Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

The effect of Menthapiperita extract on salivary α_amylase and cortisol to one bout high resistance exercise in young inactive girls

Protocol summary

Study aim

The effect of menthapiperita extract on salivary alpha-amylase and cortisol to one bout high resistance exercise in young inactive girls

Design

Thirty-two eligible individuals with an age range of 19 to 23 years were selected and then randomly divided into 4 groups of 8 people including a control group and three groups receiving different doses of menthapiperita extract and performing resistance activity as two blind and parallel strains. The rand function of Excel software was used to randomize the groups.

Settings and conduct

Materials were obtained and resistance activity was performed in the gym of the Central Tehran University Club, and the control group and analysts were unaware of the difference in the materials received. Before the performance, all 4 groups were introduced to how to perform resistance activity. In the three groups, each person took menthapiperita extract capsules 28 times in 7 days with different doses of 600, 400 and 200 mg. The control group also received starch capsules.

Participants/Inclusion and exclusion criteria

Admission requirements: Disabled healthy young girls Conditions of non-entry: the elderly, patients and athletes

Intervention groups

Experimental group A : Consumption of menthapiperita extract capsule with a dose of 600 mg plus resistance activity n : 8 2- Experimental group B : consumption of capsule of menthapiperita extract, dose 400 mg plus resistance activity n : 8 3- Experimental group C : consumption of capsule of menthapiperita extract with a dose of 200 mg plus resistance activity n : 8 4- Control group D: taking placebo capsule (starch powder) n : 8

Main outcome variables

،he results of this study show that intense resistance activity has an effect on increasing the scale of pain and salivary cortisol and the effect of the extract on each of these factors is effective and dose-dependent.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190103042219N4**
Registration date: **2021-01-06, 1399/10/17**
Registration timing: **retrospective**

Last update: **2021-01-06, 1399/10/17**
Update count: **0**

Registration date

2021-01-06, 1399/10/17

Registrant information

Name

Mohammad Ali Azarbayjani

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 8880 3071

Email address

m_azarbayjani@iauctb.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-11-21, 1399/09/01

Expected recruitment end date

2020-11-29, 1399/09/09

Actual recruitment start date

2020-11-21, 1399/09/01

Actual recruitment end date

2020-11-29, 1399/09/09

Trial completion date

2020-11-29, 1399/09/09

Scientific title
The effect of Menthapiperita extract on salivary α_amylase and cortisol to one bout high resistance exercise in young inactive girls

Public title
The effect of Menthapiperita extract on salivary α_amylase and cortisol to one bout high resistance exercise

Purpose
Basic scienece

Inclusion/Exclusion criteria
Inclusion criteria:
Yang and inactive
Exclusion criteria:
patient and athlete

Age
From **19 years** old to **23 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant
- Data analyser

Sample size
Target sample size: **32**
Actual sample size reached: **32**

Randomization (investigator's opinion)
Not randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description
The group that received the placebo was unaware of the difference between the material received and the other groups, and the analyzing group only received and analyzed the numbers of each group

Placebo
Used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee of Islamic Azad University Gachsaran branch
Street address
Islamic Azad University Gachsaran branch, Gachsaran, Kohgiluyeh and Boyer-Ahmad Province
City
Gachsaran
Province
Kohgilouyeh-va-Boyrahmad
Postal code
7581864533

Approval date
2020-09-15, 1399/06/25

Ethics committee reference number
IR.IAUG.REC.1399.010

Health conditions studied

1

Description of health condition studied
Pain and salivary cortisol

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Pain and salivary cortisol

Timepoint
After 7 days of receiving the substance, the amount of pain and salivary cortisol were measured 24 and 48 hours after resistance training.

Method of measurement
Salivary cortisol and alpha-amylase were measured by ELISA kits and an ELISAR device, and pain intensity was measured by the Tallag Mental Pain and Analog Visual Pain Scale (VAS).

Secondary outcomes

empty

Intervention groups

1

Description
Experimental group A: menthapiperita extract capsule with a dose of 600 mg plus resistance activity n : 8 Experimental group B: menthapiperita extract capsule with a dose of 400 mg plus resistance activity n : 8 Experimental group C: menthapiperita extract capsule with a dose 200 mg plus resistance activity n : 8 Control group D: taking placebo capsule (starch powder) n : 8

Category
Lifestyle

Recruitment centers

1

Recruitment center
Name of recruitment center

Islamic Azad University Central Tehran branch Gym

Full name of responsible person
Mohammad Ali Azarbayjani

Street address
Department of Sports Physiology, Islamic Azad University Central Tehran branch, Tehran

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Sponsors / Funding sources

1

Sponsor

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Islamic Azad University

Full name of responsible person
Mohammad Ali Azarbayjani

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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
Islamic Azad University

Proportion provided by this source
100

Public or private sector
Private

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
Islamic Azad University

Full name of responsible person
Mohammad Ali Azarbayjani

Position
Professor

Latest degree
Ph.D.

Other areas of specialty/work
Physiology

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available
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
Yes - There is a plan to make this available
Clinical Study Report
Yes - There is a plan to make this available
Analytic Code
Yes - There is a plan to make this available
Data Dictionary
Yes - There is a plan to make this available
Title and more details about the data/document
The data of the dependent research variables can be published as code and without name of the participants.
When the data will become available and for how long
They will be available after article submission.
To whom data/document is available
Researchers
Under which criteria data/document could be used
Data is available for re-analysis by researchers
From where data/document is obtainable
Corresponding author
What processes are involved for a request to access data/document
Send the request by email to the corresponding author.
Comments