

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of breathing exercises and low intensity circuit training in asthma patients

#### Protocol summary

##### Study aim

The aim of the study is to comprehensively compare the efficacy of breathing exercises and low-intensity circuit training as therapeutic interventions for asthma patients. This will help patients of asthma to become more independent.

##### Design

Pragmatic, community based, parallel group, double blinded, randomised control trial. There will be 357 patients that we will enroll. Study will be done from April-July 2024.

##### Settings and conduct

1. Azeem Hospital Multan 2. Sughran Wazeer Child Clinic Hospital Multan 3. South Punjab Hospital Multan 4. Muhammad Rehabilitation Clinic (Muhammad Institute of Medical and Allied Sciences Multan) after approval from institutional ethical committee

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients of 18-40 years, diagnosed asthmatic patients, both genders. Exclusion criteria: Patients with vascular neoplasia, fibromyalgia, radiculopathy, neuropathy, tumor, joint fractures, and vestibular problems, heart problems, not willing to participate, psychological unfit patients, pregnant/lactating ladies were excluded.

##### Intervention groups

Group-A will be given breathing exercises and group-B will be given low-intensity circuit exercises for 12 weeks. Breathing exercises for group-A includes pursed lip breathing, diaphragmatic breathing and breath holding exercises. For group-B low intensity circuit exercises includes walking, running and abdominal crunches.

##### Main outcome variables

Lung capacity, forced expiratory volume, exercise capacity and quality of life.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20230202057310N6**  
Registration date: **2024-06-09, 1403/03/20**  
Registration timing: **registered\_while\_recruiting**

Last update: **2024-06-09, 1403/03/20**

Update count: **0**

##### Registration date

2024-06-09, 1403/03/20

##### Registrant information

##### Name

Imran Ahmad Khan

##### Name of organization / entity

Muhammad Nawaz Shareef University of Agriculture, Multan

##### Country

Pakistan

##### Phone

+92 333 6120602

##### Email address

imran.ahmad@mnsuam.edu.pk

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2024-04-12, 1403/01/24

##### Expected recruitment end date

2024-07-12, 1403/04/22

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of breathing exercises and low intensity

circuit training in asthma patients

### Public title

Breathing exercises and low intensity circuit training in asthma patients

### Purpose

Treatment

### Inclusion/Exclusion criteria

#### Inclusion criteria:

Both male and female Age 18-40 years Patients diagnosed with asthma

#### Exclusion criteria:

Not willing to participate Psychological unfit patient Patients with heart problems/diseases Patient with musculoskeletal disorders Pregnant/ lactating ladies Patients with any trauma/neoplasms

### Age

From **18 years** old to **40 years** old

### Gender

Both

### Phase

1-2

### Groups that have been masked

- Participant
- Investigator
- Data analyser

### Sample size

Target sample size: **357**

More than 1 sample in each individual

Number of samples in each individual: **3**

At day 1, 6th week and at the end (12th week ) parameters will be checked

### Randomization (investigator's opinion)

Randomized

### Randomization description

Double blinded study will be conducted randomization of participants in two groups will be done by lottery method

### Blinding (investigator's opinion)

Double blinded

### Blinding description

In a double-blinded study, participants will be blinded. Participants will be unaware of the type of treatments that will be evaluated after the completion of the intervention trial. subjects will choose between two samples and also the investigator will be kept blind as he will not know who is receiving the treatment and who is receiving a placebo or alternative treatment.

### Placebo

Not used

### Assignment

Parallel

### Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

The Institutional Ethical Committee of Muhammad Institute of Medical and Allied Sciences,

##### Street address

Bosan Road

##### City

Multan

##### Postal code

66000

#### Approval date

2024-02-02, 1402/11/13

#### Ethics committee reference number

MIMAS/03/IRB/Farah

## Health conditions studied

### 1

#### Description of health condition studied

Asthma

#### ICD-10 code

J45

#### ICD-10 code description

Asthma

## Primary outcomes

### 1

#### Description

Lung capacity

#### Timepoint

12 weeks

#### Method of measurement

Spirometry

### 2

#### Description

Forced expiratory volume

#### Timepoint

12 weeks

#### Method of measurement

Spirometry

### 3

#### Description

Exercise capacity

#### Timepoint

12 weeks

#### Method of measurement

6-minute walk test and shuttle walk test

## Secondary outcomes

### 1

#### Description

Quality of life  
**Timepoint**  
12 weeks  
**Method of measurement**  
Asthma Quality of Life Questionnaire (AQLQ)

## 2

**Description**  
Asthma Related Anxiety and Depression  
**Timepoint**  
12 weeks  
**Method of measurement**  
Asthma Related Anxiety and Depression Scale

## Intervention groups

### 1

**Description**  
Intervention group: Group-A will be treated with breathing exercises for 3 times/ week each session lasted for 45 minutes and total duration is 12 weeks  
**Category**  
Treatment - Other

### 2

**Description**  
Intervention group: Group-B will be treated with low-intensity circuit exercises including cycling ergometer, low intensity walking, running squats for 3 times/ week each session lasted for 45 minutes and total duration is 12 weeks  
**Category**  
Treatment - Other

## Recruitment centers

### 1

**Recruitment center**  
**Name of recruitment center**  
Muhammad Rehabilitation Clinic  
**Full name of responsible person**  
Dr. Gul-e-Mizgan  
**Street address**  
Bosan road  
**City**  
Multan  
**Postal code**  
66000  
**Phone**  
+92 333 6102847  
**Email**  
gulemizgan@gmail.com

## Sponsors / Funding sources

### 1

**Sponsor**

**Name of organization / entity**  
Ali -Ul- Murtaza Department of Rehabilitation Science, MIMAS  
**Full name of responsible person**  
Gul-e-Mizgan  
**Street address**  
Bosan road  
**City**  
Multan  
**Postal code**  
66000  
**Phone**  
+92 337 6231111  
**Email**  
mimasmultan99@gmail.com  
**Grant name**  
Student fund  
**Grant code / Reference number**  
03/MIMAS/ANAS  
**Is the source of funding the same sponsor organization/entity?**  
Yes  
**Title of funding source**  
Ali -Ul- Murtaza Department of Rehabilitation Science, MIMAS  
**Proportion provided by this source**  
50  
**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**  
Muhammad Nawaz Shareef University of Agriculture, Multan  
**Full name of responsible person**  
Imran Ahmad Khan  
**Position**  
Lecturer  
**Latest degree**  
Ph.D.  
**Other areas of specialty/work**  
Medical Pharmacy  
**Street address**  
Agriculture Complex, Old Shuja Abad Rd, Multan, Punjab  
**City**  
Multan  
**Province**  
Punjab  
**Postal code**  
66000  
**Phone**  
+92 333 6120602

**Email**

imran.ahmad@mnsuam.edu.pk

**Person responsible for scientific inquiries****Contact****Name of organization / entity**

Muhammad Institute Of Medical And Allied Sciences  
Multan

**Full name of responsible person**

Farah Zahid

**Position**

Lecturer

**Latest degree**

Specialist

**Other areas of specialty/work**

Physiotherapy

**Street address**

Bosan road

**City**

Multan

**Province**

Punjab

**Postal code**

66000

**Phone**

0337-623111

**Email**

farahzahid977@gmail.com

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

Muhammad Institute Of Medical And Allied Sciences  
Multan

**Full name of responsible person**

Anas Sajjad

**Position**

Final year student of DPT

**Latest degree**

Bachelor

**Other areas of specialty/work**

Physiotherapy

**Street address**

Bosan road

**City**

Multan

**Province**

Punjab

**Postal code**

66000

**Phone**

+92 306 6887085

**Email**

anaskhanqalandrani01@gmail.com

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

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

**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