

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

19 Jun 2026

**A comparison of reduce pulmonary complications in two groups, with The exercises 2 weeks before and after coronary artery bypass surgery and no exercise therapy In patients with chronic obstructive pulmonary disease.**

### Protocol summary

#### Summary

The purpose of this study is to determine the effect of 4 weeks of exercise therapy in patients with chronic obstructive pulmonary disease(COPD) on pulmonary complications after coronary artery bypass grafting surgery(CABG). Fourty patients aged 40-80 years who were preoperatively diagnosed with chronic obstructive pulmonary disease undergoing cardiac surgery with left ventricular ejection fraction greater than30% will be studied. Patients are divided into 2 groups voluntarily: the first group of 20 people will be from2 weeks prior to surgery, breathing exercise, the use of respiratory assistance, hands at shoulder width and the use of respiratory muscles and walking intervals before the specified practice and provided papers with weekly control in the hospital and measure respiratory parameters using spirometry and peak flowmetry, monitoring to assess the hemodynamic such as heart rate, blood pressure and oxygen saturation of arterial blood before and after exercise.This process will be repeat after two week. In the second group, 20patients, 2 weeks before surgery training program will not be controlled and the length of stay in the intensive care unit and then transferred to the home will perform just a routin activities without control in 2 weeks before and after surgery and measurement for the second group will be done based on timing of the first group. finally we will study the complication decrease in COPD patients.

### General information

#### Acronym

#### IRCT registration information

IRCT registration number: **IRCT2014061018038N1**

Registration date: **2014-08-29, 1393/06/07**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

#### Registration date

2014-08-29, 1393/06/07

#### Registrant information

##### Name

Zahra Hojjati Zidashti

##### Name of organization / entity

Islamic Azad University, Rasht Branch

##### Country

Iran (Islamic Republic of)

##### Phone

+98 13 1555 7869

##### Email address

hojjati@iaurasht.ac.ir

#### Recruitment status

**Recruitment complete**

#### Funding source

Guilan University of Medical Sciences

#### Expected recruitment start date

2014-08-22, 1393/05/31

#### Expected recruitment end date

2014-12-21, 1393/09/30

#### Actual recruitment start date

empty

#### Actual recruitment end date

empty

#### Trial completion date

empty

#### Scientific title

A comparison of reduce pulmonary complications in two groups, with The exercises 2 weeks before and after coronary artery bypass surgery and no exercise therapy In patients with chronic obstructive pulmonary disease.

**Public title**

Reduce pulmonary complications in patients COPD after coronary artery bypass grafting(CABG)

**Purpose**

Prevention

**Inclusion/Exclusion criteria**

Inclusion criteria: patients aged 40 to 80 years, ejection fraction was more than 30%. exclusion criteria: arrhythmias, hypoxia, hypotension, patients schizophrenia and psychotic with long-acting sedative, Severe osteoporosis.

**Age**

From **40 years** old to **80 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **40**

**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**

Guilan University of Medical Sciences

**Street address**

shahid beheshti freeway, rasht. Guilan

**City**

Rasht

**Postal code****Approval date**

2014-02-22, 1392/12/03

**Ethics committee reference number**

6920422817

**2****Ethics committee****Name of ethics committee**

Guilan university of medical sciences

**Street address**

Shahid beheshti freeway

**City**

Rasht

**Postal code****Approval date**

2014-02-23, 1392/12/04

**Ethics committee reference number**

6920422817

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

Chronic Obstructive Pulmonary Disease

**ICD-10 code**

J 44.9

**ICD-10 code description**

•obstructive pulmonary disease

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

Measurement Peak expiratory flow

**Timepoint**

before transfer with ICU2 and transfer to surgery unit and hospital discharge

**Method of measurement**

Peak low Meter that measurement according to the American Lung Association. peak expiratory flow that readings are often classified into 3 zones: green, yellow, and red.

**2****Description**

VC, FVC, FEV1, FEV1/FVC, PEF

**Timepoint**

two week before and after surgery

**Method of measurement**

Spirometry the scale ECCS

**3****Description**

Arterial Blood Gas

**Timepoint**

Admission to the ICU, second day, third day and before discharge from hospital

**Method of measurement**

Techno Medical

**4****Description**

O2Saturation

**Timepoint**

2 week before and after surgery, at the time of admission and discharge, before the arrival and departure of the ICU2, preoperative

**Method of measurement**

Pulseoximeter Radical-V

## Secondary outcomes

### 1

#### Description

Blood Pressure

#### Timepoint

2 week before and after surgery, admission and discharge to hospital, before entering and leaving of ICU2

#### Method of measurement

Monitoring available in hospital by manometer

### 2

#### Description

Heart Rate

#### Timepoint

2 week before and after surgery, admission and discharge to hospital, before entering and leaving of ICU2

#### Method of measurement

manitor available in hospital

### 3

#### Description

Atelectasis, Pneumonia, pulmonary edema, Pneumothorax

#### Timepoint

before and after surgery, Second and third day after surgery.

#### Method of measurement

Chest x-ray and Assessment of hemodynamic

## Intervention groups

### 1

#### Description

Intervention 1 : Program breathing exercises , including breathing and lip- buds are sitting in a chair or walking 3 times a day , exercise the diaphragm in 3 times daily, 1 min , 2 min rest and gradually increase during exercise up to 5 minutes, Cough circuit technique two times a day with hands on abdomen that slightly bent forward and Coughing with mouth open. cough 2 or 3 short and sharp and stay and then the rest

#### Category

Prevention

### 2

#### Description

Intervention 2 : Exercise hands at shoulder width in three ways that are comfortable to sit on a chair , lift shoulders After 3 times, rest and other exercise. lift elbows to shoulder level and touch fingertips in front of chest. breathe in as pull elbows back so that fingertips separate and so breathe out as return elbows and fingertips to the original position and other exercise, hands on shoulders with elbows at shoulder level and pointing out, slowly make a circle with elbows, breathe out as start the circle and breathe in as complete the circle. each of the five

episodes of shoulder exercises and then relax and each of exercise 10 minute in 3 turn daily will be.

#### Category

Prevention

### 3

#### Description

Intervention 3:6minute walk three times a day

#### Category

Prevention

### 4

#### Description

Control group : routine exercise without regulation before and after surgery. Including the use of spirometry and chest physiotherapy and coughing techniques by physiotherapist residing in the morning.

#### Category

Treatment - Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Heshmat hospital

##### Full name of responsible person

Zahra Mahmoodi(Bachelor of Nursing and MSc student in Exercise Physiology

##### Street address

Dr heshmat hospital-15 khordad street- Rasht

##### City

Rasht

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Guilan Research Center of Medical Sciences and Health Services

##### Full name of responsible person

Zahra Mahmoodi

##### Street address

Heshmat Hospital

##### City

Rasht

#### Grant name

#### Grant code / Reference number

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

Yes

#### Title of funding source

Guilan Research Center of Medical Sciences and Health Services

#### 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*

**Phone**  
+98 13 1422 4086  
**Fax**  
**Email**  
hojjati@iaurasht.ac.irfzmahmoodi@yahoo.comz\_hoj@yahoo.com  
**Web page address**  
www.iaurasht.ac.ir

## Person responsible for general inquiries

### Contact

**Name of organization / entity**  
Guilan University of Medical Sciences  
**Full name of responsible person**  
Zahra Mahmoodi  
**Position**  
Nursing  
**Other areas of specialty/work**  
**Street address**  
Heshmat Hospital, Shahid Beheshti freeway  
**City**  
Rasht  
**Postal code**  
**Phone**  
+98 13 1666 9066  
**Fax**  
**Email**  
fzmahmoodi@yahoo.comz\_hoj@yahoo.com  
**Web page address**  
www.gums.ac.ir

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Guilan university of medical sciences  
**Full name of responsible person**  
Zahra Mahmoodi  
**Position**  
Nurse  
**Other areas of specialty/work**  
**Street address**  
Heshmat hospital  
**City**  
Rasht  
**Postal code**  
4193955599  
**Phone**  
+98 13 1666 5120  
**Fax**  
**Email**  
fzmahmoodi@yahoo.com  
**Web page address**  
www.gums.ac.ir

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Rasht Islamic Azad University  
**Full name of responsible person**  
Zahra Hojati Zi Dashti  
**Position**  
Assistant Professor  
**Other areas of specialty/work**  
**Street address**  
Pole taleshan, Drvaze Lakan, Rasht  
**City**  
Rasht  
**Postal code**

## 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*