Clinical Trial Protocol
Iranian Registry of Clinical Trials

23 Sep 2026

Effect of Eight Weeks of two types of High-Intensity Interval Training on Appetite sensation, Appetite-related Hormones and Body Composition in Overweight and Obese Men

Protocol summary

Study aim

Effect of Eight Weeks of two types of High-Intensity Interval Training on Appetite sensation, Appetite-related Hormones and Body Composition in Overweight and Obese Men

Design

The present study is a randomized, 3 parallel-group trial without blinded outcome

Settings and conduct

In a semi-experimental research project, among volunteer overweight and obese men (BMI > 25) at Tabriz University, with an age range of 20–30 years and no regular training in the past two years, 30 people will be randomly selected. After completion of the informed consent form, they will be randomly assigned into 3 groups of 10, including the high-intensity interval training group, the high-intensity interval functional training group, and the control group. On the first day, weight, height, BMI, and fat percentage will be measured by BIA, as well as VO2max and VVo2max using the Rockport and the 5-minute running test. Fasting blood samples as well as an appetite questionnaire with a visual analog scale (VAS) will be taken 48 hours before the first session and after the last session of training to determine the indicators of ghrelin, GLP-1, PYY, and the sensation of satiety. Also, the calorie intake and consumption will be measured before and after 4 and 8 weeks.

Participants/Inclusion and exclusion criteria

Men with BMI over 25 Between 20-30 years old Without chronic diseases Without surgery last year No consumption of weight-loss and anti-inflammatory drugs during the last year Lack of weight loss during the last year(more than 10%) Lack of programmed training during last year Lack of medical limitation. Smoking and alcohol consumption

Intervention groups

3 groups of 10 people include the high-intensity interval training (HIIT) group, the high-intensity interval functional training (HIFT) group, and the control group (Con).

Main outcome variables

changes in ghrelin, GLP-1, PYY, appetite, and body composition.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191207045644N2**
Registration date: **2024-03-04, 1402/12/14**
Registration timing: **prospective**

Last update: **2024-03-04, 1402/12/14**
Update count: **0**

Registration date

2024-03-04, 1402/12/14

Registrant information

Name

Vahid Fekri Kourabbaslou

Name of organization / entity

The University of Kharazmi

Country

Iran (Islamic Republic of)

Phone

+98 41 3288 2094

Email address

vfekri28@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-03-10, 1402/12/20

Expected recruitment end date

2024-04-20, 1403/02/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Eight Weeks of two types of High-Intensity Interval Training on Appetite sensation, Appetite-related Hormones and Body Composition in Overweight and Obese Men

Public title

Effect High-Intensity Interval Training on Appetite-related Hormones and Body Composition in Overweight and Obese Men

Purpose

Basic scienece

Inclusion/Exclusion criteria

Inclusion criteria:

Men with BMI over 25 Between 20-30 years old Without any chronic diseases Without any surgery during last year No consumption of weight-loss and anti-inflammatory drugs during the last year Lack of weight loss during the last year(more than 10%) Lack of any programmed training experience during last year Lack of any medical limitation.

Exclusion criteria:

Men with BMI below 25 Not being in the age range. History of chronic diseases. Experience of regular training program during the last year. Having surgery during the last year. Consumption of weight-loss and anti-inflammatory drugs during the last year Medical limitation. Consumption of supplement affecting muscle and adipose tissue metabolism during the last months. Being female. Smoking and alcohol consumption

Age

From **20 years** old to **30 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Simple randomization with dice-throw. So there are 3 groups. If the dice number is 1 or 2, in the first group, if 3 and 4 are in group 2, and if 5 and 6 are in group 3.

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

Research Ethics committees of University of Tabriz

Street address

University of Tabriz, 29 Bahman Boulevard, Tabriz, East Azerbaijan

City

Tabriz

Province

East Azarbaijan

Postal code

5166616471

Approval date

2023-07-09, 1402/04/18

Ethics committee reference number

IR.TABRIZU.REC.1402.042

Health conditions studied

1

Description of health condition studied

Not a disease (Hormonal levels, Body composition, Aerobic power and Performance)

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Ghrelin Hormone level

Timepoint

Pre and Post 8 weeks

Method of measurement

Blood sample

2

Description

Glucagon-like peptide 1 hormone lavel

Timepoint

Pre and Post 8 weeks

Method of measurement

Blood sample

3

Description

Peptide YY hormone level

Timepoint
Pre and Post 8 Weeks
Method of measurement
Bloos Sample

4

Description
body Composition
Timepoint
Pre and Post 8 Weeks
Method of measurement
Bioelectrical impedance analysis

5

Description
Appetite sansation
Timepoint
Pre and Post 8 Weeks
Method of measurement
Appetite questionnaire

Secondary outcomes

1

Description
Vo2 max
Timepoint
Pre and Post 8 weeks
Method of measurement
Rockport test

2

Description
vVo2max
Timepoint
Pre and Post 8 weeks
Method of measurement
5 minutes vVo2max run test

3

Description
Calorie intake
Timepoint
Pre, Post 4 and 8 weeks
Method of measurement
Dietary Recall Questionnaire

Intervention groups

1

Description
Intervention group: 8 weeks of high-intensity interval training/ 3 sessions in a week according to vVo2max
Category
N/A

2

Description
Intervention group: 8 weeks of high intensity functional training/ 3 sessions in a week including 6 full body exercises.
Category
N/A

3

Description
Control group: Daily activity without training
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
The University of Tabriz
Full name of responsible person
Ramin Amirsasan
Street address
Sports science faculty, THe University of Tabriz, Abresan
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Sponsors / Funding sources

1

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Name of organization / entity
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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
The University of Tabriz
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
The University of Tabriz
Full name of responsible person
Vahid Fekri Kourabbaslou
Position
Ph.D. Candidate
Latest degree
Master
Other areas of specialty/work
Exercise Physiology
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No3, Vatan pour alley- Ostad Jafari street, Tabriz, Iran
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available
Study Protocol
Yes - There is a plan to make this available
Statistical Analysis Plan
Yes - There is a plan to make this available
Informed Consent Form
Yes - There is a plan to make this available
Clinical Study Report
Yes - There is a plan to make this available
Analytic Code
Yes - There is a plan to make this available
Data Dictionary
Yes - There is a plan to make this available
Title and more details about the data/document
Hormone levels and appetite sensation, and body composition data
When the data will become available and for how long
Start accessing 6 months after printing results
To whom data/document is available
Researchers working in academic and scientific institutions
Under which criteria data/document could be used

To investigate the background of research in similar research

From where data/document is obtainable

Vahid Fekri Kourabbaslou

What processes are involved for a request to access data/document

Send an Email to the researcher

Comments