Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 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 Mahdaviani

Name of organization / entity

Country
Iran (Islamic Republic of)

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+98 21 2303 1406

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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 muskuloskeletal 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 Mahdaviani
Street address
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 Mahdaviani
Position
Resident
Latest degree
Medical doctor
Other areas of specialty/work

Sport Medicine

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Person responsible for updating data

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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