Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of resistance exercise on lipid profile in coronary artery disease patients:a clinical randomized trial

Protocol summary

Summary

The present study investigated the effect of resistance exercise on lipid profil in coronary artery disease patients.inclusion criteria included coronary arteries' involvement diagnosed by angiography ; two months after myocardial infarction (MI);10 days after coronary artery angioplasty; three months after coronary by- pass surgery. Exclusion criteria were playing an athletic sport; being absent for more than three sequential sessions in the rehabilitation program; incidence of severe health problems. amongst patients referred to cardiac rehabilitation unit of Isfahan Cardiovascular Research Center, forty eligible patients selected and assigned randomly to either intervention or control groups .The intervention period last 8 weeks included two exercise sessions 45 -60 min per week.In the intervention group, in addition to aerobic exercise, resistance exercise was performed. Study subjects in the control group participated only in aerobic exercise.Blood Fasting sample was taken for measurement of lipid profile at before, after and 4 weeks after the end of the intervention.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014121012551N2**
Registration date: **2015-01-02, 1393/10/12**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2015-01-02, 1393/10/12

Registrant information

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Name of organization / entity

Isfahan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Isfahan University of Medical Sciences

Expected recruitment start date

2013-04-08, 1392/01/19

Expected recruitment end date

2014-02-18, 1392/11/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of resistance exercise on lipid profile in coronary artery disease patients:a clinical randomized trial

Public title

The effect of resistance exercise on lipid profile

Purpose

Prevention

Inclusion/Exclusion criteria

inclusion criteria : Having coronary arteries' involvement diagnosed by angiography ; two months after myocardial infarction (MI);10 days after coronary artery angioplasty; three months after coronary by- pass surgery. Exclusion criteria : Playing an athletic sport; being absent for more than three sequential sessions in the rehabilitation

program; incidence of severe health problems

Age
No age limit

Gender
Both

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
Isfahan University of Medical Sciences

Street address
Isfahan University of Medical Sciences, Hezar Jerib Avenuse, Isfahan

City
Isfahan

Postal code

Approval date
2013-03-02, 1391/12/12

Ethics committee reference number
392058

Health conditions studied

1

Description of health condition studied
coronary artery disease

ICD-10 code
I25.1

ICD-10 code description
Atherosclerotic heart disease

Primary outcomes

1

Description
Lipid Profile

Timepoint
Before, After and 4 weeks after the end of the intervention

Method of measurement
Mg. Laboratory test

Secondary outcomes

1

Description
Blood Sugar

Timepoint
Before, After and 4 weeks after the end of the intervention

Method of measurement
Mg,Laboratory test

Intervention groups

1

Description
Intervention was conducted in the form of 45-–60 minute sessions, twice a week[12] (8-–12 AM) for eight 8 weeks in the rehabilitation unit of the cardiovascular research center.In the study group, in addition to aerobic exercises, resistance exercise was also administrated performed. In the first session, to determine the weight, the target weight was determined based on the heaviest weight each subject could lift for 12-–15 times in the expected range of motion. In all sessions, there were warm warm-up, exercise, and cool cool-down stages. Warm Warm-up and cool cool-down stages were conducted by with stretching exercises for 10-–15 min. The exercise included resistance exercise that was administrated performed for 20-–25 min, in addition to aerobic exercise. Resistance exercise was administrated performed by use of light weights in the range of motion of the elbow, shoulder, and knee joints. The number of repetitions in the range of motion was initially considered 10, and then, was gradually increased to 15. After the end of each set with 15 repetitions, the weight was increased by 3-–5% . In the second session, each subject held his/ her target weight in hand and administrated performed one set of side lateral, front, and overhead raise, overhead triceps extensions, alternating biceps curls and shoulder press, and weight squad with 10 repetitions. In the sessions 3-–7, a set of the above – -mentioned exercises were was repeated for 11 - 15 repetitions, respectively. In the 8th session, both the number of the sets and the weight were increased (by 3-–5% of the previous weight) in such a way that two sets of the above – -mentioned exercises were administrated performed by with 10 repetitions, with a rest period of one min between the sets. In sessions 9-–13, two sets of the above resistance exercises were administrated performed with 11 and 15 repetitions in each session, respectively, and a one minute rest period between the sets. In session 14, the number of the sets and the weight were increased again, . and in sessions 15-–16,

three sets with repetitions of 11-–12 times were administrate dperformed.

Category

Rehabilitation

2

Description

Control group was conducted in the form of 45-–60 minute sessions, twice a week (8-–12 AM) for eight 8 weeks in the rehabilitation unit of the cardiovascular research center. Subjects in the control group just attended in a routine exercise session of in the rehabilitation unit in of the cardiovascular research center, which included running or treadmill with an average speed of 4four km/hr and cycling on a stationary bicycle for 15 min

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Isfahan Cardiovascular Research Institute

Full name of responsible person

Zahra Salehi

Street address

City

Isfahan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Isfahan University of Medical Sciences

Full name of responsible person

Peyman Adibi

Street address

Isfahan University of Medical Sciences, Hezar Jerib Avenuse , Isfahan

City

Isfahan

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Isfahan 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

Isfahan University of Medical Sciences

Full name of responsible person

Zahra Salehi

Position

MS Student

Other areas of specialty/work

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Fax

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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