

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Effect of acetazolamide on cognitive function of male students in normobaric hypoxia

Protocol summary

Study aim

Determining the effect of acetazolamide on cognitive function in normobaric hypoxia in male students of Razi University

Design

counterbalanced within-subject design

Settings and conduct

This study will be performed in Kermanshah city.

Participants/Inclusion and exclusion criteria

Students aged 18 to 29 at Razi University Body mass index 18 to 24

Intervention groups

Supplement group: the group that will take acetazolamide. Control group: the group that will take a placebo.

Main outcome variables

Evaluation of cognitive function in hypoxia with and without acetazolamide

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20170326033146N5**

Registration date: **2021-03-24, 1400/01/04**

Registration timing: **prospective**

Last update: **2021-03-24, 1400/01/04**

Update count: **0**

Registration date

2021-03-24, 1400/01/04

Registrant information

Name

Vahid Tadibi

Name of organization / entity

Razi University

Country

Iran (Islamic Republic of)

Phone

+98 83 3427 9265

Email address

vahidtadibi@razi.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-04-04, 1400/01/15

Expected recruitment end date

2021-04-19, 1400/01/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of acetazolamide on cognitive function of male students in normobaric hypoxia

Public title

The effect of acetazolamide on cognitive function in hypoxia

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Male student of Razi University Age 18 to 29 years old BMI: 18.5 - 29.4

Exclusion criteria:

Permanent residence at altitudes above 2000 meters
History of cognitive disorders or neurological diseases
Having a chronic illness Smoking History of living at altitudes of more than 2000 meters in the two months before the start of a research

Age

From **18 years** old to **29 years** old

Gender

Male

Phase

3

Groups that have been masked

- Participant
- Investigator

Sample size

Target sample size: **14**

Randomization (investigator's opinion)

Randomized

Randomization description

Half of the participants will take acetazolamide in the first week, and the other half will take a placebo in the second week. The order of supplementation and placebo for the subjects will be random.

Blinding (investigator's opinion)

Double blinded

Blinding description

In this study, neither the participant nor the researcher knew about the supplement (acetazolamide or placebo).

Placebo

Used

Assignment

Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Kermanshah Razi University

Street address

Tagh-e-Bostan, University St.

City

Kermanshah

Province

Kermanshah

Postal code

6714414971

Approval date

2021-02-24, 1399/12/06

Ethics committee reference number

IR.RAZI.REC.1399.067

Health conditions studied

1

Description of health condition studied

Normobaric hypoxia

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Simple visual reaction time

Timepoint

The beginning of the study to assess the level of cognitive function after taking acetazolamide or placebo and after hypoxia.

Method of measurement

Cognitive function is assessed using a reaction time device. (RESPONSE PANEL63035A, LAFAYETTE, INDIANA)

2

Description

Simple auditory reaction time

Timepoint

The beginning of the study to assess the level of cognitive function after taking acetazolamide or placebo and after hypoxia.

Method of measurement

Cognitive function is assessed using a reaction time device. (RESPONSE PANEL63035A, LAFAYETTE, INDIANA)

3

Description

Selective visual reaction time

Timepoint

The beginning of the study to assess the level of cognitive function after taking acetazolamide or placebo and after hypoxia.

Method of measurement

Cognitive function is assessed using a reaction time device. (RESPONSE PANEL63035A, LAFAYETTE, INDIANA)

Secondary outcomes

empty

Intervention groups

1

Description

First, the cognitive function test will be performed. Forty-eight hours later, they will take two doses of 125 mg and another dose the next morning, placebo or acetazolamide. The reaction time test is then performed, and immediately hypoxia is applied, and the test is repeated. Half of the participants took acetazolamide in the first week, and the other half took a placebo. A one-week wash-out period will be considered. Then, in the second week, people took acetazolamide to take a placebo, and vice versa.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Razi university

Full name of responsible person

Vahid Solgi

Street address

Razi University, Shahid Ashrafi Dormitory

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vsolgi13590@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Razi University

Full name of responsible person

Farzad Veisi

Street address

Deputy of Research and Technology, Razi University,
University St., Tagh-e-Bostan,

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veysi@razi.ac.ir

Web page address

<https://are.razi.ac.ir/%D8%B5%D9%81%D8%AD%D9%87-1>

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Razi University

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Academic

Person responsible for general inquiries

Contact**Name of organization / entity**

Razi University

Full name of responsible person

Vahid Tadibi

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiology

Street address

School of Sports Sciences, Razi University, University
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Person responsible for scientific inquiries

Contact**Name of organization / entity**

Razi University

Full name of responsible person

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Position

Associate professor

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Person responsible for updating data

Contact

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Web page address

<https://phe.razi.ac.ir/~vahidtadibi>

Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

No more information

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

All Data

When the data will become available and for how long

assess ability immediately after publication of the results

To whom data/document is available

Researchers

Under which criteria data/document could be used

For meta analysis

From where data/document is obtainable

Vahid Tadibi vtadibi@yahoo.com

What processes are involved for a request to access data/document

Maximum, one month after the request

Comments