Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Effect of 12-Week Endurance, Resistance and Concurrent Training on Appetite Control and Weight Loss in Sedentary Men With Overweight

Protocol summary

Summary

Exercise training may be effective in weight control by appetite related hormones change. The present study is a randomized clinical trial and the subjects are assigned in the pretest-posttest design with the control group. Subjects randomly are divided into four groups including endurance training group (n=10, perform 40 min running with 80-90% of maximum heart rate), resistance training group (n=10, perform 7 resistance exercises, 4 sets, 8 repetitions with 80% of one repetition maximum), concurrent training group (n=10, perform endurance and resistance training according to Resistance and Endurance protocols in interval sessions) and the control group (n=10, without any regular exercise training). All three experimental (training) groups will perform 12-week exercise training protocol, 3 sessions per week, each session 1 hour. Blood sampling is taken at the fasting state 24 hour before start and again 24 hour after finishing the research period. Finally, serum appetite hormones level (acylated ghrelin, Peptide YY and Glucagon-like Peptide 1) will be assay by Elisa kits.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017050917675N1**
Registration date: **2017-05-27, 1396/03/06**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2017-05-27, 1396/03/06

Registrant information

Name

Dariush Sheikholeslami-Vatani

Name of organization / entity

University of Kurdistan

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Kermanshah University of Medical Sciences

Expected recruitment start date

2017-06-22, 1396/04/01

Expected recruitment end date

2017-09-23, 1396/07/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of 12-Week Endurance, Resistance and Concurrent Training on Appetite Control and Weight Loss in Sedentary Men With Overweight

Public title

Effect of Exercise on Appetite Hormones

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion Criteria: Having a Body Mass Index Over 25 kg/m2; lack of Regular Physical Activity. Exclusion Criteria: Subjects do not Wishes to Continue Participating; Having More Than 3 Session Absent.

Age

From **20 years** old to **60 years** old

Gender

Male

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **40**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double 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 Kermanshah University of Medical Sciences
Street address
Kermanshah University of Medical Sciences, Shahid Beheshti Street, Central Room of Kermanshah University of Medical Sciences
City
Kermanshah
Postal code
Approval date
2017-04-19, 1396/01/30
Ethics committee reference number
IR.KUMS.REC.1396.4

Health conditions studied

1

Description of health condition studied
Obesity
ICD-10 code
E66.9
ICD-10 code description
Simple Obesity

Primary outcomes

1

Description
Acylated Ghrelin
Timepoint
Before starting the protocol and again after finishing the project period
Method of measurement
Serum ELISA Kit

2

Description
Peptide YY
Timepoint
Before starting the protocol and again after finishing the project period
Method of measurement
Serum ELISA Kit

3

Description
Glucagon-Like Peptide 1
Timepoint
Before starting the protocol and again after finishing the project period
Method of measurement
Serum ELISA Kit

Secondary outcomes

1

Description
Diet control
Timepoint
before starting the protocol and again before the last exercise session
Method of measurement
questionnaire

Intervention groups

1

Description
Perform 12 weeks of resistance training, 3 sessions per week with 80 percent of one repetition maximum.
Category
Other

2

Description
Perform 12 weeks of endurance training, 3 sessions per week with 80-90 percent of maximum heart rate.
Category
Other

3

Description
Perform 12 weeks of both resistance and endurance training according to resistance and endurance protocols in interval sessions.
Category

Other

4

Description
During 12 weeks of intervention, the control group are not given any regular exercise training.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Sport Organization of Sanandaj Municipality
Full name of responsible person
Dariush Sheikholeslami Vatani
Street address
University of Kurdistan, Pasdaran, Sanandaj
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Sanandaj

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Kermanshah University of Medical Sciences, vice chancellor for research and technology
Full name of responsible person
Dr. Behrooz Hamzeh
Street address
Kermanshah University of Medical Sciences, Shahid Beheshti St.
City
Kermanshah
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Kermanshah University of Medical Sciences, vice chancellor for research and technology
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
University of Kurdistan
Full name of responsible person
Dariush Sheikholeslami Vatani
Position
Academic member, University of Kurdistan (Ph.D in exercise physiology)
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Person responsible for scientific inquiries

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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