

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

11 Sep 2026

### Comparison of the Effectiveness of Curcumin Supplement and Placebo in Improving Symptoms of Delayed Onset Muscle Soreness in Sedentary People

#### Protocol summary

##### Study aim

Determining the effect of curcumin on delayed onset muscle soreness

##### Design

A Crossover Randomized Control Trial, triple blinded on 15 sedentary people. Randomization will be used using blocks of size 4 carried out at a website: [www.sealedenvelope.com](http://www.sealedenvelope.com)

##### Settings and conduct

This study will conduct on 15 sedentary people who refer to sports medicine ward in Taleghani hospital. Demographic data, body composition information and knee extensor 1-RM will be entered to questionnaire. Unilateral knee extension will be used as a DOMS protocol. (5 sets, 10 rep of 120% 1-RM).

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Sedentary adult people. Non-inclusion criteria: had participated in resistance training in the last 6 months; history of DOMS in the last 3 months, history of orthopedic diseases, arthritis and other inflammatory diseases; pregnancy and lactation; taking Curcumin supplement in the previous 6 months; participation in training session during the test time; using a specific strategy for recovery

##### Intervention groups

Intervention group: Participants will take Curcumin in 7 doses. Control group: Participants will take Placebo in 7 doses.

##### Main outcome variables

Pain; swelling; muscle strength; range of motion (ROM); muscle function

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20191013045089N1**

Registration date: **2020-06-27, 1399/04/07**

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

Last update: **2020-06-27, 1399/04/07**

Update count: **0**

##### Registration date

2020-06-27, 1399/04/07

##### Registrant information

###### Name

Behnaz Mahdavian

###### Name of organization / entity

###### Country

Iran (Islamic Republic of)

###### Phone

+98 21 2303 1406

###### Email address

behnazmahdavian@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-06-09, 1399/03/20

##### Expected recruitment end date

2020-07-05, 1399/04/15

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of the Effectiveness of Curcumin Supplement and Placebo in Improving Symptoms of Delayed Onset Muscle Soreness in Sedentary People

**Public title**

Curcumin effect on delayed onset muscle soreness

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Sedentary people (people who do not participate in planned, structured physical activity at least 30 min at moderate intensity on at least 3 days per week during the last 3 months)

**Exclusion criteria:**

had participated in resistance training in the last six months history of musculoskeletal injury in the last 2 months history of Delayed Onset Muscle Soreness (DOMS) in the last 3 months history of orthopedic, arthritis and inflammatory diseases regular consumption of medicine regular consumption of Non Steroidal Anti Inflammatory Drugs (NSAIDs) (at least 3 of 7 days) dietary supplements use in the previous 6 months intake of a curcumin supplement within the past 6 months history of Hypertension disease history of gallbladder disease

**Age**

From **18 years** old

**Gender**

Female

**Phase**

4

**Groups that have been masked**

- Participant
- Investigator
- Outcome assessor
- Data analyser

**Sample size**

Target sample size: **15**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

The order of placement in the drug and placebo groups and the performing DOMS protocol on the dominant or non-dominant leg will be determined by the block randomization method through blocks of size 4 (using sealed envelope).

**Blinding (investigator's opinion)**

Triple blinded

**Blinding description**

A triple- blinded trial is designed; knowledge of the treatment assignment is concealed from the people who organize and analyze the data of the study as well as from the subjects. As placebo and drug are exactly the same in shape and color, subjects will not be notified of group allocation status. The statistician will also be unaware of the allocation of individuals to study groups. Only the supervisor will be notified.

**Placebo**

Used

**Assignment**

Crossover

**Other design features****Secondary Ids**

empty

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

Ethics committee of Shahid Beheshti University of Medical Sciences

**Street address**

Shahid Beheshti University of Medical Sciences, Arabi street, Daneshjou boulevard, Velenjak

**City**

Tehran

**Province**

Tehran

**Postal code**

1985717443

**Approval date**

2018-07-08, 1397/04/17

**Ethics committee reference number**

IR.SBMU.MSP.REC.1397.320

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

Delayed Onset Muscle Soreness

**ICD-10 code****ICD-10 code description**

muscle

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

Pain

**Timepoint**

before intervention, after intervention, on 1st, 3rd, and 7th day

**Method of measurement**

Visual Analogue Scale (VAS)

**2****Description**

Swelling

**Timepoint**

before intervention, after intervention, on 1st and 3rd day

**Method of measurement**

tape measure

**3****Description**

Muscle Strength

**Timepoint**

before intervention, after intervention, on 1st and 3rd day

**Method of measurement**

One-repetition maximum (1-RM)

**4****Description**

Range of Motion

**Timepoint**

before intervention, after intervention, on 1st and 3rd day

**Method of measurement**

Goniometer

**5****Description**

Muscle Function

**Timepoint**

before intervention, after intervention, on 1st and 3rd day

**Method of measurement**

one-legged hop for distance test

**Secondary outcomes**

empty

**Intervention groups****1****Description**

Intervention group: they will take 500 mg Curcumin supplement orally. They continue to take it for up to 7 days.

**Category**

Treatment - Drugs

**2****Description**

Control group: they will take placebo orally. They continue to take it up to 7 days.

**Category**

Placebo

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Taleghani Hospital

**Full name of responsible person**

Behnaz Mahdavian

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Taleghani hospital, Arabi street, Yaman street, Chamran Avenue

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

Shahid Beheshti University of Medical Sciences

**Full name of responsible person**

دکتر افشین زرقي

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Shahid Beheshti University of Medical Sciences, Arabi Street, Daneshjoo Blvd, Velenjak, Tehran, Iran

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info@sbm.ac.ir

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

Yes

**Title of funding source**

Shahid Beheshti University of Medical Sciences

**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**

Shahid Beheshti University of Medical Sciences

**Full name of responsible person**

Behnaz Mahdavian

**Position**

Resident

**Latest degree**

Medical doctor

**Other areas of specialty/work**

Sport Medicine

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## Person responsible for scientific inquiries

**Contact**

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## Person responsible for updating data

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**Full name of responsible person**

Behnaz Mahdavian

**Position**

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**Latest degree**

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**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**

No - There is not 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**

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