Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

The Effect of 8 Weeks Endurance and Combined Training on Serum Levels of Fetuin-A, Transforming growth factor beta)TGF-β(and Metabolic Syndrome in Overweight and Obese Women

Protocol summary

Study aim

The purpose of this study is to investigate the Effect of 8 Weeks Endurance and Combined Training on Serum Levels of Fetuin-A, Transforming growth factor beta (TGF-β) and Metabolic Syndrome in Overweight and Obese Women.

Design

A clinical trial with a control group, parallel, randomized, with a predicted sample size of 45 and Phase 3 trial

Settings and conduct

This study will be conducted on obese and overweight women living in the city of Zabol, Iran. The duration of the research is 8 weeks and the participants are divided into three groups randomly. The interventional factor including endurance and resistance training is considered for this study.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Healthy People, Inactive, Non-Smoking, Not using diet and medicines to lose weight, Body mass index greater than 25 Exclusion criteria: Heart disease, Respiratory problems, Joint pains, Use of Metabolic Drugs

Intervention groups

First intervention group: endurance training; aerobic exercise activity has been selected as interventionists of this group. Second intervention group: Combined exercise; Endurance and resistance training (combined) have been selected as interventionists of this group. Control group: This group will not do any regular physical activity.

Main outcome variables

Study of Aspartate Transaminase changes; Study of Alanine Aminotransferase Changes; Study of Alkaline Phosphatase Changes

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180612040073N5**
Registration date: **2019-05-06, 1398/02/16**
Registration timing: **retrospective**

Last update: **2019-05-06, 1398/02/16**
Update count: **0**

Registration date

2019-05-06, 1398/02/16

Registrant information

Name
Majid Vahidian-Rezazadeh
Name of organization / entity
University of Sistan and Baluchestan
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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

2018-11-01, 1397/08/10

Actual recruitment start date

2018-10-23, 1397/08/01

Actual recruitment end date

2018-11-05, 1397/08/14

Trial completion date

2019-01-20, 1397/10/30

Scientific title

The Effect of 8 Weeks Endurance and Combined Training on Serum Levels of Fetuin-A, Transforming growth factor beta)TGF-β(and Metabolic Syndrome in Overweight and Obese Women

Public title
Effect of 8 Endurance and Combined Training on Fetuin-A, TGF-β and Metabolic Syndrome
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria:
Healthy People Inactive Non-Smoking Not Using Diet And Medicines To Lose Weight Body mass index greater than 25
Exclusion criteria:
Heart disease Respiratory problems Joint pains Use of Metabolic Drugs
Age
From **30 years** old to **45 years** old
Gender
Female

Phase
3
Groups that have been masked
No information
Sample size
Target sample size: **45**
Actual sample size reached: **45**
Randomization (investigator's opinion)
Randomized
Randomization description
Randomization method: Simple Random unit: Individual Randomization Tool: Sealed Envelope
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
Ethics committee of Zahedan University of Medical Sciences
Street address
Ali Ebn Abitaleb Hospital, Salamat Blvd., Persian Gulf Highway
City
Zahedan
Province
Sistan-va-Balouchestan
Postal code
9816743111
Approval date
2019-03-10, 1397/12/19
Ethics committee reference number
IR.ZAUMS.REC.1397.514

Health conditions studied

1

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

Primary outcomes

1

Description
Fetuin A Changes
Timepoint
Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol
Method of measurement
"Fetuin A" test kit

2

Description
Transforming growth factor beta
Timepoint
Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol
Method of measurement
"Transforming growth factor beta" test kit

3

Description
Triglyceride
Timepoint
Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol. 12 hours in fasting mode
Method of measurement
" Triglyceride" test kit

4

Description
Low-density lipoprotein (LDL)
Timepoint
Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol. 12 hours in fasting

mode
Method of measurement
"LDL" test kit

5

Description
High-density lipoprotein (HDL)
Timepoint
Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol. 12 hours in fasting mode
Method of measurement
"HDL" test kit

6

Description
Cholesterol
Timepoint
Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol. 12 hours in fasting mode
Method of measurement
" Cholesterol" test kit

7

Description
Subcutaneous fat
Timepoint
24 hours before the intervention and 24 hours after the last session of the research protocol
Method of measurement
Using the Caliper

8

Description
Body mass index
Timepoint
24 hours before the intervention and 24 hours after the last session of the research protocol
Method of measurement
Based on the formula "Weight divided by height squared"

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Endurance Exercise
Category
Treatment - Other

2

Description
Intervention group: Combined exercises (Endurance and Resistance)
Category
Treatment - Other

3

Description
Control group:
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
University of Sistan and Baluchestan
Full name of responsible person
Majid Vahidian-Rezazadeh
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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Full name of responsible person
Dr Dor Mohammad Kordi
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Deputy of Research, Central Organization, University of Sistan and Baluchestan, Daneshgah Blvd.
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dor_kordi@yahoo.com
Grant name
Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
University of Sistan and Baluchestan
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
University of Sistan and Baluchestan
Full name of responsible person
Majid Vahidian-Rezazadeh
Position
Assistant Professor
Latest degree
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Other areas of specialty/work
Exercise Physiology
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Person responsible for updating data

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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
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
No - There is not 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