

Clinical Trial Protocol

Iranian Registry of Clinical Trials

12 Jul 2026

The effect of Pilates vs. Aerobic training and low calorie diet on respiratory parameters and anthropometric indexes in overweight/obese women

Protocol summary

Study aim

Overall Objective: To compare the effect of 8 weeks of Pilates and aerobic exercise with weight loss diet on respiratory and anthropometric indices in obese women.

Design

The clinical trial consisted of a control group with parallel aerobics and Pilates groups, a single-blind, non-randomized study on 48 overweight and obese individuals.

Settings and conduct

This study was randomly selected from Al-Zahra Municipal Clubs (District 5). In District 5, two clubs, 42 and 50, were randomly selected to do the job. The required specifications for this project were announced and the people volunteered and after checking the conditions, they entered the project.

Participants/Inclusion and exclusion criteria

Healthy overweight and obese people in their 30s and 50s

Intervention groups

Pilates group: 8 weeks (three times a week) Pilates exercises with weight loss diet
Aerobics group: 8 weeks (three times a week) Aerobic exercise with weight loss diet
Control group: 8 weeks weight loss diet

Main outcome variables

Weight Loss; Reduce body fat percentage, increase forced vital capacity; Increased Forced Expiratory Volume in the first second

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200718048127N1**

Registration date: **2020-07-18, 1399/04/28**

Registration timing: **retrospective**

Last update: **2020-07-18, 1399/04/28**

Update count: **0**

Registration date

2020-07-18, 1399/04/28

Registrant information

Name

Maryam Sadat Kasaii

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-07-05, 1398/04/14

Expected recruitment end date

2019-08-20, 1398/05/29

Actual recruitment start date

2019-07-04, 1398/04/13

Actual recruitment end date

2019-08-22, 1398/05/31

Trial completion date

2019-12-30, 1398/10/09

Scientific title

The effect of Pilates vs. Aerobic training and low calorie diet on respiratory parameters and anthropometric indexes in overweight/obese women

Public title

Comparison of the combined effect of physical activity and diet on respiration and body composition

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
People do not have any metabolic diseases Do not have a specific illness or respiratory problem They can attend the class for 2 months People with a body mass index above 25

Exclusion criteria:
Smoking

Age
From **30 years** old to **50 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **48**
Actual sample size reached: **33**

Randomization (investigator's opinion)
Not randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description
All three groups of participants thought that they had been subjected to an intervention that was in fact a regime intervention for them, but that some people were physically active and some were not.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Organization in Biomedical Research, Science and Research Branch of Islamic Azad University

Street address
No. 8, South Niloufar Alley, Shahrn St., Tehran

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Tehran

Province
Tehran

Postal code
1474963761

Approval date
2019-10-15, 1398/07/23

Ethics committee reference number
IR.IAU.SRB.REC.1398.097

Health conditions studied

1

Description of health condition studied

overweight and obesity

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

weight

Timepoint

Beginning of study and 2 months later (end of study)

Method of measurement

Body Composition

2

Description

Percentage of body fat

Timepoint

Beginning of study and 2 months later (end of study)

Method of measurement

Body Composition

3

Description

Lean body mass

Timepoint

Beginning of study and 2 months later (end of study)

Method of measurement

Body Composition

4

Description

Forced Vital Capacity

Timepoint

Beginning of study and 2 months later (end of study)

Method of measurement

Spirometry

5

Description

Forced Expiratory Volume in first second

Timepoint

Beginning of study and 2 months later (end of study)

Method of measurement

spirometry

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: Aerobics. Eight weeks (three times a week) aerobic exercise with an intensity of 60 to 75% of the maximum heart rate along with a specific monthly weight loss diet for each person. The exercises included 5 minutes of warm-up and 50 minutes of main body training and 5 minutes of cooling.

Category

Treatment - Other

2

Description

Intervention group 2: Pilates. Eight weeks (three times a week) Pilates exercise with an intensity of 60 to 75% of the maximum heart rate along with a specific monthly weight loss diet for each person. The exercises included 5 minutes of warm-up and 50 minutes of main body training and 5 minutes of cooling.

Category

Treatment - Other

3

Description

Control group: Two months specific weight loss diet for each person. Do not participate in any sports classes

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Al-Zahra Sports Complex 50

Full name of responsible person

Fateme Fazel

Street address

Tehran, Shahrn St. East Fifth Alley

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Web page address

[http://koodak24.ir/directories/details/7886/%D9%85%D8%AC%D9%85%D9%88%D8%B9%D9%87-%D9%88%D8%B1%D8%B2%D8%B4%DB%8C-%D8%A7%D9%84%D8%B2%D9%87%D8%B1%D8%A7\(%D8%B3\)-%D9%85%D8%B9%D8%B1%D9%81%D8%AA-50](http://koodak24.ir/directories/details/7886/%D9%85%D8%AC%D9%85%D9%88%D8%B9%D9%87-%D9%88%D8%B1%D8%B2%D8%B4%DB%8C-%D8%A7%D9%84%D8%B2%D9%87%D8%B1%D8%A7(%D8%B3)-%D9%85%D8%B9%D8%B1%D9%81%D8%AA-50)

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Saeed Bazgir

Street address

End of Sattari Highway, Simon Bolivar, University Square, Islamic Azad University, Science and Research Branch

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1477893855

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bazgir@srbiau.ac.ir

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

1

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

Islamic Azad University

Full name of responsible person

Maryam Sadat Kasaii

Position

M.A student

Latest degree

Bachelor

Other areas of specialty/work

Nutrition

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Person responsible for scientific inquiries

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Person responsible for updating data

Contact

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Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Not applicable

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available