Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

The Effect of 12 week Aerobic and Resistance Exercise on Serum Levels of Paraoxonase-1, Hydrogen Peroxide, Adiponectin, Atrial Natriuretic peptide, Apelin and Endothelin-1 in Men With High Blood Pressure

Protocol summary

Summary

Aim of this research is to investigate the effect of 12 week moderate aerobic and resistance exercise on blood pressure markers in men with high blood pressure. 28 men who have high blood pressure (subjects were on the threshold of having hypertension, but not taking the drug that reduce blood pressure) participated in the study after the completion of a consent form. Subject were divided in two groups of 12 week aerobic exercise and resistance exercise. Blood sample were taken for evaluation of Paraoxonase-1, Hydrogen Peroxide, Adiponectin, Atrial Natriuretic Peptide, Apelin and Endothelin-1 in basal state and after 4 week, 8 week and 12 week exercise.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015060521481N2**
Registration date: **2015-06-25, 1394/04/04**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2015-06-25, 1394/04/04

Registrant information

Name
Behrouz Baghaiee
Name of organization / entity
Mohaghegh Ardabili University
Country
Iran (Islamic Republic of)
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Recruitment status

Recruitment complete

Funding source
Mohaghegh Ardabili University

Expected recruitment start date

2014-11-11, 1393/08/20

Expected recruitment end date

2015-03-12, 1393/12/21

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effect of 12 week Aerobic and Resistance Exercise on Serum Levels of Paraoxonase-1, Hydrogen Peroxide, Adiponectin, Atrial Natriuretic peptide, Apelin and Endothelin-1 in Men With High Blood Pressure

Public title

The Effect of Physical Activity on Blood Pressure Markers

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: Having high blood pressure (subjects were on the threshold of having hypertension, but not taking the drug that reduce blood pressure); Being in the age range of 35 to 42 years old; Being male Exclusion criteria: Taking the drug that reduce blood pressure

Age

From **35 years** old to **42 years** old

Gender

Male

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **28**
Randomization (investigator's opinion)
N/A
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
Mohaghegh Ardabili University
Street address
University Street, Ardabil, Iran
City
Ardabil
Postal code
Approval date
2014-10-18, 1393/07/26
Ethics committee reference number
93.319

Health conditions studied

1

Description of health condition studied
High blood pressure
ICD-10 code
I10
ICD-10 code description
Essential (primary) hypertension

Primary outcomes

1

Description
Paraoxonase-1
Timepoint
Basal state and after 4 week, 8 week and 12 week
Method of measurement
autoanalyzer

2

Description
Hydrogen Peroxide
Timepoint
Basal state and after 4 week, 8 week and 12 week
Method of measurement
autoanalyzer

3

Description
Adiponectin
Timepoint
Basal state and after 4 week, 8 week and 12 week
Method of measurement
autoanalyzer

4

Description
Apelin
Timepoint
Basal state and after 4 week, 8 week and 12 week
Method of measurement
autoanalyzer

5

Description
Endothelin-1
Timepoint
Basal state and after 4 week, 8 week and 12 week
Method of measurement
autoanalyzer

6

Description
Atrial Natriuretic Peptide
Timepoint
Basal state and after 4 week, 8 week and 12 week
Method of measurement
autoanalyzer

Secondary outcomes

empty

Intervention groups

1

Description
The subjects of aerobic exercise group participated in 12 weeks of moderate aerobic exercise. Blood sample were taken in basal state and after 4 week, 8 week and 12 week.
Category
Prevention

2

Description

The subjects of resistance exercise group participated in 12 weeks of resistance exercise. Blood sample were taken in basal state and after 4 week, 8 week and 12 week.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Mohaghegh Ardabili University

Full name of responsible person

Behrouz Baghaiee

Street address

Mohaghegh Ardabili University, University Street, Ardabil, Iran

City

Ardabil

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Mogheghegh Ardabili University

Full name of responsible person

Dr Mohammad Narymani

Street address

University Mohaghegh Ardabili, Unirversity Street, Ardabil, Iran

City

Ardabil

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Mogheghegh Ardabili 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

Mohaghegh Ardabili University

Full name of responsible person

Behrouz Baghaiee

Position

PhD Student

Other areas of specialty/work

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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