Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

انگلیسی Comparison of the effect of eight weeks of Traditional resistance training and Crossfit on body composition and some physical fitness factors of obese women

Protocol summary

Study aim
survey of the effect of eight weeks of traditional resistance training and Crossfit on body composition and some fitness factors on obese women

Design
Clinical trial with two parallel groups, randomized on 30 subjects. Rand function of Excel software was used for randomization.

Settings and conduct
Subjects are selected from obese women in Varamin city and randomly placed in two groups of traditional resistance training and CrossFit. A session before the introduction, measurements related to anthropometric characteristics, some physical fitness factors and blood sampling are performed. Eight weeks of training and post-test will be conducted like the pre-test.

Participants/Inclusion and exclusion criteria
Obese women with the necessary conditions and characteristics of the research, including the age range of 20-30 years, not suffering from physical and mental diseases, not undergoing any type of treatment during the research period, not using tobacco, alcohol, sports supplements and not following Special diet and lack of regular sports activity in the last 6 months

Intervention groups
Traditional resistance training and Crossfit resistance training

Main outcome variables
Body mass index, waist to hip circumference, lipid profile, aerobic capacity and muscle strength

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20230910059392N1**
Registration date: **2023-09-25, 1402/07/03**
Registration timing: **registered_while_recruiting**

Last update: **2023-09-25, 1402/07/03**
Update count: **0**

Registration date
2023-09-25, 1402/07/03

Registrant information

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-09-13, 1402/06/22

Expected recruitment end date
2023-11-13, 1402/08/22

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
انگلیسی Comparison of the effect of eight weeks of Traditional resistance training and Crossfit on body composition and some physical fitness factors of obese

women

Public title
Effect of resistance training in obese women
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
All obese women 20 to 30 years old Have hyperlipidemia
Exclusion criteria:
suffer from any kind of physical or mental illness take any medicine use tobacco, alcohol and sports supplements have a special diet done regular physical activity in the last 6 months
Age
From **20 years** old to **30 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
Restricted randomization, random allocation rule. First, we select a sample size of 30 people, then we randomly assign 15 people to the first intervention group (Crossfit resistance training) and the rest to the second intervention group (Traditional resistance training). (using the RAND function of EXEL software)
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features
The exercises of the two groups are similar in terms of duration and intensity

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee of Semnan University of Medical Sciences
Street address
Physical Activity Department, Faculty of Human Sciences, Semnan University, Semnan, IR Iran
City
semnan
Province
Semnan
Postal code
35131- 19111
Approval date
2023-05-22, 1402/03/01
Ethics committee reference number
IR.SEMUMS.REC.1402.034

Health conditions studied

1

Description of health condition studied
Obesity and Physical Activity
ICD-10 code
E66
ICD-10 code description
Overweight and obesity

Primary outcomes

1

Description
Body mass index
Timepoint
body mass index will be done The beginning of the study and 48 hours after last session of study
Method of measurement
Body mass index with the ratio of weight to the square of height (with a digital scale and meter), bodybuilding machine.

2

Description
lipid profile
Timepoint
body composition index will be done The beginning of the study and 48 hours after last session of study
Method of measurement
Lipid profile is measured by blood analysis

3

Description
muscle strength
Timepoint
body composition, muscle strength, aerobic capacity and blood sampling will be done the first session and 48 hours after last session of study
Method of measurement
Strength is measured by indirect measurement with a bodybuilding machine

4

Description
aerobic capacity
Timepoint
aerobic capacity will be done the first session and 48 hours after last session of study

Method of measurement
Aerobic power is measured by the shuttle run test

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: participants in the crossfit resistance training program will be performed for 45 minutes, three sessions per week for eight weeks. The CrossFit resistance training program consists of six rounds in a circuit with 15 to 20 repetitions of 30 seconds, with a 60-second rest between each round. In order of performance, CrossFit exercises will include body weight squats, Davis, walking lunges, prone barfixes, burpees, box jumps, modified sit-ups, and wall balls.
Category
Treatment - Other

2

Description
Intervention group: traditional resistance training program will be performed for 45 minutes, three sessions per week for eight weeks. Exercise will be done with an intensity of 50 to 65% of 1RM in all exercise variables. Exercises are performed in three sets of 15 repetitions. Training movements will include leg press, bench press with barbell, front thigh machine, shoulder with dumbbells from the sides, back thigh machine, crunches with body weight, boat underarm. Rest time between sets and movements will be 45 seconds and three minutes, respectively.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Ferdous Clinic
Full name of responsible person
Arab Derazi Yeganeh
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Technic gym, 15th Khordad St, Pishwa, Tehran, IR IRan
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Sponsors / Funding sources

1

Sponsor
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
Semnan University
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
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Avandi Mohsen
Position
Associated professor
Latest degree
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Other areas of specialty/work
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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
Not applicable
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
Not applicable
Analytic Code
Not applicable
Data Dictionary
Not applicable
Title and more details about the data/document
Provide information on the main outcome
When the data will become available and for how long
Access starts 6 months after results are published
To whom data/document is available
Only researchers working in academic and scientific institutions
Under which criteria data/document could be used
The use of data in review studies and meta-analysis is allowed
From where data/document is obtainable
It is possible to receive the data via e-mail: h.akbari@semnan.ac.ir
What processes are involved for a request to access data/document
Submission of documents is one month after the request.
Comments