

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 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

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 Mahdaviyani

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 2303 1406

Email address

behnazmahdaviyani@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

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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 زرقی

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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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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