Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Comparison of immediate and long-term effects of eccentric exercise with concentric exercise on reducing blood pressure in people with hypertension controlled with medication

Protocol summary

Summary

The aim of this study is to evaluate the effects of eccentric exercise on blood pressure in people with high blood pressure controlled by medication. This study is a single-blind, randomized. Inclusion criteria: those with systolic blood pressure is between 140 to 179 mm Hg and diastolic blood pressure between 90 and 109 mm Hg, the blood pressure is controlled by medication. All participants must have an inactive lifestyle and don t have a regular exercise program in the past 6 months. Exclusion criteria: smokers, alcoholic and diabetic patient are excluded. those patient who have respiratory , kidney and heart disease are excluded. The sample size n = 20 is considered. Our involvement is walking in the negative slope of 10 percent of the treadmill for 30 minutes and three times a week for 4 weeks. Outcome of the study is the change in the blood pressure in the intervention persons.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014061618108N1**
Registration date: **2015-01-22, 1393/11/02**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2015-01-22, 1393/11/02

Registrant information

Name

Hamideh Mashhadi Hashemi

Name of organization / entity

Semnan Univercity of Medical Scince

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Ṡemnan University of Medical Sciences

Expected recruitment start date

2014-10-07, 1393/07/15

Expected recruitment end date

2014-10-22, 1393/07/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of immediate and long-term effects of eccentric exercise with concentric exercise on reducing blood pressure in people with hypertension controlled with medication

Public title

Effects of eccentric exercise on blood pressure in patients with hypertension

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Persons 20 to 70 years with systolic blood pressure between 140 and 179 mmHg and diastolic blood pressure between 90 and 109 mmHg controlled with medication; menopausal women
Exclusion criteria: Very thin and very obese individuals ;

smokers ; alcoholic persons ; diabetes ; persons who have respiratory ; kidney ; heart disease are excluded.

Age
From **20 years** old to **70 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **20**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Semnan University of Medical Sciences

Street address
Rehabilitation Faculty, Semnan Univercity of Medical Science, 5th K.m of Damghan Rd, Semnan

City
Semnan

Postal code

Approval date
2014-12-16, 1393/09/25

Ethics committee reference number
93/538814

Health conditions studied

1

Description of health condition studied
hypertension

ICD-10 code
I10-I15

ICD-10 code description
Hypertensive diseases

Primary outcomes

1

Description
blood pressure

Timepoint
30 minute after training

Method of measurement
sphygmomanometer

Secondary outcomes

empty

Intervention groups

1

Description
The intervention group participants walk 30 minutes on the treadmill with an incline of 10 percent of their chosen walking speed 3 times a week for 4weeks.

Category
Rehabilitation

2

Description
Another group participants walk 30 minutes with neutralize gradient and the speed their choice 3 times a week for 4 weeks.

Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Cardiology clinic of Kosar hospital in Semnan University of Medical Sciences

Full name of responsible person

Street address
Basij Blv.

City
semnan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Semnan University of Medical Sciences

Full name of responsible person
Doctor Ali Rashidipur

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Rehabilitation Faculty, Semnan Univercity of MedicalScience, 5th K.m of Damghan Rd, Semnan

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Semnan

Grant name

Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Semnan 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

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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