Clinical Trial Protocol
Iranian Registry of Clinical Trials

24 Nov 2026

The effect of two training methods High-Intensity Interval Training (HIIT) and Aerobic continuous training (AECT)on serum levels of Meteorin- like hormone, oncostatin M and lipid profile in Overweight and obese women

Protocol summary

Study aim

Determining the effect of eight weeks of high intensity interval training (HIIT) and aerobic continuous training (AECT) on serum levels of methorine-like hormone, oncostatin M and lipid profile in overweight and obese women.

Design

Clinical trial with control group, with parallel groups, not blinded, non-random, subjects 30 overweight and obese women with an age range of 30 to 45 years.

Settings and conduct

High-intensity interval training (HIIT) will be stored in the form of (running: walking) with 100% heart rate intensity. Continuous aerobic training (AECT) will be performed as follows: in the first and second weeks of 32-block blocks will be used continuously and without rest, the third and fourth weeks of the new chain with repetition of the previous chain will be performed And from the fifth week onwards, simple hand movements will also be considered. Intensity: 60 to 70% reserve heart rate. The training place will be held in Takhti gymnasium in Marand city.

Participants/Inclusion and exclusion criteria

Inclusion criteria, female subjects, age range 30 to 45 years, overweight and obesity , lack of regular exercise for at least the last six months, no medication and supplementation, no skeletal disease and Joint, glands and hormones, cardiovascular, autoimmune and ... . Exclusion criteria: having cardiovascular, respiratory, lumbar disc, glandular and hormonal diseases. Having regular exercise in the last six months and will be menopause.

Intervention groups

1) High-intensity interval training (8 weeks and 3 sessions per week with intensity of 100% reserve heart rate), 2) Continuous aerobic training (8 weeks and 3 sessions per week with intensity of 60 to 70% reserve heart rate) 3) Control group (did not have a training course).

Main outcome variables

Methorine-like hormone, oncostatin M and lipid profile.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210810052133N1**
Registration date: **2021-10-07, 1400/07/15**
Registration timing: **registered_while_recruiting**

Last update: **2021-10-07, 1400/07/15**
Update count: **0**

Registration date

2021-10-07, 1400/07/15

Registrant information

Name

Shabnam Akbarzadeh

Name of organization / entity

Tabriz University

Country

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-10-02, 1400/07/10

Expected recruitment end date

2021-12-01, 1400/09/10

Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effect of two training methods High-Intensity Interval Training (HIIT) and Aerobic continuous training (AECT)on serum levels of Meteorin- like hormone, oncostatin M and lipid profile in Overweight and obese women

Public title
The effect of two training methods on obesity hormones
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Female subjects Age range 30 to 45 years Overweight and obese (body mass index greater than or equal to 28) Lack of regular exercise for at least the last six months, no medication and supplements, no skeletal and joint disease, endocrine and hormonal, cardiovascular, autoimmune, etc.
Exclusion criteria:
Having cardiovascular, respiratory, lumbar disc, glandular and hormonal diseases. Have regular exercise in the last six months Being menopausal
Age
From **30 years** old to **45 years** old
Gender
Female

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **30**
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
Biomedical Ethics Committee of Tabriz University
Street address
Tabriz - 29 Bahman Blvd. - University of Tabriz - Central Library and Documentation and Publishing Center
City
Tabriz
Province
East Azarbaijan
Postal code
5166616471
Approval date
2021-08-29, 1400/06/07
Ethics committee reference number
IR.TABRIZU.REC.1400.025

Health conditions studied

1

Description of health condition studied
Obesity
ICD-10 code
Z00-Z99
ICD-10 code description
Chapter XXI of ICD-10 (Z00-Z99)

Primary outcomes

1

Description
Meteorin- like hormone
Timepoint
Beginning of the study (pre-test) after 12 hours of fastinag - End of the study (post-test) (48 hours after the last training session) After 12 hours of fasting
Method of measurement
Methorine-like hormone by ELISA

2

Description
Oncostatin M
Timepoint
Beginning of the study (pre-test) after 12 hours of fastinag - End of the study (post-test) (48 hours after the last training session) After 12 hours of fasting
Method of measurement
Oncostatin M by ELISA

3

Description
lipid profile
Timepoint
Beginning of the study (pre-test) after 12 hours of fastinag - End of the study (post-test) (48 hours after the last training session) After 12 hours of fasting
Method of measurement
lipid profile by photometric method

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group 1) High intensity interval training: Eight weeks (three sessions per week) Exercises will be performed in the form of (running: walking) with an intensity of 100% of the reserve heart rate.
Category
N/A

2

Description
Intervention group 2) Aerobic continuous training(AECT): Exercises will be performed for eight weeks (three sessions per week). In the first and second weeks, 32-beat blocks (complete chain) will be used continuously and without rest, in the third and fourth weeks, the new chain will be performed with repetition of the previous chain, and from the fifth week onwards, simple hand movements will be. These chains will be repeated with both feet. Exercise intensity will be 60 to 70% of the reserve heart rate.
Category
N/A

3

Description
3) Control group: will not receive any training program.
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Sarah Research Lab
Full name of responsible person
Pouran Karimi
Street address
Tabriz - Ostad Shahriyar Boulevard (Chaiknar), in front of University Square, next to the General Welfare Office, Ehsan Building, first floor
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tabriz University
Full name of responsible person
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Faculty of Physical Education and Sports Sciences, University of Tabriz, 29 Bahman Blvd., Tabriz
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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
Tabriz University
Proportion provided by this source
20
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
PhD student of Tabriz University
Full name of responsible person
Shabnam Akbarzadeh
Position
PhD student
Latest degree
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Other areas of specialty/work
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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
No - There is not a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available