

Clinical Trial Protocol

Iranian Registry of Clinical Trials

29 Jun 2026

The effect of eight weeks combined resistance and endurance exercise training on serum estradiol level and the sleep quality in menopausal women

Protocol summary

Summary

Background: Menopause, an expected event in a woman's life, is associated with multiple symptoms including vasomotor symptoms, vaginal symptoms, urinary incontinence, sexual dysfunction, and trouble sleeping. The aim of this study was to evaluate the effect of eight weeks of combined resistance and endurance training on the serum estradiol level and sleep quality in menopausal women. Materials and Methods :22 healthy postmenopausal women participated in the study and they were randomly classified into two groups: control group (n=10, age 56.9±4.9 years) and combined training (n=12, age 54.8±4.7 years) . combined training was carried out for 8 weeks, 3 sessions per week. Duration of each session was 90 minutes. weight, body mass index(BMI), percent body fat, cardiorespiratory fitness and serum estradiol level and Pittsburgh Sleep questionnaire was measured at the beginning and end of exercise period.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201512222498N5**

Registration date: **2016-07-21, 1395/04/31**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-07-21, 1395/04/31

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 eight weeks combined resistance and endurance exercise training on serum estradiol level and the sleep quality in menopausal women

Public title

The effect of eight weeks combined resistance and endurance exercise training on serum estradiol level and the sleep quality in menopausal 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, the control group; in did not participate in any exercise program.

Age

From **50 years** old to **60 years** old

Gender

Female

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **22**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Factorial

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

3516-41335

Approval date

2014-09-16, 1393/06/25

Ethics committee reference number

11721404922052

Health conditions studied

1

Description of health condition studied

Menopausal

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Estradiol

Timepoint

8 weeks after Excercise Training

Method of measurement

Blood in the laboratory

Secondary outcomes

1

Description

Pittsburgh Sleep questionnaire

Timepoint

8 weeks after Excercise Training

Method of measurement

va Pittsburgh Sleep questionnaire

Intervention groups

1

Description

Endurance_Resistance Training in training group

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

Malahat Moazzeni

Street address

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City

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, University of Islamic Azad, Rasht Branch

Full name of responsible person

Ramin Shabani

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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**

Vice chancellor for research, University of Islamic Azad, Rasht Branch

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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Fax**Email****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*