Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Effect of Pomegranate Supplementation and Aerobic Training on Total Antioxidant Capacity and Lipid Peroxidation in Overweight Male.

Protocol summary

Summary

Effect of Pomegranate Supplementation with Aerobic Training on Total Antioxidant Capacity and Lipid Peroxidation in Overweight Males. Oxidative stress is a source of many diseases, especially in obese patients. Recently, the use of herbal supplements polyphenols to prevent free radicals has been proved. The purpose of this study was to determine the effect of long-term pomegranate supplementation on Antioxidant activity and Lipid peroxidation in overweight males. Subjects have Body Mass Index of 25 to 28; male; no history of diseases included. Participants were excluded if in case of: absence of more than three exercise sessions; Sick or injured during exercise training; Unwillingness to take part in exercise. Double blind randomized clinical trials on 20 participants in 2 groups (intervention & Placebo) are selected. The participant in Intervention group were administered to take pomegranate supplementation (1 capsule daily) for a total of 8 weeks. The Control group was Placebo Capsule (200 mg daily). Each pomegranate Capsule contain 200 Mg (80 mg Ellagic Acid, 50 mg Punicalagin, 40 mg Punicalin, 20 mg Anthocyanin, and 10 mg Flavonoid). The subjects participated in an exercise for eight weeks (three sessions a week) running test with 70% VO2max. Blood samples were collected from the antecubital vein of the subjects at baseline, after 4 and 8 weeks to assess Total Antioxidant Capacity and Lipid Peroxidation. Research findings showed that although exercise can lead to antioxidant system improvement and reduce Molondealdeid among overweight subjects, the combination of aerobic training and pomegranate consumption is more effective.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014070918415N1**

Registration date: **2014-11-16, 1393/08/25**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2014-11-16, 1393/08/25

Registrant information

Name

Hassan Farhady

Name of organization / entity

University of Mohaghegh Ardabili

Country

Iran (Islamic Republic of)

Phone

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Recruitment status

Recruitment complete

Funding source

University of Mohageg Ardabili

Expected recruitment start date

2013-07-01, 1392/04/10

Expected recruitment end date

2013-09-01, 1392/06/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Pomegranate Supplementation and Aerobic Training on Total Antioxidant Capacity and Lipid Peroxidation in Overweight Male.

Public title

Effect of Pomegranate Supplementation and Aerobic Training on Total Antioxidant Capacity

Purpose
Health service research

Inclusion/Exclusion criteria
Inclusion: Body Mass Index 25 to 28; male; no history of diseases. Exclusion: absence of more than three exercise sessions; Sick or injured during exercise training; Unwillingness to participate in exercise

Age
From **20 years** old to **25 years** old

Gender
Male

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)
Double blinded

Blinding description

Placebo
Used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
University of Mohageg Ardabili

Street address
university Ave, University of Mohageg Ardabili

City
Ardabil

Postal code

Approval date
2013-06-08, 1392/03/18

Ethics committee reference number
1094463

Health conditions studied

1

Description of health condition studied
The Relationship Between Pomegranate Supplementation with Aerobic Training on Total Antioxidant Capacity and Lipid Peroxidation in Overweight Males

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Total Antioxidant Capacity

Timepoint
3 Stage

Method of measurement
Ransod kit manufactured by Randox, UK, Cat No. NX 2331, spectrophotometer

Secondary outcomes

1

Description
Malondialdeid

Timepoint
3 Stage

Method of measurement
Using thiobarbituric acid reactive substance (TBARS) and was measured by Satoh.

Intervention groups

1

Description
Experimental Group: Pomegranate Supplementation,200mg per day for 2 month

Category
Placebo

2

Description
Placebo Group, Dexterous 200mg per day for 2 month

Category
Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center
Azad University, Ahar branch

Full name of responsible person

Street address

City
Ahar

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Mohageg Ardabil University
Full name of responsible person
Hasan Farhady
Street address
University Ave, Mohageg Ardabil University, Ardabil
City
Ardabil
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Mohageg Ardabil University
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
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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