Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Effect of Aqueous Extract of Teucrium polium on oxidative stress in young athletes after graded maximal aerobic exercise

Protocol summary

Summary

The present study was conducted to assess the Effect of Aqueous Extract of Teucrium polium on oxidative stress in young athletes after graded maximal aerobic exercise. Hence, 24 physical education students in a randomized double-blind design were allocated into two supplement (Extract of Teucrium polium; n=12) & control (placebo; n=12) groups. The subjects ingested 125 gr/day/kg of Aqueous Extract or placebo 7 day before of exercise protocol. All subjects of both groups underwent in graded maximal aerobic exercise and to identify effect of 1 week consumption of Aqueous Extract of Teucrium polium blood samples were collected from the antcubital vein at: prior of supplementation, pre exercise, immediately after exercise and 24 h post exercise, and Malondiadehyde (MDA), plasma total antioxidant capacity (FRAP), superoxide dismutase (SOD) and 8-iso-Prostaglandin F2α (8-iso-PGF2α) were measured. All participants had to meet the following criteria before enrolment in the study: (1) No current chronic health problems, (2) Non-smokers, (3) No cardiovascular, metabolic or respiratory disease and (4) No consumption of any supplements or steroid anabolic drugs within the past 6 months.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2012080610512N1**
Registration date: **2013-02-25, 1391/12/07**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2013-02-25, 1391/12/07

Registrant information

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Recruitment status

Recruitment complete

Funding source

Islamic Azad Uiversity of Mahabad

Expected recruitment start date

2011-04-21, 1390/02/01

Expected recruitment end date

2012-12-21, 1391/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Aqueous Extract of Teucrium polium on oxidative stress in young athletes after graded maximal aerobic exercise

Public title

Effect of Teucrium polium on oxidative stress indices in young athletes

Purpose

Basic scienece

Inclusion/Exclusion criteria

Inclusion criteria: Males; young athlethes; aged 18-30years; No current chronic health problems; No consumption of any supplements or steroid anabolic drugs within the past 6 months Exclusion criteria:

Smoking; injuries; acute diseases; and uncontrolled intake of any supplement or drugs (during the period).

Age

From **18 years** old to **30 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **24**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Clinical Research Ethics Committee of the Mahabad Islamic Azad University

Street address

Islamic Azad University, Mahabad Branch, university Street, Mahabad, Iran

City

Mahabad

Postal code

Approval date

2011-04-13, 1390/01/24

Ethics committee reference number

90-1پ

Health conditions studied

1

Description of health condition studied

oxidative stress

ICD-10 code

Z50.1

ICD-10 code description

other physical therapy

Primary outcomes

1

Description

oxidative stress indices (MDA, FRAP, SOD, 8-iso-PGF2α)

Timepoint

prior of supplementation, pre exercise, immediately after exercise and 24 h post exercise

Method of measurement

The total antioxidant capacity of plasma was evaluated by applying the FRAP assay (ferric reducing antioxidant power or ferric reducing ability of plasma). Moreover, Plasma malondialdehyde (MDA) concentrations spectrophotometrically were assayed by measurement of thiobarbituric acid reactive substances (TBARS) assay. Serum 8-iso-PG F2α and Superoxide Dismutase (SOD) levels were measured with a commercially available kit

Secondary outcomes

1

Description

lipid profile

Timepoint

prior of supplementation, pre exercise, immediately after exercise and 24 h post exercise

Method of measurement

The lipid profile will determine by serum levels of total cholesterol (TC), high-density cholesterol (HDL-C), low-density cholesterol (LDL-C) and triglycerides (TG) using the enzymatic method

2

Description

Homosysteine

Timepoint

prior of supplementation, pre exercise, immediately after exercise and 24 h post exercise

Method of measurement

It determined by ELISA methods with commercial kits.

Intervention groups

1

Description

The subjects in the supplemented group were given prepared aqueous extract of Teucrium polium (125 ml/kg/day), 7 day before of aerobic exercise protocol

Category

Placebo

2

Description

subject in placebo group also received 125 gr/day/kg of placebo 7 day before of aerobic exercise protocol.

Category

Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Islamic Azad University of Mahabad
Full name of responsible person
Dr Sirvan Atashak
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Islamic Azad university of mahabad
Full name of responsible person
Dr Akbar Ghassemi Kahrizeh
Street address
Islamic Azad university of mahabad
City
Mahabad
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Islamic Azad university of mahabad
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

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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