

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effects of arm crank exercises on Dyspnea, Left Ventricular Ejection Fraction and exercise capacity in patients with angioplasty.

#### Protocol summary

##### Study aim

Primary Objective: To evaluate the effects of arm crank exercises on Dyspnea, Left Ventricular Ejection Fraction and exercise capacity in patients with angioplasty.  
Secondary Objective: To evaluate the effects of arm crank exercises on hemodynamic parameters (heart rate and blood pressure)

##### Design

Randomized Controlled Trial

##### Settings and conduct

Cheema Hospital Gujranwala

##### Participants/Inclusion and exclusion criteria

Inclusion Criteria:  Patients having planned angioplasty  
 Both male and female patients  Post extubation   
Signed written informed consent  Age 40-60years(15)  
Exclusion Criteria:  PCI to nonnative vessel   
Implantation of >3 stents  Evidence of thrombus   
Presence of infection  Ejection fraction <30%(16)

##### Intervention groups

Group A: Patients will be treated by standard angioplasty medical protocol. Group B: Patients will be treated by using arm ergometer.

##### Main outcome variables

Dyspnea Left Ventricular Ejection Fraction Exercise capacity Hemodynamic parameters (heart rate and blood pressure)

#### General information

##### Reason for update

##### Acronym

Effects of arm crank exercises in patients with angioplasty.

##### IRCT registration information

IRCT registration number: **IRCT20191117045462N15**

Registration date: **2024-07-19, 1403/04/29**

Registration timing: **prospective**

Last update: **2024-07-19, 1403/04/29**

Update count: **0**

##### Registration date

2024-07-19, 1403/04/29

##### Registrant information

###### Name

Wajeeha Zia

###### Name of organization / entity

Riphah International University

###### Country

Pakistan

###### Phone

+92 42 35126110

###### Email address

wajeeha\_z@yahoo.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2024-08-15, 1403/05/25

##### Expected recruitment end date

2024-12-15, 1403/09/25

##### Actual recruitment start date

2024-08-15, 1403/05/25

##### Actual recruitment end date

2024-12-15, 1403/09/25

##### Trial completion date

2025-02-15, 1403/11/27

##### Scientific title

Effects of arm crank exercises on Dyspnea, Left Ventricular Ejection Fraction and exercise capacity in patients with angioplasty.

##### Public title

Effects of arm crank exercises on Dyspnea, Left Ventricular Ejection Fraction and exercise capacity in patients with angioplasty.

##### Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

Patients having planned angioplasty Both male and female patients Post extubation Signed written informed consent Age 40-60years

### Exclusion criteria:

PCI to nonnative vessel Implantation of >3 stents Evidence of thrombus Presence of infection Ejection fraction <30%(16)

## Age

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

## Gender

Both

## Phase

N/A

## Groups that have been masked

- Participant
- Investigator

## Sample size

Target sample size: **42**

Actual sample size reached: **42**

## Randomization (investigator's opinion)

Randomized

## Randomization description

Taking into account the above mentioned inclusion and exclusion criteria, patients will be recruited in the study through convenient sampling technique and then will be randomly assigned to each group through Random Sampling sealed opaque enveloped. Labeled as 1 Group A and 2 for Group B

## Blinding (investigator's opinion)

Double blinded

## Blinding description

Both patient and assessor physiotherapist will be blinded. Although the consent form will be taken from the patient. But the patient will not be aware of the study. Accessor physiotherapist will be involved in the study. He or She must have 2- or 3-year experience in relevant domain. He will access the patient by study defined outcome measure tools before the start and at the end of study.

## Placebo

Used

## Assignment

Parallel

## Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Riphah college of rehabilitation & Allied Health Sciences

## Street address

25 Raza Saeed Rd, Bhabra Block M Gulberg III, Lahore, Punjab 25-M Block, Lahore

## City

Lahore

## Postal code

54660

## Approval date

2024-07-04, 1403/04/14

## Ethics committee reference number

RCS&AHS/REC/MS-CPPT

## Health conditions studied

### 1

#### Description of health condition studied

Angioplasty

#### ICD-10 code

Z98.6

#### ICD-10 code description

Angioplasty status

## Primary outcomes

### 1

#### Description

Dyspnea

#### Timepoint

pre and post

#### Method of measurement

Borg Scale

### 2

#### Description

Left Ventricular Ejection Fraction

#### Timepoint

pre and post

#### Method of measurement

Echocardiography

### 3

#### Description

Exercise capacity

#### Timepoint

pre and post

#### Method of measurement

Duke Activity Status Index

## Secondary outcomes

### 1

#### Description

Hemodynamic parameters

#### Timepoint

pre and post

#### Method of measurement

Heart Rate and Blood Pressure

## Intervention groups

1

### Description

Control group: Standard angioplasty medical protocol.

### Category

Rehabilitation

2

### Description

Intervention group: Arm ergometer

### Category

Rehabilitation

## Recruitment centers

1

### Recruitment center

#### Name of recruitment center

Cheema Hospital Gujranwala

#### Full name of responsible person

Zainab Butt

#### Street address

Zia ul Haq Rd, Civil Lines, Gujranwala

#### City

Gujranwala

#### Postal code

55250

#### Phone

+92 55 3255959

#### Email

Zianabbutt805@gmail.com

## Sponsors / Funding sources

1

### Sponsor

#### Name of organization / entity

Riphah International University

#### Full name of responsible person

Wajeeha Zia

#### Street address

25 Raza Saeed Rd, Bhabra Block M Gulberg III,  
Lahore, Punjab 25-M Block, Lahore

#### City

Lahore

#### Postal code

54660

#### Phone

+92 42 111 747 424

#### Email

Wajeeha.zia@riphah.edu.pk

#### Grant name

Null

#### Grant code / Reference number

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

Yes

### Title of funding source

Riphah International University

### Proportion provided by this source

15

### 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

Expert Consultant Clinic

#### Full name of responsible person

Muhammad Umer Arshad

#### Position

HOD

#### Latest degree

Master

#### Other areas of specialty/work

Physiotherapy

#### Street address

627, Khayaban e Jinnah, Iqbal Avenue Cooperative  
Housing Society-Phase 1, Airline Society

#### City

Lahore

#### Province

Punjab

#### Postal code

54000

#### Phone

+92 42 111 747 424

#### Email

Zianabbutt805@gmail.com

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

Riphah International University

#### Full name of responsible person

Wajeeha Zia

#### Position

Assistant Professor

#### Latest degree

Ph.D.

#### Other areas of specialty/work

Physiotherapy

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**Phone**

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Zinabbutt805@gmail.com

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

Riphah International University

**Full name of responsible person**

Zainab Butt

**Position**

Student

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

**Street address**25 Raza Saeed Rd, Bhabra Block M Gulberg III,  
Lahore, Punjab 25-M Block, Lahore**City**

Lahore

**Province**

Punjab

**Postal code**

54660

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

No - There is not a plan to make this available

**Justification/reason for indecision/not sharing IPD**

There is no further information.

**Study Protocol**

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

**Statistical Analysis Plan**

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

**Informed Consent Form**

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

**Clinical Study Report**

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

**Analytic Code**

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

**Data Dictionary**

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