

Clinical Trial Protocol

Iranian Registry of Clinical Trials

13 Jul 2026

Evaluation of the impact of training intensity in the plasma levels of adipolin and furin in obese middle age men

Protocol summary

Summary

Objective: Adipolin is a novel anti-inflammatory adipokine with insulin-sensitizing effects that ameliorates glucose intolerance and insulin resistance. . This study investigated effect of intensity of aerobic training on adipolin and furin levels and insulin resistance index in sedentary overweight men. Design: 36 sedentary; overweight men (BMI>25 Kg/m2); obesity and overweight not related to hypothyroidism; healthy men; without kidney disease diabetes; no physical problems & injury; no physical activity during three years ago ; assigned randomly. in three training groups of low and high intensity and control groups. People who had not above conditions exclusion from study. Low intensity training group run at intensity of 50-70 % of maximal heart rate .high intensity training group run at 70-90% of maximal heart rate at 30-45 minutes per session and three sessions per week for 10 weeks and Control group were without intervention. Levels of adipolin, furin, insulin and fasting glucose and anthropometric indices measured before and 72 hours after last training session. Adipolin and furin were primary outcome measure and insulin resistance index was secondary outcome measure.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016010310709N3**

Registration date: **2016-01-16, 1394/10/26**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-01-16, 1394/10/26

Registrant information

Name

Najmeh Rezaeian

Name of organization / entity

Islamic Azad University, Bojnourd branch

Country

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Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Private

Expected recruitment start date

2014-04-21, 1393/02/01

Expected recruitment end date

2014-07-06, 1393/04/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of the impact of training intensity in the plasma levels of adipolin and furin in obese middle age men

Public title

Effect of aerobic training on adipolin & furin

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria: Middle age men; sedentary ; overweight((BMI>25 Kg/m2); obesity and overweight not related to hypothyroidism; healthy men; without kidney disease diabetes; no physical problems & injury; no

physical activity during three years ago : assigned randomly. Exclusion criteria: People who had not above conditions.

Age

From **35 years** old to **50 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **36**

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 of Zahedan Medical Science University

Street address

Zahedan Medical Science University, Daneshgah street

City

Zahedan

Postal code

Approval date

2016-01-10, 1394/10/20

Ethics committee reference number

01/06/3901/1/21529 - 3

Health conditions studied

1

Description of health condition studied

Insulin Resistance

ICD-10 code

E10 , E11,

ICD-10 code description

Insulin-dependent diabetes mellitus.Non-insulin-dependent diabetes mellitus, Malnutrition-related diabetes mellitus.Other specified diabetes mellitus.Unspecified diabetes mellitus

Primary outcomes

1

Description

Adipolin

Timepoint

Before of first training &72 hours after last session

Method of measurement

Elisa

2

Description

Furin

Timepoint

Before of first training &72 hours after last session

Method of measurement

Elisa

Secondary outcomes

1

Description

Insulin Resistance Index

Timepoint

Before of first training &72 hours after last session

Method of measurement

HOMA-IR=(fasting glucose x fasting insulin)/22.5

Intervention groups

1

Description

Control group:Without intervention

Category

Lifestyle

2

Description

12Subjects in high intensity group run at 70-90 % of maximal heart rate 30-45 minutes per session.

Category

Lifestyle

3

Description

12Subjects in low intensity group weeks of aerobic run at 50-70 % of maximal heart rate 30-45 minutes per session.

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center
Shahid Mostafazadeh(Takhti) Sports Complex
Full name of responsible person
Zohreh Barahouei Jamar
Street address
City
Khorramabad

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice Chancellor for Research of Karaj Payame Noor University
Full name of responsible person
Dr Dehghandar
Street address
University of Payame Noor, Karaj
City
Karaj

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 of Karaj Payame Noor 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

Name of organization / entity
Karaj University of Payame Noor
Full name of responsible person
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Person responsible for updating data

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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