

Clinical Trial Protocol

Iranian Registry of Clinical Trials

03 Jul 2026

Effect of 12 weeks combined training (aerobic-resistance) and zataria multiflora supplementation on the levels of some inflammatory adipokines in overweight and obese women

Protocol summary

Study aim

The effect of 12 weeks of combined training (aerobic-resistance) with thyme supplementation on RBP-4, resistin, insulin resistance and body fat percentage in overweight and obese women

Design

This study is a double-blind, factorial randomized clinical trial. The target population of 40 women is overweight and obese. The intervention and control groups receive 500 mg of thyme supplement or placebo daily for 12 weeks. The combined training program is 12 weeks, 3 sessions per week, 30 minutes of aerobic exercise with an intensity of 60 to 70% of the maximum heart rate and 30 minutes of resistance training with an intensity of 10 maximum repetitions.

Settings and conduct

The placebo and thyme supplement are placed inside the capsule in exactly the same way, participants and researchers will not be aware of the type of supplement received. Exercises are performed in a sports club and blood sampling is performed by a laboratory sampler.

Participants/Inclusion and exclusion criteria

Inclusion: Failure to participate in regular exercise during the last year, no type 2 diabetes, cardiovascular disease and hypertension and systemic and malignant diseases, no consumption of alcohol and drugs or dietary supplements, age range 20-35 Lack of physical restraint in order to participate in sports exercises, signing an informed consent. exclusion: Absence from more than one session in the exercise program, allergy to thyme supplement, forcing to take medication or other nutritional supplements, injury and inability of the subject to continue the exercise program, not participating in one of the blood sampling stages

Intervention groups

After filling in the individual consent form, the subjects are randomly divided into four groups of 10 people:

placebo, thyme supplement, aerobic exercise, aerobic exercise + thyme supplement.

Main outcome variables

RBP-4, resistin, body fat percentage and insulin resistance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200812048388N1**

Registration date: **2020-11-21, 1399/09/01**

Registration timing: **retrospective**

Last update: **2020-11-21, 1399/09/01**

Update count: **0**

Registration date

2020-11-21, 1399/09/01

Registrant information

Name

forough darabi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 4489 1536

Email address

19foroughdarabi91@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-09-22, 1399/07/01

Expected recruitment end date

2020-11-10, 1399/08/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of 12 weeks combined training (aerobic-resistance) and zataria multiflora supplementation on the levels of some inflammatory adipokines in overweight and obese women

Public title

The effect of 12 weeks of combined training (aerobic-resistance) with thyme supplement on RBP-4, resistin, insulin resistance and body fat percentage in overweight and obese women

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Not participating in regular exercise during the last year
Not having type 2 diabetes, cardiovascular disease and high blood pressure
No systemic and malignant diseases including cancer
Do not consume whole drinks
Do not take medication or dietary supplements during the research period
Age range 35-20
Lack of physical restraint in order to participate in sports exercises
Signing informed consent

Exclusion criteria:

Absence of more than one session in the exercise program
Allergy or sensitivity to thyme supplement
Compulsion to take medication or other nutritional supplements over a 12-week period
Injury and inability of the subject to continue the training program
Failure to participate in one of the blood sampling steps (pre-test or post-test)

Age

From **20 years** old to **35 years** old

Gender

Female

Phase

3

Groups that have been masked

- Participant
- Investigator
- Outcome assessor

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Using the lottery method, the names of the subjects are written on separate papers and placed in a container, then the names of the subjects are randomly taken out and placed in the intervention group or placebo. The first 30 names in the intervention group and the rest They are in the placebo group.

Blinding (investigator's opinion)

Double blinded

Blinding description

In order to eliminate the error caused by the participants' and researcher's knowledge of the type of treatment received and its possible effect on the research result, we conduct a two-way study. Due to the fact that thyme supplements are placed exactly the same inside the capsule, participants and researchers are not aware of the type of supplement received.

Placebo

Used

Assignment

Factorial

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics Committee of Islamic Azad University, Gholum and Research Branch

Street address

Tehran, end of Shahid Sattari Highway, University Square, Shohada Hesarak Boulevard

City

Tehran

Province

Tehran

Postal code

1477893855

Approval date

2020-11-14, 1399/08/24

Ethics committee reference number

IR.IAU.SRB.REC.1399.087

Health conditions studied**1****Description of health condition studied**

Overweight and obesity

ICD-10 code

E66.0

ICD-10 code description

Obesity due to excess calories

Primary outcomes**1****Description**

Retinol binding protein 4

Timepoint

First, the end of the study

Method of measurement

Kit Eliza

2

Description

Resistin

Timepoint

First, the end of the study

Method of measurement

Kit Eliza

3

Description

Insulin resistance

Timepoint

First, the end of the study

Method of measurement

Homa index

4

Description

fat percentage

Timepoint

First, the end of the study

Method of measurement

Body Analysis

Secondary outcomes

1

Description

Glucose

Timepoint

First, the end of the study

Method of measurement

Glucose Test Kit

2

Description

Insulin

Timepoint

First, the end of the study

Method of measurement

Insulin ELISA Kit

3

Description

Maximum volume of oxygen consumption

Timepoint

First, the end of the study

Method of measurement

Rockport test and formula method

4

Description

Body mass index

Timepoint

First, the end of the study

Method of measurement

kg/m²

Intervention groups

1

Description

Control group: not participating in the combined exercise program, taking placebo for 12 weeks, taking thyme-like capsules with wheat flour content, made by Gol Daroo company, in addition to daily life activities

Category

Placebo

2

Description

Intervention group: Thyme supplement group (taking omega-thyme supplement, not participating in aerobic exercise program) for 12 weeks and daily 500 mg of thyme supplement made by Gol Daroo company after breakfast with 100 ml of water and daily activities of life

Category

Prevention

3

Description

Intervention group: Combined exercise group. The training program includes 12 weeks of combined training, 3 sessions per week. 30 minutes of aerobic training with an intensity of 60 to 70% of maximum heart rate and 30 minutes of resistance training with a maximum intensity of 10 repetitions. Before and after each exercise session, warm up for 10 minutes, respectively. And cool for 7 minutes.

Category

Prevention

4

Description

Intervention group: Combined training group + thyme supplement (taking thyme supplement and participating in the combined training program at the same time) for 12 weeks and 500 mg of thyme supplement made by Gol Darob Company daily. In addition, the training program includes 12 weeks of combined training, 3 sessions per week. Includes 30 minutes of aerobic exercise with an intensity of 60-70% of maximum heart rate and 30 minutes of resistance training with a maximum intensity of 10 repetitions are designed and before and after each exercise session, 10 minutes of warm-up and 7 minutes of cooling are performed, respectively.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Iran University of Medical Sciences

Full name of responsible person

Forough Darabi

Street address

Tehran, Hemmat Highway next to Milad Tower, Iran
University of Medical Sciences

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Islamic Azad University

Full name of responsible person

Mandana Gholami

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End of Sattari Highway, University Square, Shohada
Hesarak Boulevard

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Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

No

Title of funding source

Vice Chancellor for Research, Faculty of Literature,
Tehran University of Science and Research

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Persons

Person responsible for general inquiries**Contact****Name of organization / entity**

Islamic Azad University

Full name of responsible person

Forough Darabi

Position

Student

Latest degree

Master

Other areas of specialty/work

Nutrition

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

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Latest degree

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Other areas of specialty/work

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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)**

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Not applicable