

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effects of Preoperative Aerobic training for Improving Postoperative Functional Mobility in Coronary Artery Bypass Graft Patients

#### Protocol summary

##### Study aim

To evaluate effects of preoperative aerobic training for improving postoperative functional mobility in coronary artery bypass graft patients.

##### Design

Non Blinded non randomized Quasi experimental design.

##### Settings and conduct

Faisalabad Institute of Cardiology Faisalabad. After complete evaluation, informed consent will be taken from patients who include in the study. Sample size of 38 patients will be allocated in two groups with one receive aerobic training and other group will receive conventional treatment. the outcomes measure will be evaluating at baseline, 3rd week preoperative and postoperative before discharge.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria:40-60 years of age. patients with double and triple Coronary artery bypass graft. patients with left ventricular ejection fraction > 50%. Exclusion criteria: patients with congestive heart failure. patients with pacemaker dependents. patients with neurological deficit.

##### Intervention groups

Treatment will be provided for 4 days in a week for 3 weeks for both groups. Group 1 will perform the Aerobic exercises.Group 2 will perform the breathing exercises.

##### Main outcome variables

Time Up and Go Test, Canadian Cardiovascular Society Grading, Duration of Oxygen Therapy

#### General information

##### Reason for update

##### Acronym

CABG

##### IRCT registration information

IRCT registration number: **IRCT20221004056085N1**

Registration date: **2022-10-07, 1401/07/15**

Registration timing: **retrospective**

Last update: **2022-10-07, 1401/07/15**

Update count: **0**

##### Registration date

2022-10-07, 1401/07/15

##### Registrant information

###### Name

Usama Munir

###### Name of organization / entity

Government College University Faisalabad

###### Country

Pakistan

###### Phone

+92 332 6621129

###### Email address

usamamunir7209@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-05-20, 1401/02/30

##### Expected recruitment end date

2022-09-20, 1401/06/29

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Effects of Preoperative Aerobic training for Improving Postoperative Functional Mobility in Coronary Artery Bypass Graft Patients

##### Public title

Effects of Aerobic training for Improving Functional Mobility in Coronary Artery Bypass Graft Patients

##### Purpose

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Age 40-60 years Patients awaiting coronary artery bypass graft patients with stable angina Patients with double and triple coronary artery disease Patients with left ventricular ejection fraction >50% Patients who have diabetes Patients who are smokers Patients who have hypertension

**Exclusion criteria:**

Patients with congestive heart failure Patients having dysrhythmias and pacemaker dependent Patients with neurological deficit( stroke, epilepsy, Alzheimer disease) Patients with renal dysfunction require dialysis Concomitant valve disease Patients with pulmonary complications

**Age**

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

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **38**

More than 1 sample in each individual

Number of samples in each individual: **19**

Patients will be non randomly assigned into two groups. Each group will comprise of 19 patients

**Randomization (investigator's opinion)**

Not 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**

Name of ethics committee: Ethical committee of Government College University Faisalabad

**Street address**

Kotwali Rd, Gurunankpura, Faisalabad, Punjab 38000

**City**

Faisalabad

**Postal code**

38000

**Approval date**

2022-04-17, 1401/01/28

**Ethics committee reference number****Health conditions studied****1****Description of health condition studied**

Coronary artery bypass graft is a surgical operation in which blocked arteries are partially or completely bypass using grafts taken from other arteries or veins. a therapeutic procedure used to treat coronary artery disease.

**ICD-10 code**

T82.2

**ICD-10 code description**

Mechanical complication of coronary artery bypass graft and biological heart valve graft

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

Time up and go test was used to measure the functional mobility of the patients. record the readings in seconds in time up and go test.

**Timepoint**

3 time-points including Baseline, 3rd week preoperative, postoperative before discharge

**Method of measurement**

Time up and go test will be utilized to access functional mobility

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

Canadian cardiovascular society grading is a grading scale used to grade the angina of patients. There are 4 grade of it. Grade 1 mean ordinary physical activity does not cause angina. Grade 2 mean slight limitation of ordinary physical activity. Grade 3 mean marked limitation of ordinary physical activity. Grade 4 mean inability to carry on any physical activity.

**Timepoint**

3 time-points including Baseline, 3rd week preoperative, postoperative before discharge

**Method of measurement**

CCS will be used to grading the angina of patients.

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

Aerobic training group. Warm up activity include range of motion exercises of upper and lower limb (8-12 repetitions) one set in a day. Aerobic exercises in the form of walking on flat surface in corridor, light to moderate pace(10-15 min).Stepping (8-12 repetitions)

once a day , 4 days in a week for 3 weeks.Cool down activity include static stretching(20-60 sec hold) exercise of upper and lower limb one set in a day. As in conventional group treatment.

### Category

Rehabilitation

## 2

### Description

Conventional group. Early mobilization( bed mobility, transfer) according to the protocol. Deep breathing exercises include Diaphragmatic and Pulse lip breathing.In this exercise breath in deeply and slowly through your nose, expanding your lower rib cage and letting your abdomen move forward,hold for a count 3-5. Breath out slowly and completely through your pulsed lips, once a day, 4 days in a week for 3 weeks. Huff and cough technique once a day, 4 days in a week for 3 weeks.

### Category

Rehabilitation

## Recruitment centers

## 1

### Recruitment center

#### Name of recruitment center

Faisalabad Institute of cardiology Faisalabad

#### Full name of responsible person

Dr. Sajid Ahmad

#### Street address

New Chenab Club, Sargodha Rd, Civil lines,  
Faisalabad, Punjab 38850

#### City

Faisalabad

#### Postal code

38850

#### Phone

+92 41 9201529

#### Email

ms.ic.fsd@punjab.gov.pk

## Sponsors / Funding sources

## 1

### Sponsor

#### Name of organization / entity

Government College University Faisalabad

#### Full name of responsible person

Dr. Komal Tariq; PT

#### Street address

Kotwali Rd, Gurunankpura, Faisalabad, Punjab 38000

#### City

Faisalabad

#### Postal code

38000

#### Phone

+92 41 9200886

#### Email

info@gcuf.edu.pk

#### Web page address

https://www.gcuf.edu.pk/

#### Grant name

#### Grant code / Reference number

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

No

#### Title of funding source

Self financed

#### Proportion provided by this source

100

#### 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

Other

## Person responsible for general inquiries

### Contact

#### Name of organization / entity

Government College University Faisalabad

#### Full name of responsible person

Usama Munir

#### Position

Student

#### Latest degree

Bachelor

#### Other areas of specialty/work

Physiotherapy

#### Street address

Street no 5, Awami Colony, Milad Road, Faisalabad

#### City

Faisalabad

#### Province

Punjab

#### Postal code

38000

#### Phone

+92 332 6621129

#### Email

usamamunir7209@gmail.com

## Person responsible for scientific inquiries

### Contact

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**Person responsible for updating data****Contact****Name of organization / entity**

Government college university Faisalabad

**Full name of responsible person**

Usama Munir

**Position**

student

**Latest degree**

Bachelor

**Other areas of specialty/work**

Physiotherapy

**Street address**

Street no 5, Awami colony, Milad road, Faisalabad

**City****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**

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

**Statistical Analysis Plan**

Not applicable

**Informed Consent Form**

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

**Clinical Study Report**

Not applicable

**Analytic Code**

Not applicable

**Data Dictionary**

Not applicable