Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Determination of the effect of tomato juice consumption on Total Antioxidant Capacity, Superoxide Dismutase, Glutathione Peroxidase,Catalse and Malondialdehyde in overweight and obese female students of Shiraz University of Medical Sciences and comparing the results between overweight and obese subjects

Protocol summary

Summary

Determination of the effect of tomato juice consumption on blood antioxidative biomarkers in overweight and obese female students of Shiraz University of Medical Sciences Inclusion criteria: female, age between 20 and 30 years. Exclusion criteria: having any inflammatory diseases, including diabetes, CVD, multiple sclerosis, rheumatoid arthritis, cancers, asthma and allergies. Intake of any medication or vitamin/mineral supplement or any tobacco products. This study was a randomized controlled clinical trial conducted in 64 overweight or obese (BMI=25 kg/m2or higher) female students who were recruited from Shiraz University of Medical Sciences. Subjects randomly divided in to intervention (n=32) and control (n=32) groups and received tomato juice (330 ml/d) or water respectively for 20 days. At baseline and day 20, plasma TAC, erythrocyte SOD, GPx, and CAT and serum MDA were analysed and compared between two groups. Subgroup analysis also was performed with subjects divided as overweight or obese, according to their baseline BMI values.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014051017628N1**
Registration date: **2014-06-22, 1393/04/01**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2014-06-22, 1393/04/01

Registrant information

Name

Mahsa Ghavipour

Name of organization / entity

Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 71 1212 2333

Email address

graduate@sums.ac.ir

Recruitment status

Recruitment complete

Funding source

The cost was paid by the first Executive (Mahsa Ghavipour) and was conducted in Shiraz University of Medical Sciences

Expected recruitment start date

2013-06-22, 1392/04/01

Expected recruitment end date

2013-07-11, 1392/04/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Determination of the effect of tomato juice consumption on Total Antioxidant Capacity, Superoxide Dismutase, Glutathione Peroxidase,Catalse and Malondialdehyde in overweight and obese female students of Shiraz University of Medical Sciences and comparing the results between overweight and obese subjects

Public title
Effect of tomato juice consumption on blood antioxidative biomarkers
Purpose
Prevention
Inclusion/Exclusion criteria
Inclusion criteria: female, age between 20 and 30 years. Exclusion criteria: having any inflammatory diseases, including diabetes, CVD, multiple sclerosis, rheumatoid arthritis, cancers, asthma and allergies. Intake of any medication or vitamin/mineral supplement or any tobacco products
Age
From **20 years** old to **30 years** old
Gender
Female

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **64**
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
Tehran University of Medical Sciences
Street address
Tehran University of Medical Sciences, Health College, Enghelab street
City
Tehran
Postal code
Approval date
2010-04-16, 1389/01/27
Ethics committee reference number
10492

Health conditions studied

1

Description of health condition studied
overweight
ICD-10 code
E66.9
ICD-10 code description
Simple obesity NOS

2

Description of health condition studied
obese
ICD-10 code
E66.0
ICD-10 code description
چاقی ناشی از کالری اضافی

Primary outcomes

1

Description
total antioxidant capacity
Timepoint
befor the intervention and 20 days after that
Method of measurement
in plasma by spectrophotometric method according to mg/dl

2

Description
superoxide dismutase
Timepoint
befor the intervention and 20 days after that
Method of measurement
in erythrocytes enzymatic method according to U/gHb

3

Description
glutathione peroxidase
Timepoint
befor the intervention and 20 days after that
Method of measurement
in erythrocytes using hydrogen peroxide according to U/gHb

4

Description
catalase
Timepoint
befor the intervention and 20 days after that
Method of measurement
in erythrocytes by spectrophotometric method according to U/gHb

5

Description
malondialdehyde
Timepoint
befor the intervention and 20 days after that
Method of measurement

in serum according to µmol/ml

Secondary outcomes

empty

Intervention groups

1

Description
intervention group: 330 ml/d tomato juice for 20 days, 110 ml with their main meal (three times a day)
Category
Prevention

2

Description
control group: 330 ml/d for 20 days, 110 ml with their main meal (three times a day)
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Shiraz University of Medical Sciences
Full name of responsible person
Mrs, maryam chamari
Street address
City
Shiraz

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
with personal expenses in Shiraz University of Medical Sciences
Full name of responsible person
Mahsa Ghavipour
Street address
Shiraz University of Medical Sciences, Zand street
City
Shiraz
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
with personal expenses in Shiraz University of Medical Sciences
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
Shiraz Universist of Medical Sciences
Full name of responsible person
Mahsa Ghavipour
Position
MSc of nutrition
Other areas of specialty/work
Street address
Zand street, Shiraz University of Medical Sciences
City
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Postal code
Phone
+98 71 1212 2333
Fax
Email
mahsaghavipour@gmail.com
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Shiraz University of Medical Sciences
Full name of responsible person
Mahsa Ghavipour
Position
MSc of Nutrition Sciences
Other areas of specialty/work
Street address
Shiraz University of Medical Sciences, Zand street
City
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Postal code
Phone
+98 71 1212 2333
Fax
Email
mahsaghavipour@gmail.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Shiraz University of Medical Sciences
Full name of responsible person
Mahsa Ghavipour
Position

MSc of nutrition

Other areas of specialty/work

Street address

Shiraz University of Medical Sciences, Zand street

City

Shiraz

Postal code

Phone

+98 71 1212 2333

Fax

Email

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