

Clinical Trial Protocol

Iranian Registry of Clinical Trials

24 Jun 2026

The Effect of Interval Resistance Training with different intensity on some selected adipokines in obese men

Protocol summary

Study aim

The Aim of This Study was to Investigate the Effect of Different Intensities of Resistance Training on Adipokines and Inflammatory Factors in Obese Men.

Design

The present study is a quasi experimental and applied method with a pre-test-post-test design with a control group. The samples will be divided into 4 groups based on demographic characteristics: control group (11 people), intervention group 1 (11 people), intervention 2 (11 people) and intervention 3 (11 people).

Settings and conduct

Two days before the start of the intervention period, initial assessments including anthropometric indices (height and weight and body mass index) of each subject will be measured in the gym. Exercises are done using bodybuilding machines. Blood sampling will be conducted twice, the first time before the first exercise session and the second time 48 hours after the last exercise session (after 10-12 hours of fasting at 6 until 7 am).

Participants/Inclusion and exclusion criteria

Inclusion criteria for the study: Body mass index = 30, No addiction to drugs and alcohol, No history of regular exercise for at least 6 months, No history of kidney, liver, cardiovascular disease, diabetes

Intervention groups

Intervention group 1: High intensity resistance circular training: 3 sets of 10 repetitions with 80% of a maximum repetition, Intervention group 2: Circular resistance training with moderate intensity: 3 sets of 13 repetitions with 60% of a maximum repetition, Intervention group 3: Low intensity resistance resistance training: 3 sets of 20 repetitions with 40% of a maximum repetition, control group: Doing routine work without any resistance training. No chemical, medicinal or herbal substances are used in this research.

Main outcome variables

Asprosin, NRG-4, IL-6, TNF alfa, Leptin, Adiponectin

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191203045588N2**

Registration date: **2021-12-05, 1400/09/14**

Registration timing: **prospective**

Last update: **2021-12-05, 1400/09/14**

Update count: **0**

Registration date

2021-12-05, 1400/09/14

Registrant information

Name

Ensieh Yazdkhasti

Name of organization / entity

The University of Mohaghegh Ardabili

Country

Iran (Islamic Republic of)

Phone

+98 44 3251 8396

Email address

yazdkhasti.e@uma.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-12-22, 1400/10/01

Expected recruitment end date

2022-03-19, 1400/12/28

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effect of Interval Resistance Training with different intensity on some selected adipokines in obese men

Public title

Evaluation of The Effect of Resistance Training in obese people

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

BMI=30 No addiction to drugs and alcohol No history of regular exercise for at least 6 months No history of kidney, liver, cardiovascular disease, diabetes Not having any injuries or physical problems for the subjects

Exclusion criteria:

Age

From **20 years** old to **30 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **44**

Randomization (investigator's opinion)

Not 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 Committee of Mohaghegh Ardabili University

Street address

Mohaghegh Ardabil University End of University Street Ardabil

City

Ardabil

Province

Ardabil

Postal code

5619913131

Approval date

2021-11-06, 1400/08/15

Ethics committee reference number

IR.UMA.REC.1400.024

Health conditions studied

1

Description of health condition studied

obesity

ICD-10 code

E66

ICD-10 code description

Overweight and obesity

Primary outcomes

1

Description

Asprosin

Timepoint

48 hours before and 48 hours after training intervention

Method of measurement

Blood sample, Equipment needed: Date disposable syringe, standard garo or tourniquet, test tube containing anticoagulant (EDTA), sterile cotton, 75% ethanol alcohol , ELISA kit (Made in the USA) and ELIZA Reader

2

Description

neuregulin-4

Timepoint

48 hours before and 48 hours after training intervention

Method of measurement

Blood sample, Equipment needed: Date disposable syringe, standard garo or tourniquet, test tube containing anticoagulant (EDTA), sterile cotton, 75% ethanol alcohol , ELISA kit (Made in the USA) and ELIZA Reader

3

Description

Leptin

Timepoint

48 hours before and 48 hours after training intervention

Method of measurement

Blood sample, Equipment needed: Date disposable syringe, standard garo or tourniquet, test tube containing anticoagulant (EDTA), sterile cotton, 75% ethanol alcohol , ELISA kit (Made in the Czech Republic) and ELIZA Reader

4

Description

Adiponectin

Timepoint

48 hours before and 48 hours after training intervention

Method of measurement

Blood sample, Equipment needed: Date disposable syringe, standard garo or tourniquet, test tube containing anticoagulant (EDTA), sterile cotton, 75%

ethanol alcohol, ELISA kit (Made in the Czech Republic) and ELIZA Reader

5

Description

Interleukin 6

Timepoint

48 hours before and 48 hours after training intervention

Method of measurement

Blood sample, Equipment needed: Date disposable syringe, standard garo or tourniquet, test tube containing anticoagulant (EDTA), sterile cotton, 75% ethanol alcohol , ELISA kit (Made in the Czech Republic) and ELIZA Reader

6

Description

Tumor necrosis factor-alpha

Timepoint

8 hours before and 48 hours after training intervention

Method of measurement

Blood sample, Equipment needed: Date disposable syringe, standard garo or tourniquet, test tube containing anticoagulant (EDTA), sterile cotton, 75% ethanol alcohol , ELISA kit (Made in Wuhan, China) and ELIZA Reader

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: In this group, obese people do resistance training in a gym for 12 weeks. Their training protocol is as follows: They perform high-intensity circular resistance training, 3 sets of 10 repetitions with 80% of a maximum repetition, 3 days a week, each session for 70 minutes. The formulas mentioned in articles and books are used to determine their maximum repetition. In this research, no chemicals, drugs, herbal supplements, etc. are used.

Category

Prevention

2

Description

Intervention group 2: In this group, obese people do resistance training in a gym for 12 weeks. Their training protocol is as follows: They do circular resistance training with moderate intensity, 3 sets of 13 repetitions with 60% of one maximum repetition, 3 days a week, 70 minutes per session. The formulas mentioned in articles and books are used to determine their maximum repetition. In this research, no chemicals, drugs, herbal supplements, etc. are used.

Category

Prevention

3

Description

Intervention group 3: In this group, obese people do resistance training in a gym for 12 weeks. Their training protocol is as follows: They do low-intensity circular resistance training, 3 sets of 20 repetitions with 40% of a maximum repetition, 3 days a week, each session for 70 minutes. The formulas mentioned in articles and books are used to determine their maximum repetition. In this research, no chemicals, drugs, herbal supplements, etc. are used.

Category

Prevention

4

Description

Control group: This group has their normal and routine life conditions and should avoid any physical activity for 12 weeks.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

University Of Mohaghegh Ardabili

Full name of responsible person

Ensieh Yazdkhasti

Street address

Mohaghegh Ardabil University, End of University Street, Ardabil

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The university of Mohaghegh Ardabili

Full name of responsible person

Davood Seif zadeh

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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
The university of Mohaghegh Ardabili
Proportion provided by this source
100
Public or private sector
Public
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
The University of Mohaghegh Ardabili
Full name of responsible person
Ensieh Yazdkhasti
Position
Student
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
There is no more information
Study Protocol
Yes - There is a plan to make this available
Statistical Analysis Plan
Not applicable
Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

Program protocol and informed consent are easily accessible to individuals.

When the data will become available and for how long

After completing the research and publishing articles

To whom data/document is available

Academics and sports coaches

Under which criteria data/document could be used

According to the articles of this research, the use of training protocol is allowed.

From where data/document is obtainable

Yazdkhasti.ensi@yahoo.com Email. yazdkhasti

What processes are involved for a request to access data/document

Please email and explain what research they need. Data is provided to them in a minimum of time.

Comments