

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 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

Name

akram jafari

Name of organization / entity

Islamic azad university shahrekord branch

Country

Iran (Islamic Republic of)

Phone

+98 38 3232 6462

Email address

mrmoradi@sku.ac.ir

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 science

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 University 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

Street address

rahmatieh, Islamic azad university

City

Shahrekord

Province

Chahar-Mahal-va-Bakhtiari

Postal code

8813733441

Phone

+98 38 3336 1000

Email

bzamani@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Behzad Zamani Dehkordi

Street address

Rahmatieh, Islamic Azad University

City

Shahrekord

Province

Chahar-Mahal-va-Bakhtiari

Postal code

8813733441

Phone

+98 38 3336 1000

Email

Bzamani@gmail.com

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

Latest degree

Ph.D.

Other areas of specialty/work

Sport Physiology

Street address

Rahmatieh, Islamic Azad University

City

Shahrekord

Province

Chahar-Mahal-va-Bakhtiari

Postal code
8813733441
Phone
+98 38 3336 1000
Email
jafari.akm@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
Islamic Azad University
Full name of responsible person
Akram Jafari
Position
Assistante Professor
Latest degree
Ph.D.
Other areas of specialty/work
Sport Physiology
Street address
Rahmatieh, Islamic Azad University,
City
Shahrekord
Province
Chahar-Mahal-va-Bakhtiari
Postal code
8813733441
Phone
+98 38332326462
Email
jafari.akm@gmail.com

Person responsible for updating data

Contact

Name of organization / entity
Islamic Azad University
Full name of responsible person
Akram Jafari
Position
Assistante Professor
Latest degree
Ph.D.

Other areas of specialty/work
Sport Physiology
Street address
Rahmatieh, Islamic Azad University
City
Shahrekord
Province
Chahar-Mahal-va-Bakhtiari
Postal code
8813733441
Phone
+98 38332326462
Email
jafari.akm@gmail.com

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