Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Effect of tomato juice consumption on the inflammatory biomarkers of male athletes following exhaustive exercise

Protocol summary

Summary

The aim of this study will determine the effect of tomato juice consumption as a rich source of lycopene (a potent antioxidant) on inflammatory biomarkers of male athletes following exhaustive exercise. And study design will be Control Clinical Trial. In this study 30 male university students will enroll and randomly divide into two groups. The experimental group will consume 200 mL tomato juice daily (containing 50 mg of lycopene) for one week, and then performed exercise on treadmill at a speed of 18 km/hour till exhaustion. The control group will consume the same amount of water and will perform the same exercise regimen. Blood samples will collect pre- and immediately post-exercise for analysis of IL-6, CRP and oxidant/antioxidant ratio.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201301166415N5**
Registration date: **2014-12-18, 1393/09/27**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2014-12-18, 1393/09/27

Registrant information

Name

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Name of organization / entity

Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2009-05-10, 1388/02/20

Expected recruitment end date

2009-05-17, 1388/02/27

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of tomato juice consumption on the inflammatory biomarkers of male athletes following exhaustive exercise

Public title

Effect of tomato juice on inflammatory bio-markers in exhaustive exercise

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: Healthy Exercise Student Volunteer of University of Tehran Exclusion criteria: Unhealthy Exercise Student Volunteer of University of Tehran

Age

From **19 years** old to **21 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size
Target sample size: **30**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Faculty of Sport Science and Physical Activity, University of Tehran
Street address
15th- Amirabad Shomali (Kargar)Ave,
City
Tehran
Postal code
Approval date
2009-01-03, 1387/10/14
Ethics committee reference number
11250

Health conditions studied

1

Description of health condition studied
Inflammation
ICD-10 code
D80-D89
ICD-10 code description
Certain disorders involving the immune mechanism

Primary outcomes

1

Description
Supplementation by Tomato Juice (Decreased Inflammation)
Timepoint
One Week
Method of measurement
Measurement of Inflammtion Biomarker (IL-6, CRP, Oxidant/Antioxidant)

Secondary outcomes

empty

Intervention groups

1

Description
Thirty male sport students will enroll and randomly divide into two groups. The experimental group will consume 200 mL tomato juice daily (containing 50 mg of lycopene) for one week, and then will perform exercise on treadmill at a speed of 18 km/hour till exhaustion. Blood samples will collect pre- and immediately post-exercise for analysis of IL-6, CRP and oxidant/antioxidant ratio.
Category
Other

2

Description
Thirty male sport students will enroll and randomly divide into two groups. The experimental group will consume 200 mL water daily for one week, and then will perform exercise on treadmill at a speed of 18 km/hour till exhaustion. Blood samples will collect pre- and immediately post-exercise for analysis of IL-6, CRP and oxidant/antioxidant ratio.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Student of Sport Science of Faccalty of Sport Science, University of Tehran
Full name of responsible person
Street address
15 th, Amir Abad Ave,
City
Tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Investigator
Full name of responsible person
Mohammad Taherireykande
Street address
Clinic of University of Tehran,16 Azar, Enghelab Ave,
City
Tehran
Grant name
Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Investigator
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
Department of Cellular & Molecular Nutrition, School of Nutrition and Dietetics, Tehran University o
Full name of responsible person
Dr. Ahmad Saedi Some Olia
Position
Assistant Professor
Other areas of specialty/work
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Person responsible for scientific inquiries

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Person responsible for updating data

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Web page address

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