

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

Effect of aerobic exercise on thyroid hormones and quality of life in women

Protocol summary

Study aim

The objective of present study was to see the effect of eight weeks aerobic exercise on the thyroid hormones and quality of life of overweight postmenopausal women.

Design

Clinical trial with control, community based and pragmatic groups, with parallel groups, not blinded care, twenty-one sedentary women were randomly divided into two groups: sedentary control (n=11) and aerobic training (n=10)

Settings and conduct

This clinical trial includes control, community based and pragmatic groups carried out as pre-test and post-test in two intervention and control groups at Mashhad Ferdowsi University.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Women aged 35-45 years old; Healthy without chronic diseases; not have done regular exercises in the last six months; Exclusion Criteria: Less than 35 years old or older than 45 years; Having any history of chronic diseases; have done regular exercise during the last six months.

Intervention groups

Intervention group: Subjects in aerobic training group underwent 8-week aerobic training of three sessions per week, 30-60 minutes per session. Subjects in this group did aerobic training at 65-75% HRmax intensity. Control group: The control group did not participate in any intervention.

Main outcome variables

Thyroxine; Triiodothyronine; Thyroid releasing hormone; Thyroid-stimulating hormone; Quality of life

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20120129008863N8**

Registration date: **2018-04-16, 1397/01/27**

Registration timing: **retrospective**

Last update: **2018-04-16, 1397/01/27**

Update count: **0**

Registration date

2018-04-16, 1397/01/27

Registrant information

Name

Keyvan Hejazi

Name of organization / entity

Ferdowsi University of Mashhad

Country

Iran (Islamic Republic of)

Phone

+98 51 1768 6790

Email address

ke_he981@stu-mail.um.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2015-09-23, 1394/07/01

Expected recruitment end date

2016-09-22, 1395/07/01

Actual recruitment start date

2015-06-22, 1394/04/01

Actual recruitment end date

2016-09-22, 1395/07/01

Trial completion date

empty

Scientific title

Effect of aerobic exercise on thyroid hormones and quality of life in women

Public title

Effect of aerobic exercise on thyroid hormones and

quality of life in women

Purpose
Supportive

Inclusion/Exclusion criteria
Inclusion criteria:
Women aged 35-45years old Healthy without chronic diseases
Exclusion criteria:
Doing regular exercise during the last six months

Age
From **35 years** old to **45 years** old

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **21**
Actual sample size reached: **21**

Randomization (investigator's opinion)
Randomized

Randomization description
Simple randomization

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

Ethics committee of Ferdowsi University of Mashhad

Street address

Paradise Daneshgah, Azadi Square, Faculty of
Physical Education and Sport Sciences, Ferdowsi
University of Mashhad, Mashhad, IRAN

City

Mashhad

Province

Razavi Khorasan

Postal code

91779-48979

Approval date

2015-09-23, 1394/07/01

Ethics committee reference number

IR.MUMS.REC.1394.42314

Health conditions studied

1

Description of health condition studied

Overweight and obesity

ICD-10 code

E66

ICD-10 code description

Overweight and obesity

Primary outcomes

1

Description

Thyroxine

Timepoint

Eight weeks

Method of measurement

By collecting venous blood before and at the end of study and measuring serum levels of related factors using Enzyme-linked immunosorbent assay (ELISA)

2

Description

Triiodothyronine

Timepoint

Eight weeks

Method of measurement

By collecting venous blood before and at the end of study and measuring serum levels of related factors using Enzyme-linked immunosorbent assay (ELISA)

3

Description

Thyroid-stimulating hormone

Timepoint

Eight weeks

Method of measurement

By collecting venous blood before and at the end of study and measuring serum levels of related factors using Enzyme-linked immunosorbent assay (ELISA)

4

Description

Thyrotropin-releasing hormone

Timepoint

Eight weeks

Method of measurement

By collecting venous blood before and at the end of study and measuring serum levels of related factors using Enzyme-linked immunosorbent assay (ELISA)

5

Description

Quality of life

Timepoint

Eight weeks

Method of measurement

Quality of life of subjects before and at the end of study

and measuring by quality of Life questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Subjects in aerobic training group underwent aerobic training for eight weeks, 3 sessions per week for 30-60 min. Subjects of this group doing aerobic training with intensity of 65-75% HRmax.

Category

Other

2

Description

Control group: Subjects of the control group did not have any regular physical activities during the period of study.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Ferdowsi University of Mashhad

Full name of responsible person

Mehrdad Fathie

Street address

Paradise Daneshgah, Azadi Square, Faculty of Physical Education and Sport Sciences, Ferdowsi University of Mashhad, Mashhad

City

Mashad

Province

Razavi Khorasan

Postal code

91779-48979

Phone

+98 51 3883 3910

Email

mfathei@um.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Ferdowsi University of Mashhad

Full name of responsible person

Mehrdad Fathi

Street address

Paradise Daneshgah, Azadi Square, Faculty of Physical Education and Sport Sciences, Ferdowsi

University of Mashhad, Mashhad

City

Mshhad

Province

Razavi Khorasan

Postal code

91779-48979

Phone

+98 51 3883 3910

Email

mfathei@um.ac.ir

Grant name

Grant code / Reference number

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

No

Title of funding source

Research Council of Ferdowsi University of Mashhad

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Toos Institute of Higher Education

Full name of responsible person

Keyvan Hejazi

Position

Associate Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiology

Street address

Esteghlal Square, Faramarz Abbasi St. 2

City

Mashhad

Province

Razavi Khorasan

Postal code

9197913116

Phone

+98 51 3606 3044

Email

keyvanhejazi@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Toos Institute of Higher Education

Full name of responsible person

Keyvan Hejazi

Position

Associate Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiology

Street address

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Person responsible for updating data**Contact****Name of organization / entity**

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

In order to observe ethical principles in research, personal data and collected data from subjects will remain with the researcher.

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available