

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The effect of incentive spirometry, knowing oxygenation in patients after coronary artery bypass surgery

#### Protocol summary

##### Summary

The main objective of this study is to determine the effect of incentive spirometry, knowing oxygenation in patients after coronary artery bypass graft surgery. Inclusion criteria: elective coronary artery bypass graft surgery; coronary artery bypass graft surgery is not an emergency; no history of previous coronary artery bypass graft surgery; no neurological disorders - muscular or cognitive impairments; pulmonary disease; ability Spirometry; written and informed consent to participate in the study. Exclusion criteria: congestive heart failure; severe respiratory failure; reoperation; sternal infection; need for mechanical ventilation for more than 48 hours; the patient died. The study sample of 70 patients candidate coronary artery disease surgery were randomly divided into two groups will perform. Spirometry was used in the intervention group and in the hospital routine will be applied. Expect to use incentive spirometry is effective in improving oxygenation in patients.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2013102015073N1**  
Registration date: **2013-11-16, 1392/08/25**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2013-11-16, 1392/08/25

##### Registrant information

###### Name

Mohammad Hadi Zahmatkesh Saredorahy

###### Name of organization / entity

Yazd University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 35 1523 2241

###### Email address

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###### Recruitment status

**Recruitment complete**

###### Funding source

Research Council of Yazd University of Medical Sciences

###### Expected recruitment start date

2013-11-01, 1392/08/10

###### Expected recruitment end date

2013-12-31, 1392/10/10

###### Actual recruitment start date

empty

###### Actual recruitment end date

empty

###### Trial completion date

empty

###### Scientific title

The effect of incentive spirometry, knowing oxygenation in patients after coronary artery bypass surgery

###### Public title

The effect of incentive spirometry, knowing oxygenation in patients after coronary artery bypass surgery

###### Purpose

Health service research

###### Inclusion/Exclusion criteria

Inclusion criteria: elective coronary artery bypass graft surgery; coronary artery bypass graft surgery is not an emergency; no history of previous coronary artery bypass graft surgery; no neurological disorders - muscular or cognitive impairment; preoperative pulmonary disease lack the ability Spirometry performed; ventricular ejection fraction greater than 35% of output; written informed consent to participate in the study.

Exclusion criteria: congestive heart failure; severe respiratory failure; reoperation; sternal infection; need for mechanical ventilation for more than 48 hours; the patient died.

#### **Age**

From **18 years** old to **90 years** old

#### **Gender**

Both

#### **Phase**

N/A

#### **Groups that have been masked**

*No information*

#### **Sample size**

Target sample size: **70**

#### **Randomization (investigator's opinion)**

Randomized

#### **Randomization description**

#### **Blinding (investigator's opinion)**

Single blinded

#### **Blinding description**

#### **Placebo**

Not used

#### **Assignment**

Parallel

#### **Other design features**

### **Secondary Ids**

empty

### **Ethics committees**

#### **1**

##### **Ethics committee**

###### **Name of ethics committee**

Yazd University of Medical Sciences

###### **Street address**

Headquarters Yazd University, Bahonar Square, Yazd

###### **City**

Yazd

###### **Postal code**

8916877443

##### **Approval date**

2013-09-03, 1392/06/12

##### **Ethics committee reference number**

104943/1/17/پ

### **Health conditions studied**

#### **1**

##### **Description of health condition studied**

Coronary Atrial Bypass Graft Pations

##### **ICD-10 code**

I25.1

##### **ICD-10 code description**

Atherosclerotic heart disease

### **Primary outcomes**

#### **1**

##### **Description**

Arterial Blood Gas values

##### **Timepoint**

Before induction of anesthesia in the operating room, the first and second day after surgery

##### **Method of measurement**

Arterial blood gas sample get in the time scales considered and this is analyzed using Nova Biomedical machine

### **Secondary outcomes**

empty

### **Intervention groups**

#### **1**

##### **Description**

In the intervention group:24 hours before surgery and use of incentive spirometry device is functioning properly , the patient was given a full explanation by the researcher from the patient will be asked to perform incentive spirometry . Then ensure the appropriate use of spirometry incentive.after coronary artery bypass graft surgery patients were extubated after a time , she/he began spirometry and 10 times per hour at the time, thus awakening a deep breath spirometry done about 2 seconds, then exhale and hold to do. between each time we do rest about 10 seconds .

##### **Category**

Rehabilitation

#### **2**

##### **Description**

In Ontrol group: Routine is applied in hospitals for patients who have already attempted before surgery is performed after the operation policy for the use of Spirometry including frequency of use, monitor used is not correct.

##### **Category**

N/A

### **Recruitment centers**

#### **1**

##### **Recruitment center**

###### **Name of recruitment center**

Afshar Hospital Yazd

###### **Full name of responsible person**

Mrs. H. Dehghani

###### **Street address**

Yazd University of Medical Sciences, School of Nursing

###### **City**

Yazd

## Sponsors / Funding sources

### 1

#### Sponsor

**Name of organization / entity**

Research Council of Yazd University of Medical Sciences

**Full name of responsible person**

Dr.f.Ezoddin

**Street address**

Research Council of Yazd University of Medical Sciences

**City**

Yazd

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Research Council of Yazd 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**

Yazd University of Medical Sciences, School of Nursing

**Full name of responsible person**

Mohammad Hadi Zahmatkesh Saredorahy

**Position**

Student nurse in master of critical care nursing

**Other areas of specialty/work****Street address**

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## Person responsible for scientific

## inquiries

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## Person responsible for updating data

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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*