Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

The effect of caffeine supplementation on anaerobic power, some oxidative stress indices, and appetite in female athletes after a single bout of wingate test.

Protocol summary

Summary

The purpose of this study is to investigate the effect of caffeine supplementation on anaerobic power, oxidative stress, and appetite in female athletes after Wingate test. 24 female athletes will ingest caffeine (5mg/kg-1) or placebo 1 hour prior to a Wingate test in a randomized double-blind crossover design. The blood concentration of blood lactate, MDA and TAC will be determined. Visual analogue scales will be used to monitor each subject's appetite sensation. During the initial visit, height, weight, Vo2max, WBC, and Hematocrit will be measured. Subjects will perform a Wingate test in 2 occasions, at the same time of the day on different days. Participants will instruct to abstain from vigorous physical activity for 24 hours prior to test. After 8 hours fasting, on their arrival at the laboratory, each subject sits for 15 minutes before blood sampling. Participants will eat a breakfast (150 Kcal). Fifteen minutes after breakfast, they will ingest capsules (5 mg caffeine /□kg□^(-1) or placebo) with 250ml water. After an hour, the subjects will warm up and perform the test. Five minutes after the blood sampling (5 ml), VAS will be completed immediately and 30, 60, and 90 min after the Wingate test. After 8 days washout period the same procedure will be done in a cross over manner.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138806301197N3**
Registration date: **2010-09-13, 1389/06/22**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2010-09-13, 1389/06/22

Registrant information

Name
Reza Mahdavi
Name of organization / entity
Faculty of Health & Nutrition, Tabriz UniV. of Medical Sciences
Country
Iran (Islamic Republic of)
Phone
+98 41 1335 7584
Email address
mahdavir@tbzmed.ac.ir

Recruitment status

Recruitment complete

Funding source

Nutritional Research center

Expected recruitment start date

2010-10-23, 1389/08/01

Expected recruitment end date

2010-12-22, 1389/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of caffeine supplementation on anaerobic power, some oxidative stress indices, and appetite in female athletes after a single bout of wingate test.

Public title

The effect of caffeine supplementation on anaerobic power, some oxidative stress indices, and appetite in female athletes after a single bout of wingate test.

Purpose
Health service research
Inclusion/Exclusion criteria
Inclusion criteria: 18-30 years old female basketballist, willing to participate Exclusion criteria: consumption of any dietary supplements including creatine, protein, aminoacids, vitamins and minerals
Age
From **18 years** old to **30 years** old
Gender
Female

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
Crossover
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
The Research Ethics Committee of Tabriz University of Medical Sciences
Street address
Tabriz University of Medical Sciences
City
Tabriz
Postal code
Approval date
2010-08-09, 1389/05/18
Ethics committee reference number
8921

Health conditions studied

1

Description of health condition studied
athletes
ICD-10 code
Z10.3
ICD-10 code description
Routine general health check-up of sports teams

Primary outcomes

1

Description
oxidative stress indices (MDA & TAC)
Timepoint
5 minutes after finishing wingate test
Method of measurement
blood sampling

2

Description
appetite
Timepoint
immediately and 30, 60, and 90 min after the wingate test
Method of measurement
appetite questionnaire (VAS)

3

Description
anaerobic power
Timepoint
30 second wingate test
Method of measurement
monark wingate ergometer

Secondary outcomes

empty

Intervention groups

1

Description
caffeine supplementation capsule, 5mg/kg-1, one session
Category
Other

2

Description
Placebo, one capsule, one session
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Nutritional Research Center, Tabriz University of Medical Sciences
Full name of responsible person
Dr. Raza Mahdavi
Street address
Tabriz University of Medical Sciences

City
Tabriz

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Nutritional Research center, Tabriz University of Medical Sciences
Full name of responsible person
Dr. Raza Mahdavi
Street address
Tabriz University of Medical Sciences
City
Tabriz
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Nutritional Research center, Tabriz 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
Nutritional Research center, Tabriz University of Medical Sciences
Full name of responsible person
Dr. Raza Mahdavi
Position
Ph.D of Nutrition
Other areas of specialty/work
Street address
Tabriz University of Medical Sciences
City
Tabriz
Postal code
Phone
+98 41 1334 1113
Fax
Email
mahdavir@tbzmed.ac.ir
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Tabriz University of Medical Sciences
Full name of responsible person
Sevana Daneghian
Position
MS student of Nutrition
Other areas of specialty/work
Street address
Tabriz University of Medical Sciences
City
Tabriz
Postal code
Phone
+98 41 1334 1113
Fax
Email
sevana_d@yahoo.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Full name of responsible person
Sevana Daneghian
Position
MS student of Nutrition
Other areas of specialty/work
Street address
Tabriz University of Medical Sciences
City
Tabriz
Postal code
Phone
+98 41 1334 1113
Fax
Email
sevana_d@yahoo.com
Web page address

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