

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

20 Jun 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

Iran (Islamic Republic of)

##### Phone

+98 41 3475 2683

##### Email address

shabnam.akbarzadeh66@gmail.com

##### 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

##### City

Tabriz

##### Province

East Azarbaijan

##### Postal code

5156934736

##### Phone

+98 41 3657 7147

##### Email

info@sara-co.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Tabriz University

##### Full name of responsible person

Dr. Ramin Amirsasan

##### Street address

Faculty of Physical Education and Sports Sciences, University of Tabriz, 29 Bahman Blvd., Tabriz

##### City

Tabriz

##### Province

East Azarbaijan

##### Postal code

5166616471

##### Phone

+98 41 3339 3255

##### Email

amirsasan@tabrizu.ac.ir

#### 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

Master

##### Other areas of specialty/work

Exercise and health

##### Street address

Tabriz - Laleh Intersection - Salari St. - Opposite 18 meters south of Amir Kabir - Elahieh Twin Towers - Ninth Floor - Unit A8

##### City

Tabriz

##### Province

East Azarbaijan

**Postal code**  
5173971964  
**Phone**  
+98 41 3475 2683  
**Email**  
shabnam.akbarzadeh66@gmail.com

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Tabriz University  
**Full name of responsible person**  
Ramin Amirsasan  
**Position**  
Associate Professor  
**Latest degree**  
Ph.D.  
**Other areas of specialty/work**  
Exercise Physiology and Sports Nutrition  
**Street address**  
Faculty of Physical Education and Sport Sciences,  
University of Tabriz, Imam Khomeini St., 29 Bahman  
Blvd., Tabriz  
**City**  
Tabriz  
**Province**  
East Azarbaijan  
**Postal code**  
5166616471  
**Phone**  
+98 41 3339 3255  
**Email**  
amirsasan@tabrizu.ac.ir

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Tabriz University

**Full name of responsible person**  
Shabnam Akbarzadeh  
**Position**  
PhD student in sports physiology  
**Latest degree**  
Master  
**Other areas of specialty/work**  
Exercise and health  
**Street address**  
Tabriz - Laleh Intersection - Salari St. - Opposite 18  
meters south of Amir Kabir - Elahieh Twin Towers -  
Ninth Floor - Unit A8  
**City**  
Tabriz  
**Province**  
East Azarbaijan  
**Postal code**  
5173971964  
**Phone**  
+98 41 3475 2683  
**Email**  
shabnam.akbarzadeh66@gmail.com

## 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