

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 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 in the urine of postmenopausal women was conducted. Methods: In this study, 22 postmenopausal women were randomly assigned to two groups (n = 12, age: 74 ± 83/54) and control (n = 10, age: 94 ± 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: **IRCT201512222498N4**

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)

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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

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University of Rasht

Full name of responsible person

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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**

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Web page address**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*