

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

The effects of one bout of strenuous physical activity and black mulberry supplementation on some pro-inflammatory factors in female basketball players

Protocol summary

Summary

This research aims to discover the effects of Black Mulberry on serum concentration of Interleukin-6 and Tumor Necrosis Factor-alfa after one bout of strenuous exercise in female basketball players. Including criteria: female basketball players, ages 20 to 30 years with at least 2 years of professional basketball playing and with no recent history of nutritional supplement usage were selected to participate in the trial. Excluding criteria: recent exercise induced injury, non-standard BMI, high body fat percentage. Study Population: female basketball players Number of Participants: 15 Study intervention: 300 milliliters of Black Mulberry juice Intervention time and period: 10 days, during exercise sessions or in snacks First impression: decrease in pro-inflammatory cytokines

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015100524358N1**
Registration date: **2016-07-20, 1395/04/30**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-07-20, 1395/04/30

Registrant information

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research of Islamic Azad University
Science and Research Branch

Expected recruitment start date

2015-07-06, 1394/04/15

Expected recruitment end date

2015-09-26, 1394/07/04

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of one bout of strenuous physical activity and black mulberry supplementation on some pro-inflammatory factors in female basketball players

Public title

The effect of Black Mulberry on inflammation caused by strenuous physical activity

Purpose

Other

Inclusion/Exclusion criteria

Inclusion Criteria: >2 years athletic activity; female; 20-30 years old; BMI range of 19-27; Standard Body Fat Percentage. Exclusion Criteria: metabolic disorders such as diabetes; chronic heart and artery diseases; smoking; alcohol consumption.

Age

No age limit

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **14**

Randomization (investigator's opinion)

N/A

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Single

Other design features**Secondary Ids**

empty

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

Ethics in biomedical research Science and Research
Branch of Islamic Azad University

Street address

Sciences & Research Branch, Hesarak

City

Tehran

Postal code**Approval date**

2016-06-19, 1395/03/30

Ethics committee reference number

IR.IAU.SRB.REC.1395.6

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

Inflammation caused by strenuous physical activity,
Effect of one bout of strenuous physical activity and
Black Mulberry supplementation

ICD-10 code

Z00.6,Z00.

ICD-10 code description

Examination for comparison and control in clinical
research programme, General medical examination

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

Interleukin-6

Timepoint

before, immediately after, after an hour (before and after
supplementation)

Method of measurement

Serum concentrations measured by high sensitivity
Diaclone kit

2**Description**

TNF-alfa

Timepoint

before, immediately after, after an hour (before and after
supplementation)

Method of measurement

Serum concentrations measured by high sensitivity
Diaclone kit

Secondary outcomes**1****Description**

Creatine Kinase

Timepoint

before,immediately after, after an hour, after 48 hours

Method of measurement

Serum concentrartions

2**Description**

Lactate Dehydrogenase

Timepoint

before,immediately after, after an hour, after 48 hours

Method of measurement

Serum concentrartions

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

Black Mulberry pulped Juice, 300 grams, used before,
during and after exercise sessions or between meals for
10 days.

Category

Other

2**Description**

Basketball Exercise Simulation for 87 minutes

Category

Other

Recruitment centers**1****Recruitment center**

Name of recruitment center

Science and Research Branch Islamic Azad University

Full name of responsible person

Farshad Ghazalian

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Hesarak Blvd, University Square, Sattari Highway

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

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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

Science and Research Islamic Azad University

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**

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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