Clinical Trial Protocol
Iranian Registry of Clinical Trials

03 Jun 2026

Effect of Six Weeks High Intensity Intermittent Training With and Without Turmeric Supplementation on Irisin, Thermogenin (UCP1) and visceral Fat in Obese Females

Protocol summary

Study aim
Effect of High Intensity Intermittent Training With and Without Turmeric Supplementation on Irisin, Thermogenin (UCP1) and visceral Fat in Obese Females

Design
Clinical trial with pre test- post test pattern, The goal of prevention, parallel groups, double blind, Sample size of 30 people in two groups (15 people in each group)

Settings and conduct
Coordination meetings, Initial measurements, Advice, Distribution of capsules and Exercises will be held at the persian Gulf club in Ayatollah Yektaei street. Blood sampling will be taken in Khalkhal Social Security Laboratory. Researcher and participants blinding for plasebo and turmeric capsuls will be done by third person.

Participants/Inclusion and exclusion criteria
Inclusion criteria: females aged 20 to 25 years old, obesity (Body Mass Index equal and greater than 30), Not having regular exercise training, not using drug and supplement. Exclusion criteria: Having disease ,Allergy to spices, Unwillingness to cooperate with the researcher

Intervention groups
Exercise group: 3 weeks preparation training (50 to 80 percent Heart Rate Reserve(HRR)) and 6 weeks High Intensity Intermittent Training (HIIT) (80 to 100 percent HRR). 4 session per week. Exercise and Supplement group: The above-mentioned protocol In addition Turmeric supplementation (3 milligram Curcumin per kilogram body weight per day)

Main outcome variables
Plasma Irisin, Thermogenin (UCP1) and visceral Fat Diameter

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20180317039120N1**
Registration date: **2018-04-25, 1397/02/05**
Registration timing: **registered_while_recruiting**

Last update: **2018-04-25, 1397/02/05**
Update count: **0**

Registration date
2018-04-25, 1397/02/05

Registrant information

Name
Zahra Rostami Hashjin

Name of organization / entity
Tabriz University

Country
Iran (Islamic Republic of)

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+98 41 3334 0081

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2018-04-09, 1397/01/20

Expected recruitment end date
2018-05-10, 1397/02/20

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title

Effect of Six Weeks High Intensity Intermittent Training With and Without Turmeric Supplementation on Irisin, Thermogenin (UCP1) and visceral Fat in Obese Females

Public title
Effect of high intensity Training and Turmeric on Obesity
Purpose
Prevention
Inclusion/Exclusion criteria
Inclusion criteria:
Having a BMI equal and greater than 30 Not having Special disease history and drug consumption (be healthy) Age range 20 to 25 years old
Exclusion criteria:
performing regular exercise training during last 6 month Allergy to spices Unwillingness to cooperate with the researcher
Age
From **20 years** old to **25 years** old
Gender
Female

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **30**
Randomization (investigator's opinion)
Randomized
Randomization description
Using random numbers table, individuals will grouped into two groups
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Used
Assignment
Parallel
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
Research Vice-Chancellor, Third floor, Central Building No. 2, Tabriz University of Medical Sciences, Golgasht Ave
City
Tabriz
Province
East Azarbaijan
Postal code
5166616471
Approval date
2018-03-12, 1396/12/21
Ethics committee reference number
IR.TBZMED.REC.1396.1297

Health conditions studied

1

Description of health condition studied
Obesity
ICD-10 code
E66.9
ICD-10 code description
Obesity, unspecified

Primary outcomes

1

Description
Plasma Irisin Levels
Timepoint
Before Intervention and 48 hours after last intervention session
Method of measurement
ELISA Method

2

Description
Plasma UnCoupling protein 1 (UCP1) Levels
Timepoint
Before Intervention and 48 hours after last intervention session
Method of measurement
ELISA Method

3

Description
Visceral Fat Diameter
Timepoint
Before and After Training Intervention
Method of measurement
Ultrasound Method

Secondary outcomes

1

Description
Body composition indicators
Timepoint
Before and After Intervention
Method of measurement
Body mass index, Waist–hip ratio, Body Fat - Jackson/Pollock 3-Site Caliper Method tool

2

Description
Basal Metabolism Rate
Timepoint
Before and after Intervention
Method of measurement
Mifflin and St. Jeor Equation

3

Description
Insulin Resistance
Timepoint
Before and 48 hours after intervention
Method of measurement
HOMA-IR Formula

4

Description
maximal oxygen consumption (maximal aerobic capacity)
Timepoint
Before and after intervention
Method of measurement
Rockport test

5

Description
Plasma levels of Triglyceride, Cholesterol, LDL, HDL
Timepoint
Pre and post test
Method of measurement
Enzymatic method with AutoAnalyzer

6

Description
Liver Enzymes: Alanine Aminotransferase(ALT), Aspartate Aminotransferase (AST), Alkaline phosphatase(ALP)
Timepoint
Pre and post test
Method of measurement
Spectrophotometry

Intervention groups

1

Description
First Intervention group: Three weeks Preparation Period and Six weeks high intensity intermittent training (HIIT)
Category
Lifestyle

2

Description
Second Intervention group: First Intervention Training Protocol and turmeric Supplementation . 3 miligram curcumin per kilogram body weight per day
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Health Center
Full name of responsible person
Mehdi Bahri Nesaz
Street address
Khalkhal Health Center, Mozzafar Azizi Ave
City
Khalkhal
Province
Ardabil
Postal code
۵۶۸۱۷۶۱۳۵۱
Phone
+98 45 3242 6801
Fax
+98 45 3242 2305
Email
Thelordofthebirds@yahoo.com
Web page address

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice-chancellor for Research and Technology of Tabriz University
Full name of responsible person
Abolghasem Jouyban
Street address
Tabriz University, 29 Bahman Blvd
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Tabriz
Province
East Azarbaijan
Postal code
5166614766
Phone
+98 41 3335 3110
Email
ajouyban@hotmail.com
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 and Technology 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

University of Tabriz

Full name of responsible person

Zahra Rostami

Position

Student

Latest degree

Master

Other areas of specialty/work

Biochemistry and exercise metabolism

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Person responsible for scientific inquiries

Contact

Name of organization / entity

The University of Tabriz

Full name of responsible person

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Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

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Full name of responsible person

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Latest degree

Master

Other areas of specialty/work

Biochemistry and 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

There is a possibility of abuse

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

Data file with encoding will be exposed

When the data will become available and for how long

6 Month after publication of results

To whom data/document is available

Everyone

Under which criteria data/document could be used

Use is not allowed

From where data/document is obtainable

Zahra Rostami

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

Send request via email and receive

Comments