

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

02 Jul 2026

### The effects of progressive resistance training with melatonin ingestion on antioxidant, inflammatory markers, and cardiovascular risk factors in overweight males

#### Protocol summary

##### Summary

The purpose of this study was to investigate the effect of 8 weeks progressive resistance training on antioxidant, inflammatory markers and cardiovascular disease in overweight men. Forty four overweight men were randomly assigned in four groups: (Group 1, melatonin without training (12 n), (CM), group 2, placebo training (12 n), (CP), group 3, melatonin with resistance training (12 n), (TM), and group 4, placebo resistance training (12 n), (TP)) in the summer 2017. The progressive resistance training performed three days a week with 55-85% IRM increasing intensity for eight weeks. Subjects of supplement group consumed 3 gr melatonin capsules, while other group consumed placebo for eight weeks daily, one hour before bedtime. Before and after the training period, blood samples were taken at 8 a.m. at the rest time, 48 to 72 hours after the last exercise session, after overnight fasting. Moreover, body composition indicators were measured in both stages.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2017031333064N1**

Registration date: **2017-08-02, 1396/05/11**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2017-08-02, 1396/05/11

##### Registrant information

##### Name

Mohammad Ghaderi

##### Name of organization / entity

Islamic Azad University, Mahabad Branch

##### Country

Iran (Islamic Republic of)

##### Phone

+98 44 4233 6000

##### Email address

m.ghaderi@iau-mahabad.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Science and Research Branch, Islamic Azad University

##### Expected recruitment start date

2017-05-31, 1396/03/10

##### Expected recruitment end date

2017-08-11, 1396/05/20

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effects of progressive resistance training with melatonin ingestion on antioxidant, inflammatory markers, and cardiovascular risk factors in overweight males

##### Public title

The effects of melatonin supplementation during resistance training on antioxidant, inflammatory and as a predictor of cardiovascular disease factors

##### Purpose

Prevention

##### Inclusion/Exclusion criteria

Inclusion criteria: Men, Overweight, aged 20-30 years; Body mass index (BMI) between 25 and 30; No current chronic health problems. Exclusion criteria: Smoking and

Alcohol consumption; uncontrolled intake of any drug or supplement; being absent for three training sessions.

#### Age

From **20 years** old to **30 years** old

#### Gender

Male

#### Phase

N/A

#### Groups that have been masked

*No information*

#### Sample size

Target sample size: **44**

#### Randomization (investigator's opinion)

Randomized

#### Randomization description

#### Blinding (investigator's opinion)

Double blinded

#### Blinding description

#### Placebo

Used

#### Assignment

Parallel

#### Other design features

Simple random method

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Clinical Research Ethics Committee of the Mahabad  
Islamic Azad University

##### Street address

Islamic Azad University, Mahabad Branch

##### City

Mahabad

##### Postal code

591393-3137

##### Approval date

2010-08-20, 1389/05/29

##### Ethics committee reference number

62/741ε

## Health conditions studied

### 1

#### Description of health condition studied

cardiovascular disease risk factors

#### ICD-10 code

#### ICD-10 code description

other physical therapy

## Primary outcomes

### 1

#### Description

Antioxidant factors (SOD,TAC), Oxidative stress (MDA), Inflammatory (CRP,IL-6) and Cardiovascular risk factors (LDL,HDL,CHOL. TG, LDL/HDL)

#### Timepoint

At the beginning of the study and prior of training and after training program

#### Method of measurement

Using specialized kits

## Secondary outcomes

### 1

#### Description

Body composition indices

#### Timepoint

At the beginning of the study and prior of training and after training program

#### Method of measurement

At the beginning of the study and prior of training and after training program

## Intervention groups

### 1

#### Description

The subjects in the training group were recommended to perform progressive resistance training three days a week with 55-85% IRM for eight weeks with melatonin ingestion.

#### Category

Lifestyle

### 2

#### Description

In the control group, participants were advised to maintain their normal lifestyle during the study

#### Category

Treatment - Drugs

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Islamic Azad University, Mahabad Branch

##### Full name of responsible person

Mohammad Ghaderi

##### Street address

Islamic Azad University, Mahabad Branch, Sports Complex

##### City

Mahabad

## Sponsors / Funding sources

### 1

#### Sponsor

**Name of organization / entity**

Islamic Azad University, Science and Research Branch

**Full name of responsible person**

Hossein Abed Natanzi

**Street address**

Science and Research Branch, Daneshgah Blvd,  
Simon Bulivar Blvd, Tehran

**City**

Tehran

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

Yes

**Title of funding source**

Islamic Azad University, Science and Research Branch

**Proportion provided by this source**

100

**Public or private sector**

*empty*

**Domestic or foreign origin**

*empty*

**Category of foreign source of funding**

*empty*

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

*empty*

## Person responsible for general inquiries

**Contact****Name of organization / entity**

Islamic Azad University, Mahabad Branch

**Full name of responsible person**

Mohammad Ghaderi

**Position**

Ph.D. Candidate of Exercise Physiology

**Other areas of specialty/work****Street address**

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## Sharing plan

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

*empty*

**Study Protocol**

*empty*

**Statistical Analysis Plan**

*empty*

**Informed Consent Form**

*empty*

**Clinical Study Report**

*empty*

**Analytic Code**

*empty*

**Data Dictionary**

*empty*