponding to 65-80% of one-repetition maximum, 8-12 repetitions and 2-4 sets for 8 weeks.

Category

Lifestyle

3

Description

Control group: This group did not do any exercise.

Category

N/A

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

Islamic Azad University Gachsaran Branch

Full name of responsible person**Street address****City**

Gachsaran

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Islamic Azad University Gachsaran

Full name of responsible person

Seyed Saman Mousavian

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Islamic Azad University Gachsaran ,Iran

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Gachsaran

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Islamic Azad University Gachsaran

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**

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Amin Mohammadi Damieh

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Fax**Email****Web page address****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*

