

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jul 2026

Effects of 12 weeks of pilates training and turmeric supplementation on SIRT1, Klotho gene and Quality of life in middle-aged Overweight females

Protocol summary

Serum sirtuin1; klotho gene and Quality of Life

Study aim

Effect of Pilates training and turmeric supplementation on serum sirtuin1, Klotho and quality of life in overweight middle-aged women.

Design

A randomized, double-blinded, sham controlled clinical trial with a parallel group design of 48 participants (12 person in every group)

Settings and conduct

Synchronization sessions, initial measurements, counseling and distribution of capsules and Pilates exercises will be held at the Vira Club located at Shariati Street. Blood sampling will be carried out at Iran Medical Laboratory of Tabriz. Blinding participants and researcher will be used to administer turmeric and placebo capsules by distributing capsules by third person.

Participants/Inclusion and exclusion criteria

Entry requirements include age range of 35-55 years, overweight, lack of regular exercise, no use of medication and supplements, having a regular menstrual cycle, Withdrawal conditions including the incidence of any illness and the presence of allergies to spices and the unwillingness of the subject to cooperate with the researcher

Intervention groups

1) Pilates Exercise Group: participate in Pilates practice program (3 sessions per week) for 12 weeks and receive 3 placebo tablets per day. 2) Turmeric Group: receive three tablets of 700 milligrams of turmeric receive daily for 12 weeks 20 min after eating. 3) Practice group and turmeric: The group will also conduct Pilates training sessions (three sessions per week) for 12 weeks and will consume daily three tablets of 700 mg of turmeric immediately after eating for 12 weeks Will 4) Control group: They will receive three placebo tablets a day, 20 min after eating for 12 weeks, but will not participate in the training program.

Main outcome variables

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180218038785N1**

Registration date: **2018-03-15, 1396/12/24**

Registration timing: **prospective**

Last update: **2018-03-15, 1396/12/24**

Update count: **0**

Registration date

2018-03-15, 1396/12/24

Registrant information

Name

Rahele Dolgari

Name of organization / entity

The university of Tabriz

Country

Iran (Islamic Republic of)

Phone

+98 41 3551 7007

Email address

amirsasa@tabrizu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-04-02, 1397/01/13

Expected recruitment end date

2018-05-03, 1397/02/13

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of 12 weeks of pilates training and turmeric supplementation on SIRT1, Klotho gene and Quality of life in middle-aged Overweight females

Public title

Effects of pilates training and turmeric supplementation on SIRT1, Klotho gene and Quality of life

Purpose

Prevention

Inclusion/Exclusion criteria**Inclusion criteria:**

Age range of 35 to 55 years Being Overweight(BMI: 25-30 kg/m²) Without regular physical activity No drug and supplementation Having menstrual period

Exclusion criteria:

illness allergy to spices Unwillingness or person's cooperation

Age

From **35 years** old to **55 years** old

Gender

Female

Phase

N/A

Groups that have been masked

- Participant
- Investigator
- Outcome assessor
- Data analyser

Sample size

Target sample size: **48**

Randomization (investigator's opinion)

Randomized

Randomization description

Using random numbers table, individuals were grouped into four groups

Blinding (investigator's opinion)

Double blinded

Blinding description

Blinding is carried out in the distribution of turmeric and placebo capsules so that the third person (researcher assistant) will distribute the capsules and and the participants and researchers do not know if they are receiving capsules of turmeric or placebo.

Placebo

Used

Assignment

Factorial

Other design features**Secondary Ids**

empty

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

Ethics committee of Tabriz University of Medical Sciences

Street address

No 2 building, Tabriz University of Medical Sciences, Golgasht St,

City

Tabriz

Province

East Azarbaijan

Postal code

5166614766

Approval date

2017-11-05, 1396/08/14

Ethics committee reference number

IR.TBZMED.REC.1396.699

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

Aging

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Sirtuin1

Timepoint

Before and after the intervention (3 month later)

Method of measurement

Sirtuin 1 content will be measured by using Human Sirtuin1 ELISA kit, made by Shanghai Crystal D company.

2**Description**

Serum Klotho gene

Timepoint

Before and after the intervention (3 month later)

Method of measurement

Human Klotho ELISA kit, made by Shanghai Crystal D company

3**Description**

Quality of life

Timepoint

Before and after the intervention (3 month later)

Method of measurement

Quality of life questionnaire

Secondary outcomes

1

Description

Weight

Timepoint

Before and after intervention (3 month later)

Method of measurement

With Omron Digital Scale

2

Description

Body fat percent

Timepoint

Before and after intervention (3 month later)

Method of measurement

Using body composition analyzer

3

Description

Fat-free mass

Timepoint

Before and after intervention (3 month later)

Method of measurement

Using body composition analyzer

Intervention groups

1

Description

Intervention group (training) : Participate in 12 weeks of Pilates training (3 sessions per week with intensity of 40 -70 % maximum heart rate)

Category

Lifestyle

2

Description

Intervention group (supplement): Daily consumption of three tablets of 700 mg turmeric, 20 min after meal.

Category

Prevention

3

Description

Intervention group (training-supplement): Participate in 12 weeks of Pilates training (3 sessions per week with intensity of 40 -70 % maximum heart rate) and daily consumption of three tablets of 700 mg turmeric, 20 min after meal.

Category

Prevention

4

Description

Control group: daily consumption of three placebo

tablets of 700 mg starch, 20 min after meal.

Category

Placebo

Recruitment centers

1

Recruitment center**Name of recruitment center**

Tabriz city health center

Full name of responsible person

Parastoo Ahmadi

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Qods St

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5166616471

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p_ahmadi@yahoo.com

Sponsors / Funding sources

1

Sponsor**Name of organization / entity**

Deputy of Research and Technology Development of Tabriz University

Full name of responsible person

Abolgasem Jooyban

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Emam Khomeini St

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East Azarbaijan

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ajouyban@hotmail.com

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

Yes

Title of funding source

Deputy of Research and Technology Development of Tabriz University

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**

The University of Tabriz

Full name of responsible person

Rahele Dolgari

Position

instructor

Latest degree

Master

Other areas of specialty/work

exercise metabolism

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No. 36, Aliabadi Ave., Ansarifard St., Khayam St.

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

The University of Tabriz

Full name of responsible person

Ramin Amirsasan

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Exercise Physiology and nutrition

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

The University of Tabriz

Full name of responsible person

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Position

Instructor

Latest degree

Master

Other areas of specialty/work

Exercise metabolism

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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

Abuse is possible

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is 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

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

Title and more details about the data/document

The data file will be provided after encoding

When the data will become available and for how long

6 months after printing results

To whom data/document is available

all persons

Under which criteria data/document could be used

Use is not allowed

From where data/document is obtainable

Rahele Dolgari

What processes are involved for a request to access data/document

Send request via email and receive

Comments