

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 Jul 2026

The efficacy of moderate aerobic exercise training on brachial artery flow-mediated dilatation in patients with coronary artery bypass graft surgery

Protocol summary

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Summary

The aim of this study is to evaluate the effects of exercise training on patients with history of coronary artery bypass grafted surgery. Men aged 40-65 years who had this operation during past 3-12 months involved in study. Patients who had congestive heart failure (ejection fraction less than 40%); valvular heart disease; chronic renal disease and hepatic failure excluded from this study. Of 40 patients chosen to study, 20 men will be randomized to perform 6 weeks of exercise training using treadmill. Before and after completion of this period, flow-mediated dilation of brachial artery will be assessed and then would be compared with control group results.

Recruitment status

Recruitment complete

Funding source

Cardiovascular Research Center of Ahvaz Jundishapor University of Medical Sciences

Expected recruitment start date

2012-05-21, 1391/03/01

Expected recruitment end date

2012-08-22, 1391/06/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201204249555N1**

Registration date: **2012-05-08, 1391/02/19**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2012-05-08, 1391/02/19

Registrant information

Name

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Name of organization / entity

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Scientific title

The efficacy of moderate aerobic exercise training on brachial artery flow-mediated dilatation in patients with coronary artery bypass graft surgery

Public title

Exercise training in post-CABG patients

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria: post-CABG men; age 40 to 65 years; Exclusion criteria: CABG in last 3 months; angioplasty in last 3 months; myocardial infarction in last 3 months; valvular heart disease; left ventricular ejection fraction < 40%; chronic obstructive pulmonary disease; chronic renal failure; liver failure; Patients who previously had moderate aerobic exercise as their routine physical activities.

Age

From **40 years** old to **65 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 40

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ahvaz Jundishapor University of Medical Sciences

Street address

Golestan street

City

Ahvaz

Postal code

6135733118

Approval date

2011-06-15, 1390/03/25

Ethics committee reference number

Eth- 225

Health conditions studied**1****Description of health condition studied**

effects of exercise training on endothelium-dependent dilation in patients with CABG history

ICD-10 code

Z50.0

ICD-10 code description

Cardiac Rehabilitation

Primary outcomes**1****Description**

Flow mediated dilation of Brachial artery

Timepoint

before and after exercise training period

Method of measurement

Flow mediated dilation as an index of endothelium-

dependent vasodilatation intended as percentage of increase in brachial artery diameter after deflating the cuff compared to its original size

Secondary outcomes**1****Description**

Brachial artery internal diameter

Timepoint

before and after exercise training period

Method of measurement

brachial artery internal diameter measured by doppler sonography

Intervention groups**1****Description**

of all 40 patients intending in study, 20 cases will attend supervised aerobic moderate treadmill walking sessions(60-80% of the maximal heart rate predicted for the patient's age), three times a week. The sessions will continue for 6 weeks for each case. Before treadmill walking, 5 minutes of warm up including stretching exercises will perform for each subject. The treadmill walking starts using the Harbor treadmill protocol as follow: 3 minutes of relatively slow "warm-up" speed, followed by gradual increase in constant amount (1 to 4 percent per minute) for up to 10 minutes depending on the person's fitness. The test will stop prior to achievement of the target heart rate if the patient develops significant chest discomfort, shortness of breath, dizziness, unsteady gait, or if the electrocardiogram shows alarming ischemic changes or serious arrhythmia's. All Patients (cases and controls) will asked to maintain their normal diet and other lifestyle behaviors, as well as their medications. Assessments will then repeat for all 40 subjects, and crossover will occur with final assessments made 6 weeks after entry.

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

Cardiovascular Research Center of Ahvaz Jundishapor University of Medical Sciences

Full name of responsible person

Farzane Ahmadi M.D. cardiologist , master of echocardiography

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Golestan street

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Cardiovascular Research Center of Ahvaz Jundishapor
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Full name of responsible person

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Grant name

U-90112

Grant code / Reference number

U-90112

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Cardiovascular Research Center of Ahvaz Jundishapor
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**

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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