

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

09 Jun 2026

### Effects of swiss ball and walking exercises in improving lumbar extensors endurance in non-specific low back pain among sedentary women

#### Protocol summary

##### Study aim

To compare the effects of walking exercises and swiss ball exercises along-with walking exercises in reducing pain and improving lumbar extensors endurance and physical activity in non-specific low back pain among sedentary women.

##### Design

Randomized Controlled trial, parallel group with participants and outcome assessors double blinded. A list was generated using computer generated table and concealment of allocation was made using sealed envelopes

##### Settings and conduct

Gujrat Hospital Gujrat, participants and outcome assessors are blinded

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: 1. Age 18 to 40 years old; 2. Females with sedentary lifestyle or occupations; 3. Pain duration more than 6 weeks; 4. Not taken any previous exercise session for lumbar pain within last two months Exclusion criteria: 1. Presence of spinal deformity (scoliosis with cobb's angle exceeding 10\*); 2. History of recent lumbar or abdominal surgery; 3. Presence of systemic or inflammatory disease; 4. Severe knee or hip arthritis as it will affect walking; 5. Prolapsed intervertebral disc; 6. Fracture, tumors, ankylosing spondylitis

##### Intervention groups

Group A: Perform fast walking on flat ground for 30 minutes with abdominal bracing. Group B: Perform fast walking on flat ground for 30 minutes with abdominal bracing alongwith swiss ball exercises ( swiss ball straight arm crunch, alternate arm and leg extension, wall squat, shoulder bridge, back extension, hamstring curl and leg raises)

##### Main outcome variables

Pain and endurance of lumbar extensors using NPRS and Trunk extensors endurance test are primary outcomes. Secondary outcome is function measured by Modified Oswestry Disability Index.

#### General information

##### Reason for update

##### Acronym

EOSBAWEIILEEINSLBPASW

##### IRCT registration information

IRCT registration number: **IRCT20200225046622N1**

Registration date: **2020-07-24, 1399/05/03**

Registration timing: **prospective**

Last update: **2020-07-24, 1399/05/03**

Update count: **0**

##### Registration date

2020-07-24, 1399/05/03

##### Registrant information

##### Name

Nooria Naeem Dar

##### Name of organization / entity

Riphah International University Lahore

##### Country

Pakistan

##### Phone

+92 53 3506173

##### Email address

nooriadar@yahoo.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-07-27, 1399/05/06

##### Expected recruitment end date

2020-10-26, 1399/08/05

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

## Scientific title

Effects of swiss ball and walking exercises in improving lumbar extensors endurance in non-specific low back pain among sedentary women

## Public title

Effects of swiss ball and walking exercises in improving lumbar extensors endurance in non-specific low back pain among sedentary women

## Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

Age 18 to 40 years Females with sedentary lifestyle or occupations Pain duration more than 6 weeks Not taken any previous exercise session for lumbar pain within last two months

### Exclusion criteria:

Presence of spinal deformity (scoliosis with cobb's angle exceeding 10\*) History of recent lumbar or abdominal surgery Presence of systemic or inflammatory disease Severe knee or hip arthritis as it will affect walking Prolapsed intervertebral disc Fracture, tumors, ankylosing spondylitis

## Age

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

## Gender

Female

## Phase

N/A

## Groups that have been masked

- Participant
- Outcome assessor

## Sample size

Target sample size: **40**

## Randomization (investigator's opinion)

Randomized

## Randomization description

Written informed consent will be taken.A list will be generated using computer generated table and patients will be allocated accordingly.

## Blinding (investigator's opinion)

Double blinded

## Blinding description

Study is double blinded in which participants and outcome assessors are masked of the treatment groups assigned.

## Placebo

Not used

## Assignment

Parallel

## Other design features

## Secondary Ids

empty

## Ethics committees

## 1

### Ethics committee

#### Name of ethics committee

Secretary ethical review committee, Riphah College of Rehabilitation and Allied Health Sciences

#### 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

1036

## Health conditions studied

## 1

### Description of health condition studied

Non specific low back pain

### ICD-10 code

M54.5

### ICD-10 code description

Low back pain

## Primary outcomes

## 1

### Description

Pain

### Timepoint

Before intervention, after two weeks and then after 4 weeks completion

### Method of measurement

NPRS

## 2

### Description

Endurance of lumbar extensors

### Timepoint

Before intervention, after 2 weeks and 4 weeks completion

### Method of measurement

Trunk extensor endurance tests such as Modified Sorenson test, prone double SLR and prone isometric chest raise

## Secondary outcomes

## 1

### Description

Function

### Timepoint

Before intervention, after 2 weeks and 4 weeks completion

**Method of measurement**

Modified Oswestry Disability Index

**Intervention groups****1****Description**

Intervention group A will perform fast walking on flat ground with abdominal bracing for 30 minutes, 5 days per week for one month

**Category**

Other

**2****Description**

Intervention group B will perform walking exercises for 30 minutes and additional swiss ball exercises (swiss ball straight arm crunches, alternate arm and leg extension, wall squats, shoulder bridge, back extension, hamstring curl and leg raises), 2 sets of 10 repetitions in first two weeks and then 3 sets of 12 repetitions for next two weeks. All exercises will be performed 5 days per week for a period of one month

**Category**

Other

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Riphah College of Rehabilitation & Allied Health Sciences

**Full name of responsible person**

Muhammad Salman Bashir

**Street address**

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

**City**

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**Postal code**

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**Phone**

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**2****Recruitment center****Name of recruitment center**

Gujrat Hospital

**Full name of responsible person**

Nooria Naeem Dar

**Street address**

Gujrat Hospital Bhimber Road Gujrat

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**Postal code**

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**Phone**

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**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Riphah International University

**Full name of responsible person**

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**Grant name**

Muhammad Salman Bashir

**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

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Riphah International University  
**Full name of responsible person**  
Muhammd Salman Bashir  
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Associate professor  
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## Person responsible for updating data

### Contact

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## 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