

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effect of resistance training on serum concentration of resistin and novel indices of insulin resistance in sedentary underweight men

Protocol summary

Summary

The purpose of present study is to investigate the effect of resistance training on serum concentration of resistin and novel indices of insulin resistance in sedentary underweight men. To do this, nineteen sedentary (without experience of regular physical activity in one year before beginning of the study) underweight (body mass index less than 18.5 kilogram/meter squared) men from cities Boukan and Saghez randomly are placed at two groups: resistance training and control. General characteristics of subjects, serum concentration of resistin, and novel indices of insulin resistance are evaluated before and after training. Resistance training protocol is consisted of twelve weeks weight training (3 sessions per week, 10 stations, 3 sets 8-12 repetitions in each station, intensity 60-80% of one repetition maximum, rest between sets 1 min and between stations 2 min, duration of main training 60 min per each session).

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014081910158N3**

Registration date: **2014-09-17, 1393/06/26**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2014-09-17, 1393/06/26

Registrant information

Name

Fatah Moradi

Name of organization / entity

Islamic Azad University of Saghez

Country

Iran (Islamic Republic of)

Phone

+98 87 3630 5049

Email address

moradi_fatah@iausaghez.ac.ir

Recruitment status

Recruitment complete

Funding source

Islamic Azad University of Saghez

Expected recruitment start date

2009-12-22, 1388/10/01

Expected recruitment end date

2010-04-21, 1389/02/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of resistance training on serum concentration of resistin and novel indices of insulin resistance in sedentary underweight men

Public title

Effect of training in underweight men

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: Male; underweight (body mass index less than 18.5 kilogram/meter squared); 18-30 year; without experience of regular physical activity in one year before beginning of the study; Exclusion criteria: history of cardiovascular diseases; diabetes; thyroid diseases; drug consumption; being under any diet or medication; addiction to any narcotic substances; smoking; alcoholism; caffeine.

Age

From **18 years** old to **38 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

Islamic Azad University of Saghez (Ethical Committee)

Street address

Islamic Azad University of Saghez

City

Saghez

Postal code

Approval date

2013-07-24, 1392/05/02

Ethics committee reference number

11-16-1-4747

Health conditions studied

1

Description of health condition studied

Underweight

ICD-10 code

E-90

ICD-10 code description

Nutritional and metabolic disorders in diseases classified elsewhere

Primary outcomes

1

Description

Body weight

Timepoint

Before and after the resistance training

Method of measurement

Digital weighing machine

Secondary outcomes

1

Description

Insuline resistance

Timepoint

Before and after the resistance training

Method of measurement

Novel insulin resistance indices

2

Description

Serum resistin concentration

Timepoint

Before and after the resistance training

Method of measurement

Measure of serum resistin concentration

Intervention groups

1

Description

Resistance training protocol consisted of twelve weeks weight training in training group

Category

Other

2

Description

Continuing daily living without doing regular physical activity in control group

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Islamic Azad University of Boukan

Full name of responsible person

Street address

City

Boukan

2

Recruitment center

Name of recruitment center

Islamic Azad University of Saghez

Full name of responsible person

Street address

City

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University of Saghez

Full name of responsible person

Dr. M. Salar Tarkhami

Street address

Islamic Azad University of Saghez

City

Saghez

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 Saghez

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 of Saghez

Full name of responsible person

Soran Heydari

Position

Manager of Physical Education and Sport Sciences
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Other areas of specialty/work

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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