

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

The effect of endurance training on endurance and cardiovascular endurance, body composition, estradiol, determines, IL-6, insulin, fasting blood glucose, fibrinogen, C-reactive protein, serum calcium and phosphorus sedentary postmenopausal women

Protocol summary

Summary

This study aimed to evaluate the effect of combined training (cross-resistance) on endurance and cardiovascular, body composition, estradiol, progesterone, interleukin-6, insulin, fasting blood glucose, fibrinogen, C-reactive protein, calcium, phosphorus, and calcium and phosphorus. Off the urine of postmenopausal women was conducted. Methods: In this study, 22 postmenopausal women were randomly assigned to two groups ($n = 12$, age: $7/4 \pm 83/54$) and control ($n = 10$, age: $9/4 \pm 90/56$) were divided. The experimental group three times a week, every 90 minutes, for 8 weeks. During this period, the control group did not participate in any exercise program. The ratio of waist-to-hip (WHR), body mass index (BMI), body fat percentage, cardiorespiratory fitness and serum levels of alkaline phosphatase, calcium, phosphorus, estradiol, progesterone, cholesterol, triglycerides, LDL, HDL, IL-6, insulin, fasting blood glucose, fibrinogen, C-reactive protein, calcium and phosphorus in urine, systolic and diastolic pressure, resting heart rate and sleep quality was measured before and after exercise.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015122222498N4**

Registration date: **2016-03-12, 1394/12/22**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-03-12, 1394/12/22

Registrant information

Name

Ramin Shabani

Name of organization / entity

Islamic Azad University

Country

Iran (Islamic Republic of)

Phone

+98 13 3375 2715

Email address

shabani@iaurasht.ac.ir

Recruitment status

Recruitment complete

Funding source

Islamic Azad University of Rasht

Expected recruitment start date

2014-07-23, 1393/05/01

Expected recruitment end date

2014-08-23, 1393/06/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of endurance training on endurance and cardiovascular endurance, body composition, estradiol, determines, IL-6, insulin, fasting blood glucose, fibrinogen, C-reactive protein, serum calcium and phosphorus sedentary postmenopausal women

Public title

The effect of combination endurance-resistance exercise training on inactive postmenopausal women

Purpose

Prevention

Inclusion/Exclusion criteria
 Inclusion criteria: history of drug use have been present for at least one year from the last menstrual period, subjects were under 30 minutes of physical activity per week
 Exclusion criteria: in practice groups, participants had been missing no more than two sessions, control group did not participate in any exercise program.

Age
 No age limit

Gender
 Female

Phase
 N/A

Groups that have been masked
No information

Sample size
 Target sample size: **22**

Randomization (investigator's opinion)
 Randomized

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
 Islamic Azad University of Rasht
Street address
 Lakan BVL
City
 Rasht
Postal code
Approval date
 2014-08-23, 1393/06/01
Ethics committee reference number
 11721404922053

Health conditions studied

1

Description of health condition studied
 Menopausal
ICD-10 code
 n95
ICD-10 code description
 Menopausal and other perimenopausal disorders

Primary outcomes

1

Description
 estradiol
Timepoint
 8 weeks after Exercise Training
Method of measurement
 Blood in the laboratory

Secondary outcomes

1

Description
 alkaline phosphates
Timepoint
 8 weeks after Exercise Training
Method of measurement
 Blood in the laboratory

Intervention groups

1

Description
 1: Combined training was carried out for 8 weeks, 3 sessions per week. Duration of each session was 90 minutes
Category
 Other

2

Description
 The control group had no activity
Category
 Other

Recruitment centers

1

Recruitment center
Name of recruitment center
 Mosque Moalem Blvd
Full name of responsible person
 Nasim Shabanzadeh
Street address
 Fazl, Moalem Blvd
City
 Rasht

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
 Islamic Azad University of Rasht

Full name of responsible person
Ramin Shabani

Street address
Lakan BVL

City
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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
Islamic Azad University of Rasht

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
Islamic Azad university of Rasht

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Associate Professor

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