Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Jun 2026

The effect of probiotic yogurt intake in the prevention of oxidative stress and inflammatory factors in young females after exhaustive exercise.

Protocol summary

Summary

Objectives: Probiotics are defined as live microorganisms possess antioxidant and anti-inflammatory activity. This study is designed the effect of probiotic yogurt on oxidative stress and inflammatory markers in young women athletes after exhaustive exercise. Design: 30 healthy female students will be selected in both groups (15 controls and 15 experiments) at age 30-18 years. 500 ml probiotic yogurt and 500 ml ordinary yogurt will be taken to control and experiment groups for two weeks, respectively. Setting and Conduct: Fasting blood samples are taken for both groups at the beginning and end of the supplementation. Exhaustive exercise session will be given to both groups at the 15th day. Fasting blood samples are taken at the end of exhaustive exercise. Blood samples will be used to test of biochemical and inflammatory factors. Participants including major eligibility criteria: Young healthy males with moderate physical activity in 18-30 years old. Exclusion criteria for participant selection, including: Individuals with diseases; smoking; alcoholism and other supplements consumption; having certain dietary; professional training; sedentary and having 25 and less than18.5 kg.m2. Interventions: Probiotic yogurt and exhaustive exercise. Variables: Superoxide dismutase, Glutathione peroxidase, Malondialdehyde, Interlukine-6, Tumor necrosis factor-alpha, hs-CRP, Catalase, Matrix metalloproteinase-2 and 6.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201307105144N4**
Registration date: **2014-02-20, 1392/12/01**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2014-02-20, 1392/12/01

Registrant information

Name
Ali Nemati
Name of organization / entity
Ardabil University of Medical Sciences
Country
Iran (Islamic Republic of)
Phone
+98 45 3351 0052
Email address
a.nemati@arums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research Ardabil University of Medical Sciences

Expected recruitment start date

2013-12-22, 1392/10/01

Expected recruitment end date

2014-04-19, 1393/01/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of probiotic yogurt intake in the prevention of oxidative stress and inflammatory factors in young females after exhaustive exercise.

Public title

The effect of probiotic yogurt intake in the prevention of oxidative stress and inflammatory factors in young females after exhaustive exercise.

Purpose
Basic scienece
Inclusion/Exclusion criteria
Inclusion criteria: Young healthy females with moderate physical activity in 18-30 years old. Exclusion criteria: Individuals with any diseases; smoking; alcoholism and other supplements consumption; having certain dietary; professional training; sedentary and having BMI over 25 and less than18.5 kg.m2.
Age
From **18 years** old to **30 years** old
Gender
Female

Phase
2-3
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
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethic Committee of Ardabil University of Medical Sciences
Street address
Ethic Committee of Ardabil University of Medical Sciences, Vice Chancellor for Research, Ardabil University of Medical Sciences, Ardabil University of Medical Sciences, Daneshgah Avenue, Ardabil, Iran
City
Ardabil
Postal code
5318985991
Approval date
2012-09-22, 1391/07/01
Ethics committee reference number
arums 1018

Health conditions studied

1

Description of health condition studied
Young healthy females
ICD-10 code
Z02.5
ICD-10 code description
Examination for participation in sport

Primary outcomes

1

Description
Exhaustive exercise time
Timepoint
At the end of exercise
Method of measurement
With signs and symptoms of exhaustion

Secondary outcomes

1

Description
Weight
Timepoint
At the beginning of intervention
Method of measurement
Digital scales

2

Description
Height
Timepoint
At the beginning of intervention
Method of measurement
Stadiometers

3

Description
Malondialdehyde
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
Spectrophotometry

4

Description
Catalase
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
Spectrophotometry

5

Description

Total antioxidant capacity

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

6

Description

Superoxide dismutase

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

7

Description

Glutathione peroxidase

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

8

Description

Matrix metalloproteinase-2

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

ELISA

9

Description

Interlukine-6

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

ELISA

10

Description

Tumor necrosis factor-alpha

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

ELISA

11

Description

hs-CRP

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Immunoturbidimetry

12

Description

Paraoxonase-1

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

13

Description

Arylesterase

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

14

Description

HDL-cholesterol

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

15

Description

LDL-cholesterol

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

16

Description

Triglyceride

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

17

Description

Hemoglobin

Timepoint

At the beginning of intervention, previous and after of exercise

Method of measurement

Spectrophotometry

18

Description
Total cholesterol
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
Spectrophotometry

19

Description
Copper
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
Atomic absorptions spectrophotometry

20

Description
Zinc
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
Atomic absorptions spectrophotometry

21

Description
Magnesium
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
Atomic absorptions spectrophotometry

22

Description
Ceruloplasmin
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
Spectrophotometry

23

Description
Ascorbic acid
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
Spectrophotometry

24

Description
Matrix metalloproteinase-9
Timepoint
At the beginning of intervention, previous and after of exercise
Method of measurement
ELISA

Intervention groups

1

Description
Given 500 ml/day probiotic yogurt for 14 days and once exhaustive exercise for intervention group.
Category
Other

2

Description
Given 500 ml/day ordinary yogurt for 14 days and once exhaustive exercise for control group.
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Ardabil University of Medical Sciences
Full name of responsible person
Kobra Heydari
Street address
Biochemistry Dept, Ardabil University of Medical Sciences, Ardabil University of Medical Sciences, Daneshgah Avenue, Ardabil, Iran.
City
Ardabil

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice Chancellor for Research Ardabil University of Medical Sciences
Full name of responsible person
Hadi Peeri
Street address
Vice Chancellor for Research Ardabil University of Medical Sciences, Ardabil University of Medical Sciences, Daneshgah Avenue, Ardabil, Iran.
City
Ardabil
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source

Vice Chancellor for Research Ardabil 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
Ardabil University of Medical Sciences

Full name of responsible person
Kobra Heydari

Position
Student of MSc

Other areas of specialty/work

Street address
Biochemistry Dept, Ardabil University of Medical Sciences, Ardabil University of Medical Sciences, Daneshgah Avenue, Ardabil, Iran.

City
Ardabil

Postal code
5155653466

Phone
+98 44 1383 1568

Fax
+98 45 1551 3776

Email
k.heydari1977@yahoo.com

Web page address
http//:www.arums.ac.ir

Person responsible for scientific inquiries

Contact

Name of organization / entity
Ardabil University of Medical Sciences

Full name of responsible person
Mohammad Mazani

Position
PhD of Clinical Biochemistry

Other areas of specialty/work

Street address
Biochemistry Dept, Faculty of Medicine, University of Medical Sciences, Daneshgah Avenue, Ardabil, Iran

City
Ardabil

Postal code
5618953141

Phone
+98 45 1551 2788

Fax
+98 45 1551 3776

Email
m.mazani@arums.ac.ir

Web page address
http//:www.arums.ac.ir

Person responsible for updating data

Contact

Name of organization / entity
Ardabil University of Medical Sciences

Full name of responsible person
Mohammad Mazani

Position
PhD of Clinical Biochemistry

Other areas of specialty/work

Street address
Biochemistry Dept, Faculty of Medicine, University of Medical Sciences, Daneshgah Avenue, Ardabil, Iran

City
Ardabil

Postal code
5618953141

Phone
+98 45 1551 2788

Fax
+98 45 1551 3776

Email
m.mazani@arums.ac.ir

Web page address
http//:www.arums.ac.ir

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