

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effects Of Chest Expansion Exercises On Pulmonary Function, Chest Expansion, Trunk Control Ability And Quality Of Life Among Stroke Patients

Protocol summary

Study aim

To find the effects of Chest Expansion exercises on pulmonary function, chest expansion, trunk control ability and quality of life among stroke patients.

Design

Two parallel groups, double blinded, randomized controlled trial with pre and post assessment

Settings and conduct

Physiotherapy department of Jinnah Memorial Trust Hospital Gujranwala

Participants/Inclusion and exclusion criteria

Inclusion Criteria: • Patients between age group of 40-55 years • Both genders • Chronic stroke from at least last 6 months-2 years of both forms (ischemic and hemorrhage). • Hemiplegic patients caused by stroke • Patients are able to sit independently • Patients who are able to walk independently with or without walking aid
Exclusion Criteria: • Patients with any pulmonary disease before onset of stroke • Patients with thoracic deformity or rib fracture • Patients who received respiratory rehabilitation for stroke • Patients with any neurological disorder other than stroke

Intervention groups

Conventional neurorehabilitation program along with Chest expansion exercises

Main outcome variables

Pulmonary function test by using Diagnostic Spirometry, Assessment of quality of life using SS-QOL (Stroke Specific Quality Of Life) questionnaire, Trunk Impairment Scale used to assess trunk control (TIS), Measurement of Chest Expansion using measuring tape.

General information

Reason for update

Acronym

Effects Of Chest Expansion Exercises Among Stroke

Patients

IRCT registration information

IRCT registration number: **IRCT20191117045462N16**

Registration date: **2024-07-20, 1403/04/30**

Registration timing: **prospective**

Last update: **2024-07-20, 1403/04/30**

Update count: **0**

Registration date

2024-07-20, 1403/04/30

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 Chest Expansion Exercises On Pulmonary Function, Chest Expansion, Trunk Control Ability And Quality Of Life Among Stroke Patients

Public title

Effects Of Chest Expansion Exercises On Pulmonary Function, Chest Expansion, Trunk Control Ability And Quality Of Life Among Stroke Patients

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients between age group of 40-55 years Both genders Chronic stroke from at least 6 months-2 years of both forms (ischemic and hemorrhage) Hemiplegic patients caused by stroke. Patients are able to sit independently Patients who are able to walk independently with or without walking aid

Exclusion criteria:

Patients with any pulmonary disease before onset of stroke. Patients with thoracic deformity or rib fracture. Patients who received respiratory rehabilitation for stroke. Patients with any neurological disorder other than stroke

Age

From **40 years** old to **55 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. Assessor 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

Stroke patients

ICD-10 code

G46.4

ICD-10 code description

Cerebellar stroke syndrome

Primary outcomes

1

Description

Pulmonary Function

Timepoint

Pre and Post Treatment

Method of measurement

Diagnostic spirometer

2

Description

Chest Expansion

Timepoint

Pre and post Treatment

Method of measurement

Measuring Tape

3

Description

Trunk control ability

Timepoint

Pre and post Treatment

Method of measurement

Trunk Impairment Scale (TIS)

4

Description

Quality Of Life

Timepoint

Pre and post Treatment

Method of measurement

Stroke Specific Quality Of Life (SS-QOL)

Secondary outcomes

empty

Intervention groups

1

Description

Control group: Conventional neurorehabilitation program

Category

Rehabilitation

2

Description

Intervention group: Conventional neurorehabilitation program along with Chest expansion exercises

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Jinnah Memorial Trust Hospital

Full name of responsible person

Noor ul Zuha

Street address

287/A, Block A Model Town, Gujranwala, Punjab

City

Gujranwala

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52200

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noorulzuha123@gmail.com

Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University

Full name of responsible person

Wajeeha Zia

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Wajeeha.zia@riphah.edu.pk

Grant name

Nil

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

Expert Consultant Clinic

Full name of responsible person

Muhammad Umer Arshad

Position

HOD

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

Contact

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Full name of responsible person

Wajeeha Zia

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Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

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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

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

Riphah International University

Full name of responsible person

Noor ul Zuha

Position

Student

Latest degree

Master

Other areas of specialty/work

Physiotherapy