

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

11 Sep 2026

### Effects of Lumbar Sustained Natural Appophyseal Glide versus Muscle energy techniques on pain, Range of Motion and function in chronic Nonspecific Low Back Pain.

#### Protocol summary

##### Study aim

To compare the effects of Lumbar Sustained Natural Appophyseal Glide and Muscle energy techniques on pain, Range of Motion and function in chronic nonspecific low back pain.

##### Design

Two parallel group , double blinded, randomized clinical trial with pre and post assessment

##### Settings and conduct

Riphah Rehab clinic. Participants and outcome Assessor blind: Data safety will be ensured by assigning Specific Identity numbers and all consent, readings forms will be placed in locker to blind assessors

##### Participants/Inclusion and exclusion criteria

INCLUSION CRITERIA: 1. Subject between the ages 25 to 60. 2. Both male and female patients with low back pain. 3. Subject with history of 3 months continues or intermittent symptoms of low back pain. 4. The flexion of trunk at least 40-degree ROM. EXCLUSION CRITERIA: 1. Patient with history of pathology of spine (spine tumors,spinal infections, spondylosis, neurological deficit, pregnant women). 2. Patient pain will radiate down to the knee. 3. History of spinal surgery.

##### Intervention groups

Intervention group A: lumber sustained natural appophyseal glide and conventional treatment.  
Intervention group B:Muscle Energy Technique (METs) of Quadratus Lumborum and conventional treatment.

##### Main outcome variables

Numeric Pain Rating scale (NPRS),Modified Oswestry disability index (MODI),Lumber inclinometer

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20200228046639N1**

Registration date: **2020-09-22, 1399/07/01**

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

Last update: **2020-09-22, 1399/07/01**

Update count: **0**

##### Registration date

2020-09-22, 1399/07/01

##### Registrant information

###### Name

Assra Noor Javed

###### Name of organization / entity

Riphah International University

###### Country

Pakistan

###### Phone

+92 52 3582055

###### Email address

assra.khan.ak@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-07-08, 1399/04/18

##### Expected recruitment end date

2020-12-30, 1399/10/10

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Effects of Lumbar Sustained Natural Appophyseal Glide versus Muscle energy techniques on pain, Range of

Motion and function in chronic Nonspecific Low Back Pain.

**Public title**  
Effects of Lumbar Sustained Natural Appophyseal Glide and Muscle energy technique in Low Back Pain.

**Purpose**  
Treatment

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Subject between the ages 25 to 60. Both male and female patients with low back pain. Subject with history of 3 months continues or intermittent symptoms of low back pain. The flexion of trunk at least 40-degree ROM.  
**Exclusion criteria:**  
Patient with history of pathology of spine (spine tumors,spinal infections, spondylosis, neurological deficit, pregnant women). Patient pain will radiate down to the knee. History of spinal surgery.

**Age**  
From **25 years** old to **60 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**

- Participant
- Outcome assessor

**Sample size**  
Target sample size: **36**

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

**Randomization description**  
Written informed consent will be taken. After enrollment into study, patient will be allocated either to group A or Group B by lottery method. No. of Chits will be equal to total sample size, odd Numbers will be allocated to Group A and even number will be allocated to Group B.Each patient will be requested to draw a chit from the box and after that patient will be recruited into either Group A or Group B.

**Blinding (investigator's opinion)**  
Double blinded

**Blinding description**  
Participant, Assessor Blind: Data safety will be ensured by assigning Specific Identity numbers and all consent, readings forms will be placed in locker to blind Assessors

**Placebo**  
Not used

**Assignment**  
Parallel

**Other design features**

**Secondary Ids**  
empty

**Ethics committees**

## 1

### Ethics committee

#### Name of ethics committee

Research Ethical Committee (REC), Riphah College of Rehabilitation Sciences,Lahore campus

#### Street address

28-M, Quaid-e-Azam Industrial Estate, Kot Lakhpat, Lahore

#### City

Lahore

#### Postal code

54000

#### Approval date

2020-02-08, 1398/11/19

#### Ethics committee reference number

REC/RCRS/20/1034

## Health conditions studied

## 1

### Description of health condition studied

Chronic nonspecific low back pain

#### ICD-10 code

M54.5

#### ICD-10 code description

Low back pain

## Primary outcomes

## 1

### Description

Pain

#### Timepoint

First (pre/post) and third and sixth week

#### Method of measurement

Numeric Pain Rating Scale

## 2

### Description

Range of motion for flexion and extension

#### Timepoint

First (pre/post) and third and sixth week

#### Method of measurement

Lumber inclinometer

## Secondary outcomes

## 1

### Description

Function

#### Timepoint

First (pre/post) and third and sixth week

#### Method of measurement

Modified Oswestry disability index

## Intervention groups

### 1

#### Description

Intervention group:Lumber sustained natural appophyseal glide SNAG on Lumber L4/L5 vertebrae. The subjects will receive mulligan concept SNAG (sustained natural Appophyseal glide) position of subject: sitting on the edge of table and both feet will be support on footstep. The therapist must be standing behind the subject and place a belt around the subject's lower abdomen (below the anterior superior illac spine) also the therapist below hips. The Ulnar border of therapist right hand will be placed under the spinous process of vertebra above the suspected spinal segment. The other hand will be placed on the bed to the left of subject. The mobilizing force will be parallel to the facet joint plan in cephalic direction and asked the subject to lean forward. Sustained the flexed position for few seconds and maintain the facet glide until the subject erect.

#### Category

Treatment - Other

### 2

#### Description

Intervention group:The subject will receive METS on Quadrates lumborum (post isometric relaxation technique) position of subject: side lying and the physiotherapist behind the subject at waist level. the subject will extend uppermost arm over the head to grasp the top end of the table and on inhalation subject will abduct his uppermost leg until the therapist palpates quadrates activity(elevated around 30°).the subject is asked to hold the leg isometrically in this state and allowing gravity to provide resistance. After 10 sec the subject let the leg to fall toward the floor.

#### Category

Treatment - Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Riphah Rehab Center, Lahore Pakistan

##### Full name of responsible person

Muhammad Hashim

##### Street address

393-D3 wapda Town Lahore

##### City

Lahore

##### Postal code

54770

##### Phone

+92 42 35126110

##### Email

chistisalman@yahoo.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Riphah International University

##### Full name of responsible person

Muhammad Salman Bashir

##### Street address

28-M Quaid-e-Azam Industrial Estate, Kot Lakhpat, Lahore

##### City

Lahore

##### Postal code

54000

##### Phone

+92 42 35126110

##### Email

chistisalman@yahoo.com

#### Grant name

#### Grant code / Reference number

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

Yes

#### Title of funding source

Riphah International University

#### Proportion provided by this source

20

#### Public or private sector

Private

#### Domestic or foreign origin

Foreign

#### Category of foreign source of funding

Sponsor: country of origin

#### Country of origin

PK

#### 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

Muhammad Salman Bashir

##### Position

Associate professor

##### Latest degree

Ph.D.

##### Other areas of specialty/work

Physiotherapy

##### Street address

28-M Quaid-e-Azam, Industrial Estate, Kot Lakhpat, Lahore

##### City

Lahore

##### Province

Punjab

##### Postal code

54000

**Phone**  
+92 42 35126110  
**Email**  
chistisalman@yahoo.com

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Riphah International University  
**Full name of responsible person**  
Muhammad Salman Bashir  
**Position**  
Associate professor  
**Latest degree**  
Ph.D.  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
28-M Quaid-e-Azam, Industrial Estate, Kot Lakhpat,  
Lahore  
**City**  
Lahore  
**Province**  
Punjab  
**Postal code**  
54000  
**Phone**  
+92 42 35126110  
**Email**  
chistisalman@yahoo.com

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Riphah International University  
**Full name of responsible person**  
Assra Noor Javed  
**Position**

Student  
**Latest degree**  
Bachelor  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
28-M Quaid-e-Azam, Industrial Estate, Kot Lakhpat,  
Lahore  
**City**  
Lahore  
**Province**  
Punjab  
**Postal code**  
54000  
**Phone**  
+92 42 3434557209  
**Email**  
assra.khan.ak@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