Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

The comparison of the effect of 8 week aerobic and Resistance training on serum concentrations of nisfatin-1, vaspatin, myonectin, omentin and insulin resistance in obese women

Protocol summary

Study aim

The purpose of this study was to investigate the effect of aerobic and resistance training on some of the myokines and Adipokines among obese women.

Design

The study design is pre and post test with control group. Among women aged 23 to 50 years old (obese) who referred to Shahid Bahonar Hospital in Kerman, after calculating BMI (BMI), 45 obese and over weight women (BMI > 25) are selected. They are just divided into 3 groups: resistance training, endurance training and control group.

Settings and conduct

The place of Practice Protocol: Bahonar Hospital in Kerman and Kerman Islamic Azad University. The place of Blood Collection and Molecular Cell Tests: Bahonar Hospital in Kerman and Razi Lab

Participants/Inclusion and exclusion criteria

Inclusion criteria: Body mass index more than 25; specialist permission to perform the practice protocol; the pass permission according to PAR-Q questionnaire. Exclusion criteria: Alcohol consumption; Smoking; Continuous physical activity; Cardiovascular disease; High blood pressure

Intervention groups

1- resistance training group: perform strength training 2- endurance training group: perform aerobic training 3- control group: There is no intervention

Main outcome variables

nisfatin-1, visfatin, lipid profile, myonectin, chemrin, omentin and insulin resistance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180708040399N2**
Registration date: **2018-11-05, 1397/08/14**
Registration timing: **retrospective**

Last update: **2018-11-05, 1397/08/14**
Update count: **0**

Registration date

2018-11-05, 1397/08/14

Registrant information

Name

Abdolreza Kazemi

Name of organization / entity

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2015-10-23, 1394/08/01

Expected recruitment end date

2015-11-22, 1394/09/01

Actual recruitment start date

2015-10-23, 1394/08/01

Actual recruitment end date

2015-12-22, 1394/10/01

Trial completion date

2016-04-20, 1395/02/01

Scientific title

The comparison of the effect of 8 week aerobic and Resistance training on serum concentrations of nisfatin-1, vaspatin, myonectin, omentin and insulin

resistance in obese women

Public title
The effects of aerobic and resistance training on some serum Adipokines and myokines in obese women.
Purpose
Health service research
Inclusion/Exclusion criteria
Inclusion criteria:
Body mass index > 25 Specialist permission to perform the training protocol performing the training protocol according to PAR-Q
Exclusion criteria:
Cardiovascular disease Negative exercise test High blood pressure Deep scars in the limbs and not having letter of satisfaction
Age
From **23 years** old to **50 years** old
Gender
Female

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **45**
Actual sample size reached: **45**
Randomization (investigator's opinion)
Randomized
Randomization description
Among the volunteers, overweight and obese women, 45 were randomly selected and then the samples were randomly assigned to the groups. The method of randomization was using random numbers table.
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
Kerman University of Medical Sciences
Street address
158257842- Physiology Research Center - Somayeh Crossroads- Shariati Ave.
City
Kerman
Province
Kerman
Postal code
158257842
Approval date
2016-02-20, 1394/12/01
Ethics committee reference number
IR.KMU.REC.1394.407

Health conditions studied

1

Description of health condition studied
obese an overwieght
ICD-10 code
E66
ICD-10 code description
Overweight and obesity

Primary outcomes

1

Description
Nisfatin
Timepoint
Before and After 6 Weeks of Exercise training
Method of measurement
ELISA method

2

Description
Visfatin
Timepoint
Before and After 6 Weeks of Exercise training
Method of measurement
ELISA method

3

Description
lipid profile
Timepoint
Before and After 6 Weeks of Exercise training
Method of measurement
ELISA method

4

Description
Myonectine
Timepoint
Before and After 6 Weeks of Exercise training
Method of measurement
ELISA method

5

Description
chemerin
Timepoint
Before and After 6 Weeks of Exercise training
Method of measurement

ELISA method

6

Description
omentin-1
Timepoint
Before and After 6 Weeks of Exercise training
Method of measurement
ELISA method

7

Description
Insulin Resistance
Timepoint
Before and After 6 Weeks of Exercise training
Method of measurement
ELISA method

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group1 (Endurance training): training will be performed with 30% of the maximum heart rate for 30 minutes. Then, according to the principle of overload, the duration of the exercise will be increased to 55 minutes at 60% of the maximum heart rate at the 6th week.
Category
Other

2

Description
Intervention group 2 (Resistance training): 2 sets with 18-16 repetitions and 30% of a maximal repetition with 2 min rest between each set of exercises. This intervention will be done through 5 sessions per week.
Category
Other

3

Description
Control group: there is no intervention for this group.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Kerman Physiology Research Center
Full name of responsible person
Mohammad Pourranjbar
Street address
158257842, Physiology Research Center, Somayeh Crossroads, Shariati Ave., Kerman
City
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Sponsors / Funding sources

1

Sponsor
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Kerman University of Medical Sciences
Full name of responsible person
Mohammad Pourranjbar
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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
Kerman University of Medical Sciences
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
Kerman University of Medical Sciences
Full name of responsible person
Mohammad Pourranjbar

Position
Associate professor
Latest degree
Ph.D.
Other areas of specialty/work
Others
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Not applicable
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available