

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

05 Jun 2026

### Effect of cardiac rehabilitation on level of endostatin, SDF1 and PDGF in patients with atherosclerosis after CABG

#### Protocol summary

##### Study aim

Effect of cardiac rehabilitation on level of endostatin, SDF1 and PDGF in patients with atherosclerosis after CABG

##### Design

The clinical task consisted of two groups of practice and control in a simple random method with factorial group

##### Settings and conduct

Exercises were performed in rehabilitation ward of Mashhad Javad Alaemeh Cardiovascular Specialist Hospital in two simple randomized, non-blinded, aerobic and control groups.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and had no hypertension, diabetes, and chest pain. Exclusion criteria: Patients with hypertension, diabetes, chest pain.

##### Intervention groups

Intervention group: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and received resistance aerobic combined exercise intervention. Control group: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and did not receive resistance aerobic combined exercise intervention.

##### Main outcome variables

Plasma levels of endostatin, SDF1 and PDGF

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20191228045916N1**

Registration date: **2020-02-04, 1398/11/15**

Registration timing: **retrospective**

Last update: **2020-02-04, 1398/11/15**

Update count: **0**

##### Registration date

2020-02-04, 1398/11/15

##### Registrant information

###### Name

Hadi Seyedi

###### Name of organization / entity

###### Country

Iran (Islamic Republic of)

###### Phone

+98 35 1763 0790

###### Email address

h.seyedi@iau-neyshabur.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2019-09-07, 1398/06/16

##### Expected recruitment end date

2019-10-12, 1398/07/20

##### Actual recruitment start date

2019-09-07, 1398/06/16

##### Actual recruitment end date

2019-10-12, 1398/07/20

##### Trial completion date

2019-10-12, 1398/07/20

##### Scientific title

Effect of cardiac rehabilitation on level of endostatin, SDF1 and PDGF in patients with atherosclerosis after CABG

##### Public title

Effect of cardiac rehabilitation on level of endostatin, SDF1 and PDGF in patients with atherosclerosis after CABG

##### Purpose

Supportive

##### Inclusion/Exclusion criteria

**Inclusion criteria:**

Being a man Aged 40 to 60 years Performing a coronary artery bypass graft in the past two months

**Exclusion criteria:**

Chest pain Hypertension disorder Diabetes

**Age**

From **40 years** old to **60 years** old

**Gender**

Male

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **30**

Actual sample size reached: **24**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

The simple and easy design method is used with the design of the numeric table.

**Blinding (investigator's opinion)**

Not blinded

**Blinding description****Placebo**

Not used

**Assignment**

Parallel

**Other design features**

Use of Aerobic-Resistance Combined Exercise Method

**Secondary Ids**

empty

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

Ethics Committee of Neyshabur University

**Street address**

Khorasan Razavi Province, Neyshabur, Abbey Road

**City**

neyshabur

**Province**

Razavi Khorasan

**Postal code**

9319975853

**Approval date**

2019-09-05, 1398/06/14

**Ethics committee reference number**

IR.IAU.NEYSHABUR.REC.1398.018

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

Patients aged 60-40 years who underwent coronary

artery bypass graft surgery

**ICD-10 code****ICD-10 code description****Primary outcomes****1****Description**

endostatin

**Timepoint**

Blood sampling in the pre-test phase 24 hours before the first training session and 48 hours after the last training session

**Method of measurement**

Blood sampling from brachial vein and testing by Real-Time-PCR

**2****Description**

SDF1

**Timepoint**

Blood sampling in the pre-test phase 24 hours before the first training session and 48 hours after the last training session

**Method of measurement**

Blood sampling from brachial vein and testing by Real-Time-PCR

**3****Description**

PDGF

**Timepoint**

Blood sampling in the pre-test phase 24 hours before the first training session and 48 hours after the last training session

**Method of measurement**

Blood sampling from brachial vein and testing by Real-Time-PCR

**Secondary outcomes**

empty

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

Intervention group: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and received aerobic-resistance combined exercise intervention.

**Category**

Rehabilitation

**2****Description**

Control group: Control group: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and

did not receive aerobic resistance training.

**Category**

Rehabilitation

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Mashhad Javad Alameh Hospital

**Full name of responsible person**

Dr. Emad Alavi Nia

**Street address**

Vakilabad Boulevard, Conservatory Road

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mashhad

**Province**

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**Postal code**

9178613111

**Phone**

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**Email**

info@jhosp.org

**Web page address**

**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Islamic Azad University

**Full name of responsible person**

rambod khajee

**Street address**

Khorasan Razavi Province, Neyshabur, Abbey Road

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neyshabur

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**Postal code**

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**Fax**

**Email**

neyshabur@iau-neyshabur.ac.ir

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

Islamic Azad University

**Proportion provided by this source**

1

**Public or private sector**

Private

**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**

Islamic Azad University

**Full name of responsible person**

seyed hadi seyedi

**Position**

coach

**Latest degree**

Master

**Other areas of specialty/work**

Sport Medicine

**Street address**

Adel Khomeini Street, Adel Khomeini 67, No. 33

**City**

mashhad

**Province**

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**Postal code**

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**Phone**

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**Email**

seyedi9@gmail.com

**Person responsible for scientific inquiries**

**Contact**

**Name of organization / entity**

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**Full name of responsible person**

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coach

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## Person responsible for updating data

### Contact

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## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**

Undecided - It is not yet known if there will be a plan to

make this available

**Study Protocol**

Yes - There is a plan to make this available

**Statistical Analysis Plan**

Yes - There is a plan to make this available

**Informed Consent Form**

Yes - There is a plan to make this available

**Clinical Study Report**

Not applicable

**Analytic Code**

Not applicable

**Data Dictionary**

Not applicable

**Title and more details about the data/document**

Only part of the data related to the original outcome is shared

**When the data will become available and for how long**

1 year after publishing the results

**To whom data/document is available**

Researchers working in academia and people in the industry

**Under which criteria data/document could be used**

Certain conditions are not considered

**From where data/document is obtainable**

Communication with the responsible person

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

Via email address

**Comments**