

# 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/m<sup>2</sup>

## **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**City**

Tehran

**Province**

Tehran

**Postal code**

۱۴۴۹۶۱۴۵۳۵

**Phone**

+98 21 86701

**Email**

19foroughdarabi91@gmail.com

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

Islamic Azad University

**Full name of responsible person**

Mandana Gholami

**Street address**End of Sattari Highway, University Square, Shohada  
Hesarak Boulevard**City**

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**Postal code**

1477893855

**Phone**

+98 21 4486 9827

**Email**

m.gholami@srbiau.ac.ir

**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

**Street address**Punak, Mirzababaei intersection, Behesht 3, No. 10,  
Unit 8**City**

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**Province**

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**Postal code**

1476736434

**Phone**

+98 21 4489 1536

**Email**

19foroughdarabi91@gmail.com

**Person responsible for scientific 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**

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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