

# 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)

###### 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 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

Faz1, Moalem Blvd

##### City

Rasht

## 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

##### Street address

Lakan BVL

##### City

Rasht

#### 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

**Full name of responsible person**

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Associate Professor

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**Position**

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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*