

Clinical Trial Protocol

Iranian Registry of Clinical Trials

04 Aug 2026

The effects of eight weeks of Pilates exercise on serum visfatin levels, the HOMA-IR β indices in overweight and obese women

Protocol summary

Summary

The aim of this study was to determine the effect of 8 weeks of Pilates exercise on serum Visfatin levels, (the homeostatic model assessment-insulin resistance) HOMA-IR index, (the homeostatic model assessment-beta-cell) HOMA- β Cell Index in overweight and obese women. For this reason, 20 overweight and obese healthy and non-athletic women without any illness will voluntarily participate in the research and will be divided into two groups: experimental and control groups. The experimental group will take place in a Pilates training program for eight weeks with an intensity of 40 to 60 percent of maximum heart rate, three times a week and each session will take an hour. The control group will not perform any exercises. In order to measure serum Visfatin and Insulin level and HOMA-IR & HOMA- β indices, fasting blood samples of two groups will be collected 24 hours before the start of exercise and 24 hours after the last exercise session. Also, before and after performing Pilates training, body mass index, body weight and waist to hip ratio will be measured in two groups. Finally, we will compare the mentioned variables between and within groups in order to clarify the effect of Pilates training on above variables.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017030432873N1**

Registration date: **2017-04-10, 1396/01/21**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2017-04-10, 1396/01/21

Registrant information

Name

Farzad Zehsaz

Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2017-04-14, 1396/01/25

Expected recruitment end date

2017-04-20, 1396/01/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of eight weeks of Pilates exercise on serum visfatin levels, the HOMA-IR β indices in overweight and obese women

Public title

The effects of exercise training on HOMA-IR index in obese women

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Non-athletic women; being obese and over weight; Regular menstruation; exposure to early stage of follicular period; age range 25-40 years old;

Exclusion criteria: having any illness

Age

From **25 years** old to **40 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

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

Islamic Azad University, Tabriz Branch

Street address

Islamic Azad University, Tabriz Branch, Tabriz, Iran

City

Tabriz

Postal code

-

Approval date

2016-10-24, 1395/08/03

Ethics committee reference number

IR.IAU.TABRIZ.REC.1395.4

Health conditions studied

1

Description of health condition studied

Obesity

ICD-10 code

E66

ICD-10 code description

E66.9

Primary outcomes

1

Description

Insulin

Timepoint

Before intervention and after 8 weeks of the beginning of intervention

Method of measurement

IU/mL & Blood sampling

2

Description

Glucose

Timepoint

Before intervention and after 8 weeks of the beginning of intervention

Method of measurement

mg/dL & Blood sampling

3

Description

Visfatin

Timepoint

Before intervention and after 8 weeks of the beginning of intervention

Method of measurement

mg/mL & Blood sampling

Secondary outcomes

1

Description

HOMA-β

Timepoint

Before intervention and after 8 weeks of the beginning of intervention

Method of measurement

Blood Sampling and putting glucose and insulin levels in formula

2

Description

HOMA-IR

Timepoint

Before intervention and after 8 weeks of the beginning of intervention

Method of measurement

Blood Sampling and putting glucose and insulin levels in formula

Intervention groups

1

Description

The experimental group participated in a Pilates training program for eight weeks with an intensity of 40 to 60 percent of maximum heart rate, three times a week and each session took an hour. The control group did not perform any exercises.

Category

Lifestyle

2

Description

Pilates exercise training

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Tabriz Youth and Sport Office

Full name of responsible person

-

Street address

Tabriz Pilates Clubs

City

Tabriz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Investigator

Full name of responsible person

Nasrin Jahanyar

Street address

Physical Education Department, Islamic Azad University of Tabriz

City

Tabriz

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Investigator

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Islamic azad University of Tabriz

Full name of responsible person

Farzad Zehsaz

Position

Academic Staff Member

Other areas of specialty/work

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Fax

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Web page address

Person responsible for updating data

Contact

Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty