

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 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)

Phone

+98 34 3131 2102

Email address

a.kazemi@vru.ac.ir

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 overweight

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

Kerman

Province

Kerman

Postal code

158257842

Phone

+98 34 3131 2102

Email

RKAZEMI22@YAHOO.COM

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kerman University of Medical Sciences

Full name of responsible person

Mohammad Pourranjbar

Street address

158257842, Physiology Research Center, Somayeh Crossroads, Shariati Ave., Kerman

City

Kerman

Province

Kerman

Postal code

158257842

Phone

+98 34 3131 2102

Email

rkazemi22@yahoo.com

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

Street address

158257842, Physiology Research Center, Somayeh
Crossroads, Shariati Ave.

City

Kerman

Province

Kerman

Postal code

158257842

Phone

+98 34 3131 2102

Email

rkazemi22@yahoo.com

Person responsible for scientific inquiries**Contact****Name of organization / entity**

Kerman University of Medical Sciences

Full name of responsible person

Mohammad Pour ranjbar

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

sport sciences

Street address

158257842- Physiology Research Center - Somayeh
Crossroads- Shariati Ave.

City

Kerman

Province

Kerman

Postal code

158257842

Phone

+98 34 3131 2102

Email

rkazemi22@yahoo.com

Person responsible for updating data**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

sport sciences

Street address

158257842- Physiology Research Center - Somayeh
Crossroads- Shariati Ave.

City

Kerman

Province

Kerman

Postal code

158257842

Phone

+98 34 3131 2102

Email

rkazemi22@yahoo.com

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