Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

effect of 8 weeks of swimming HIIT training on serum levels of irisin and metabolic indicators in 50-60 years old overweight and obese women.

Protocol summary

Study aim
The purpose of this study is to investigate the effect of 8 weeks of swimming HIIT training on serum levels of irisin and some metabolic indicators in overweight and obese women.

Design
30 persons of overweight and obese women with an age range of 60-50 years will be selected as the statistical sample they and randomly will divide to two experimental and control groups

Settings and conduct
The present study is a semi-experimental which will be done in fieldwork

Participants/Inclusion and exclusion criteria
50-60 years old overweight and obese women, postmenopausal, no disease, familiar with swimming skill

Intervention groups
the study training program is conducted as an 8-week swimming HIIT trainings, which each week included 3 sessions, each session including 10 minutes of warm-up and 6-8 repetitions of 30 seconds of free swimming (front crawl) with maximum speed and active rest time of 2 minutes between repetitions and at the end of the training, 10 minutes of cool-down trainings will done. control group will not get any exercise

Main outcome variables
waist circumference; blood pressure; glucose; insulin resistance; HDL; TG ; irisin

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20180822040849N1**
Registration date: **2018-09-18, 1397/06/27**
Registration timing: **prospective**
Last update: **2018-09-18, 1397/06/27**
Update count: **0**

Registration date
2018-09-18, 1397/06/27

Registrant information

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akram jafari

Name of organization / entity
Islamic azad university shahrekord branch

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Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2018-10-23, 1397/08/01

Expected recruitment end date
2018-12-27, 1397/10/06

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
effect of 8 weeks of swimming HIIT training on serum levels of irisin and metabolic indicators in 50-60 years old overweight and obese women.

Public title
swimming HIIT training and serum levels of irisin

Purpose
Basic scienece

Inclusion/Exclusion criteria

Inclusion criteria:
overweight and obese women 60-50 years no disease postmenopausal
Exclusion criteria:
having disease BMI less than 30 age less than 50

Age
From **50 years** old to **60 years** old

Gender
Female

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: First each subject will be taken in each groups (A or B) by tossing a coin. For example the side of the coin determines the assignment of each subject. Then each group will be named as control or experiment group by tossing a coin.

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Islamic Azad Univercity Shahrekord Branch

Street address
Rahmatieh, Islamic Azad University

City
Shahrekord

Province
Chahar-Mahal-va-Bakhtiari

Postal code
8813733441

Approval date
2018-05-21, 1397/02/31

Ethics committee reference number
IR.IAU.SHK.REC.1397.008

Health conditions studied

1

Description of health condition studied
Over Weight and Obesity

ICD-10 code
Z68.53

ICD-10 code description
Body mass index (BMI) pediatric, 85th percentile to less than 95th percentile for age

Primary outcomes

1

Description
irisin

Timepoint
before and after 8 weeks swimming HIIT training

Method of measurement
blood sampling

2

Description
glucose

Timepoint
before and after 8 weeks swimming HIIT training

Method of measurement
blood sampling

3

Description
insulin resistance

Timepoint
before and after 8 weeks swimming HIIT training

Method of measurement
blood sampling

4

Description
TG

Timepoint
before and after 8 weeks swimming HIIT training

Method of measurement
blood sampling

5

Description
HDL

Timepoint
before and after 8 weeks swimming HIIT training

Method of measurement
blood sampling

6

Description
Blood pressure

Timepoint
before and after 8 weeks swimming HIIT training

Method of measurement
barometer

7

Description
waist circumference
Timepoint
before and after 8 weeks swimming HIIT training
Method of measurement
narrowest waist circumference

Secondary outcomes

empty

Intervention groups

1

Description
30 overweight and obese women (60-50 years) will be selected as the statistical sample and randomly assigned to two experimental and control groups. Experimental group will practice high intensity interval swimming trainings for 8 weeks, each week with 3 sessions, each session including 10 minutes of warm-up, 6-8 repetitions of 30 seconds of front crawl with maximum speed and 2 minutes of active rest between repetitions and at the end of training, 10 minutes of cool-down trainings. During the study period, the control group will not participate in any physical activity. Before training program, and 48 hours after the last training session, measurements of waist circumference and blood pressure, as well as blood samples in the fasting state will performed to measure irisin, glucose and insulin resistance
Category
N/A

2

Description
Control group: without any exercise
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
islamic azad univercity shahrekord branch
Full name of responsible person
Behzad Zamani dehkordi
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Sponsors / Funding sources

1

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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
Islamic Azad University
Proportion provided by this source
100
Public or private sector
Private
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
Islamic Azad University
Full name of responsible person
Akram Jafari
Position
Assisstante Professor
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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)
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
all data
When the data will become available and for how long
6 months after publication
To whom data/document is available
academic staff
Under which criteria data/document could be used
nothing
From where data/document is obtainable
scientific papers
What processes are involved for a request to access data/document
searching on scientific websites
Comments