

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 Jul 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

Lahore

Postal code

54000

Phone

+92 42 35126110

Email

chistisalman@yahoo.com

2

Recruitment center

Name of recruitment center

Gujrat Hospital

Full name of responsible person

Nooria Naeem Dar

Street address

Gujrat Hospital Bhimber Road Gujrat

City

Gujrat

Postal code

50700

Phone

+92 53 3605173

Email

nooriadar@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

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

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
Muhammd 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
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

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