

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 Jun 2026

The effects of aerobic training and response to single session exhaustion exercise on some antioxidant indicators of salivary and serum in young non-active men

Protocol summary

Summary

The purpose of the present study is to investigate effects of aerobic training and response to single session exhaustion exercise on some antioxidant indicators salivary and serum in young non-active men. Thirty healthy men in a randomized design, will allocate equally into two homogeneous group: training group (N = 15) or control group (N = 15). Subjects of training group will participate in 8 week aerobic training (3 session per week). After training period, all subjects (any groups) will participate in single session exhaustion exercise protocol on the treadmill (Bruce test). In both groups, physical fitness index (VO₂max), body composition (BMI, body Fat percent), blood lipid profile, oxidative stress (salivary and serum malondialdehyde, total antioxidant capacity, glutathione peroxidase, superoxide dismutase, catalase and uric acid), and inflammatory indicator (salivary and serum C-reactive protein: CRP) will determine in before and after training period and also, after exhaustion exercise protocol.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016042214371N2**

Registration date: **2016-05-14, 1395/02/25**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-05-14, 1395/02/25

Registrant information

Name

Vahid Sari-Sarraf

Name of organization / entity

University of Tabriz

Country

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Tabriz University

Expected recruitment start date

2016-01-05, 1394/10/15

Expected recruitment end date

2016-03-17, 1394/12/27

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of aerobic training and response to single session exhaustion exercise on some antioxidant indicators of salivary and serum in young non-active men

Public title

Exercise-induced oxidative stress

Purpose

Basic science

Inclusion/Exclusion criteria

Inclusion criteria: Healthy male: Non-athlete: Non-Smoker: Informed consent: without any inflammatory or oxidative supplement ingestion during 6 months prior to the study, Exclusion criteria: chronic diseases: injuries.

Age

From **18 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

Randomization: By random numbers

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tabriz University of Medical Sciences

Street address

Golgasht street, Daneshgah street, Tabriz university of medical sciences Tabriz

City

Tabriz

Postal code

Approval date

2016-01-18, 1394/10/28

Ethics committee reference number

TBZMED.REC.1394.977

Health conditions studied

1

Description of health condition studied

oxidative stress

ICD-10 code

Z10.3

ICD-10 code description

Routine general health check-up of other defined subpopulations

Primary outcomes

1

Description

Total antioxidant capacity (TAC)

Timepoint

Before and after the initiation of the intervention (training), after one session acute aerobic exercise

Method of measurement

by ABTs Method.

2

Description

Malondialdehyde (MDA)

Timepoint

Before and after the initiation of the intervention (training), after one session acute aerobic exercise

Method of measurement

by thiobarbituric acid reactive substance (TBARS) and spectrophotometer

3

Description

Superoxide dismutase

Timepoint

Before and after the initiation of the intervention (training), after one session acute aerobic exercise

Method of measurement

Specific kit

4

Description

Catalase

Timepoint

Before and after the initiation of the intervention (training), after one session acute aerobic exercise

Method of measurement

by spectrophotometric

5

Description

Glutathione peroxidase

Timepoint

Before and after the initiation of the intervention (training), after one session acute aerobic exercise

Method of measurement

Specific kit

6

Description

Uric acid

Timepoint

Before and after the initiation of the intervention (training), after one session acute aerobic exercise

Method of measurement

Specific kit

Secondary outcomes

1

Description

Lipid profile

Timepoint

Before and after the initiation of the intervention (training), after one session acute aerobic exercise

Method of measurement

by specific kits

Intervention groups

1

Description

Intervention group 1: 8 week aerobic exercise training, 3 session per day and single session exhaustion exercise

Category

Other

2

Description

Control group: single session exhaustion exercise

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

University of Tabriz

Full name of responsible person

Vahid Sari-Sarraf

Street address

Faculty of Physical Education & Sports Sciences, University of Tabriz, 29 Bahman Ave, Tabriz, Iran.

City

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for research of Tabriz University

Full name of responsible person

Dr Mohammad Moghaddam Vahed

Street address

University of Tabriz, 29 Bahman Ave, Tabriz, Iran.

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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

Vice Chancellor for research of Tabriz 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

University of Tabriz

Full name of responsible person

Hamidreza Zolfi

Position

Phd Candidate of Exercise Physiology

Other areas of specialty/work

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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