

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

The effects of high intensity and volume of resistance exercise on post exercise hypotension (PEH) in healthy young men

Protocol summary

Study aim

the purpose of present study is to compare the responses of hemodynamic variables to two different resistance exercise with high volume and high intensity.

Design

Clinical trial without control group, the crossover, not-randomized on 15 healthy individuals will be used using SPSS software to analyze the data

Settings and conduct

Two sessions of resistance exercise of high intensity 90% and high volume 60% will be performed using bodybuilding machines in the hall of Shahid Beheshti University

Participants/Inclusion and exclusion criteria

Among volunteers, 15 healthy men will be selected to participate in this study. Subjects should have a history of performing recreational resistance training without regular exercise. Subjects will participate in this research voluntarily through announcements and will complete and sign the health and medical past questionnaire as well as the consent form to participate in the test before participating in the research. None of the subjects should have a history of medication or blood clotting-related illnesses, as well as a history of smoking, anabolic steroid use, or knee joint damage.

Intervention groups

Effect of two types of high-intensity and high-volume exercise on post exercise hypotension, with cross-over method two groups of people will perform two types of exercise.

Main outcome variables

post exercise hypotension

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20201213049696N1**

Registration date: **2021-04-14, 1400/01/25**

Registration timing: **prospective**

Last update: **2021-04-14, 1400/01/25**

Update count: **0**

Registration date

2021-04-14, 1400/01/25

Registrant information

Name

Nafiseh Farjadi kia

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 2248 8265

Email address

nafisefarjadi@ymail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-05-24, 1400/03/03

Expected recruitment end date

2021-06-24, 1400/04/03

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of high intensity and volume of resistance exercise on post exercise hypotension (PEH) in healthy young men

Public title

The effects of high intensity and volume of resistance

exercise on post exercise hypotension (PEH) in healthy young men

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

All people who have a history of resistance training without regular training

Exclusion criteria:

History of drug use Cigarette smoking history Taking anabolic steroids Knee joint injury Blood diseases associated with blood clotting

Age

From **20 years** old to **30 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **15**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Institute of Physical Education and Sports Sciences

Street address

No. 3, 5th Alley, Miremad Street, Motahhari Street, Tehran, Iran.

City

Tehran

Province

Tehran

Postal code

1583718967

Approval date

2021-01-14, 1399/10/25

Ethics committee reference number

IR.SSRC.REC.1399.125

Health conditions studied

1

Description of health condition studied

blood pressure

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Percentage of people with high blood pressure

Timepoint

Heart rate and blood pressure are measured every 15 minutes before, immediately after and after exercise for 60 minutes during recovery.

Method of measurement

Holter monitor barometer

2

Description

Percentage of people with high heart rate

Timepoint

Heart rate and blood pressure are measured every 15 minutes before, immediately after and after exercise for 60 minutes during recovery.

Method of measurement

Holter monitor barometer

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: The first intervention group, after entering the gym, first sits for 20 minutes and resting blood pressure is taken by the recipient test and high-volume resistance exercise with a weight equal to 60% 1-RM for each movement 4 consecutive sets of 13 to 15 repetitions , Will take one minute break intervals between movements and sets. Their movements and sequence are Barbell squat from behind, Leg press, Lying leg curls, Leg extension and Standing calf raises. Immediately after high-volume resistance exercise and at 15, 30, 45 and 60 minutes during recovery, heart rate and blood pressure will be measured.

Category

Prevention

2

Description

Intervention group 2: Intervention group: The second intervention group first sits for 20 minutes after entering the gym and resting blood pressure is taken by the recipient test and high intensity resistance exercise with a weight equal to 90% 1-RM subject for each movement

4 consecutive sets of 3 to 5 Repetitions and rest intervals of 2 minutes between movements and sets will be performed. Their movements and sequence are Barbell squat from behind, Leg press, Lying leg curls, Leg extension and Standing calf raises. Immediately after high-volume resistance exercise and at 15, 30, 45 and 60 minutes during recovery, heart rate and blood pressure will be measured.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Shahid Beheshti university

Full name of responsible person

Nafiseh Farjadi Kia

Street address

Shahriari Square, Daneshjou Boulevard, Shahid Chamran Highway, Tehran, Iran

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Nafise Farjadi Kia

Street address

Shahriari Square, Daneshjou Boulevard, Shahid Chamran Highway, Tehran, Iran

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Tehran

Postal code

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Phone

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Email

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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

Shahid Beheshti University of Medical Sciences

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

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Nafiseh Farjadi Kia

Position

Student

Latest degree

Master

Other areas of specialty/work

Physiology

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Person responsible for scientific inquiries

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Full name of responsible person

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Other areas of specialty/work

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Person responsible for updating data

Contact

Name of organization / entity

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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

No - There is not 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

No - There is not a plan to make this available

Data Dictionary

Not applicable

Title and more details about the data/document

Only part of the data, such as information about the main outcome or the like, can be shared.

When the data will become available and for how long

Start access from the time it is approved in the journal

To whom data/document is available

Anyone researching cardiovascular disease can access it

Under which criteria data/document could be used

Refer to Shahid Beheshti University.

From where data/document is obtainable

Send email to this mailing address.

nafisefarjadi@ymail.com

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

Documents will be available as soon as possible

Comments