

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effects Of Dynamic Hug Exercise And Serratus Punch On Chest Wall Mobility, Dyspnea, Pulmonary Function Test And Strength Of Scapulothoracic Muscle In COPD

#### Protocol summary

##### Study aim

To find the effects of Dynamic Hug Exercise and Serratus Punch on Chest wall mobility, Dyspnea, Pulmonary function test and Strength of scapulothoracic muscle in COPD patients.

##### Design

Two parallel groups, single-blinded, Randomized Controlled Trial with pre and post-assessment.

##### Settings and conduct

Gulab Devi Hospital Lahore

##### Participants/Inclusion and exclusion criteria

Inclusion Criteria: • Stable mild to moderate COPD according to GOLD guidelines, • 40-60 years of age will be included. • Both genders will be included. • Stable hemodynamics (heart rate, blood pressure, temperature) • FEV1 $\geq$ 50 Exclusion Criteria: • Subjects having any kind of Infective pulmonary conditions. • The subjects with acute exacerbation. • Uncontrolled hypertension • Fracture at the clavicle, scapula, humerus, sternum or spine within previous 2 months • Patients with any diagnosed neurological, orthopedic and cardiovascular disease

##### Intervention groups

Group A: it will be treated by pursed lip breathing, upper trapezius stretching. Group B: it will be treated by pursed lip breathing, upper trapezius stretching as well as dynamic hug and serratus punch.

##### Main outcome variables

Dyspnea: Medical Research Council (MRC) Dyspnea Scale  
Pulmonary function test: Spirometry  
Cest wall expansion : measuring tape  
Pectoralis muscles, Lower trapezius and Serratus anterior strength: Handheld dynamometer

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20191117045462N21**

Registration date: **2024-07-31, 1403/05/10**

Registration timing: **prospective**

Last update: **2024-07-31, 1403/05/10**

Update count: **0**

##### Registration date

2024-07-31, 1403/05/10

##### 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

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Effects Of Dynamic Hug Exercise And Serratus Punch On

Chest Wall Mobility, Dyspnea, Pulmonary Function Test And Strength Of Scapulothoracic Muscle In COPD

#### Public title

Effects Of Dynamic Hug Exercise And Serratus Punch On Chest Wall Mobility, Dyspnea, Pulmonary Function Test And Strength Of Scapulothoracic Muscle In COPD

#### Purpose

Treatment

#### Inclusion/Exclusion criteria

##### Inclusion criteria:

Stable mild to moderate COPD according to GOLD guidelines 40-60 years of age will be included. Stable hemodynamics (heart rate, blood pressure, temperature) FEV1≥50

##### Exclusion criteria:

Subjects having any kind of Infective pulmonary conditions. The subjects with acute exacerbation. Uncontrolled hypertension Fracture at the clavicle, scapula, humerus, sternum or spine within previous 2 months Patients with any diagnosed neurological, orthopedic and cardiovascular disease

#### Age

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

#### Gender

Both

#### Phase

N/A

#### Groups that have been masked

- Outcome assessor

#### Sample size

Target sample size: **50**

#### Randomization (investigator's opinion)

Randomized

#### Randomization description

Patients who will meet the inclusion criteria will be recruited by convenient sampling technique and allocated to groups by simple randomization process using sealed opaque enveloped labeled as 0 for Group A and for 1 group B.

#### Blinding (investigator's opinion)

Single blinded

#### Blinding description

This is single blinded study. Although the patient will sign a consent form but still he will not be aware of other treatment group. Another physical therapist or assessor will be involved in the study. He/she must have a minimum of 2 years of clinical experience in the relevant domain. He will assess the patient by defined outcome measure tools before start, follow up and, at the end of the study.

#### Placebo

Not 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

2024-07-16, 1403/04/26

#### Ethics committee reference number

RCR&AHS/REC/MS-CPPT

## Health conditions studied

### 1

#### Description of health condition studied

COPD

#### ICD-10 code

J44.8

#### ICD-10 code description

Other specified chronic obstructive pulmonary disease

## Primary outcomes

### 1

#### Description

dyspnea

#### Timepoint

pre post treatment

#### Method of measurement

Medical Research Council (MRC) Dyspnea Scale

### 2

#### Description

Pulmonary function test

#### Timepoint

pre, post treatment

#### Method of measurement

Spirometry

### 3

#### Description

Chest wall expansion

#### Timepoint

pre, post treatment

#### Method of measurement

inches tape

## 4

### Description

scapulothoracic muscle strength

### Timepoint

pre, post treatment

### Method of measurement

Handheld dynamometer

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Control group: it will be treated by pursed lip breathing (to inhale through the nose for several seconds with the mouth closed and then exhale slowly over 4 to 6 seconds through lips held in a whistling or kissing position. This cycle can be repeated for three to five breaths per session), upper trapezius stretching (Moderate stretching Hold stretch 60 sec. /time 5 times/set, 1 set/day 3 days/weeks, 8 weeks)

#### Category

Rehabilitation

### 2

#### Description

Intervention group: it will be treated by pursed lip breathing, upper trapezius stretching as well as dynamic hug (The subject will stand with the feet shoulder-width apart, elbows flexed at 90° and internally rotated at 90°, and shoulders abducted at 90°. The subject will push the handle using horizontal shoulder adduction and elbow extension until the hands touch together) and serratus punch (The patient will lie down on the floor. Then he will Raise both arms directly above shoulders and keep the elbows straight. Proceed to protract the shoulder blades by pushing them forwards (pushing the fists towards the ceiling)).

#### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Gulab Devi Hospital, Lahore.

##### Full name of responsible person

Kazmah Azeem

##### Street address

st # 103 h# 21 Ghazi park new shad bagh Lahore

##### City

Lahore

##### Postal code

05475

##### Phone

+92 309 9071269

##### Email

qazam6942@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

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05475

##### Phone

+92 42 111 747 424

##### Email

wajeeha\_z@yahoo.com

#### Grant name

#### Grant code / Reference number

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

No

#### 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

Riphah International University

##### Full name of responsible person

Kazmah Azeem

##### Position

student

##### Latest degree

Master

##### Other areas of specialty/work

Physiotherapy

##### Street address

H # 21 St# 103 Ghazi Park New Shad Bagh Lahore

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##### Province

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Riphah International University  
**Full name of responsible person**  
Wajeeha  
**Position**  
Assistant Professor  
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## Person responsible for updating data

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**Name of organization / entity**  
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**Latest degree**  
Master

**Other areas of specialty/work**  
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**Postal code**  
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**Email**  
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## 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