

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Combined Effects of Retro Walking Exercises and Clamshell Exercises on Pain, Strength and Balance among Osteoarthritis Patients

#### Protocol summary

##### Study aim

To compare the combined effects of Retro walking exercises and Clamshell exercises on pain, strength and balance among Osteoarthritic patients.

##### Design

Single blinded, Parallel, Randomized clinical trial

##### Settings and conduct

This study will be conducted at Arif Memorial Teaching Hospital

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients who will above 40 years old and diagnosed with osteoarthritis or have previous knee pain will be included in this study. Exclusion criteria: Patients diagnosed with rheumatoid arthritis, having history of ankle or knee surgery or intra-articular injection in knee joint in past 1 year or having dizziness or balance problems and pregnant women will excluded from this study

##### Intervention groups

There will be two intervention groups. Group A will be treated with clamshell exercise and group B will be treated with retro walking exercises and clamshell exercises

##### Main outcome variables

1. Numeric Pain Rating Scale will be used for knee pain intensity 2. Berg Balance Scale will be used to check balance while 3. Sit To Stand Test will be used to measure glutei strength

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20221205056713N3**

Registration date: **2024-07-26, 1403/05/05**

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

Last update: **2024-07-26, 1403/05/05**

Update count: **0**

##### Registration date

2024-07-26, 1403/05/05

##### Registrant information

###### Name

hafiza Nida Rasheed

###### Name of organization / entity

Rashid Latif Medical college, Lahore

###### Country

Pakistan

###### Phone

+92 336 4535979

###### Email address

naddia.rasheed20@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2024-07-25, 1403/05/04

##### Expected recruitment end date

2024-12-27, 1403/10/07

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Combined Effects of Retro Walking Exercises and Clamshell Exercises on Pain, Strength and Balance among Osteoarthritis Patients

##### Public title

Effects of retro walking exercises and clamshell exercises in osteoarthritis

##### Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

Both genders male and female age above 40 years .  
Patients diagnosed with OA and confirmed by radiographic imaging History of knee pain in past 30 days

### Exclusion criteria:

Patients diagnosed with rheumatoid arthritis Having history of ankle or knee surgery History of intra-articular injection in knee joint in past 1 year Patients having dizziness or balance problems Pregnant females

## Age

From **40 years** old

## Gender

Both

## Phase

N/A

## Groups that have been masked

- Outcome assessor

## Sample size

Target sample size: **34**

## Randomization (investigator's opinion)

Randomized

## Randomization description

Participants will randomly divided in two groups (group A group B) by using lottery method. Both groups will be given conventional physical therapy treatment. Group A patients will be treated with the retro walking exercises and Group B patients will be treated with retro walking and clamshell exercises.

## Blinding (investigator's opinion)

Single blinded

## Blinding description

Subjects in two groups will blinded from other treatment options. However they will be instructed to report any adverse effects during trial. Data will assessed by a third person which will not known about the study so trial will be single blinded study. (as outcome assessor will be blinded)

## Placebo

Not used

## Assignment

Parallel

## Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

The institutional board of Rashid Latif Medical College, Lahore

##### Street address

35KM Ferozepur Road, Lahore.

##### City

Lahore

##### Postal code

54900

##### Approval date

2023-10-10, 1402/07/18

##### Ethics committee reference number

IRB/2023/137

## Health conditions studied

### 1

#### Description of health condition studied

Osteoarthritis of knee

#### ICD-10 code

M17

#### ICD-10 code description

Osteoarthritis of knee

## Primary outcomes

### 1

#### Description

Pain

#### Timepoint

Before treatment and 4 weeks after treatment

#### Method of measurement

By using Numeric pain rating scale

### 2

#### Description

Balance

#### Timepoint

Before treatment and 4 weeks after treatment

#### Method of measurement

By using Balance berg scale

### 3

#### Description

Muscle strength

#### Timepoint

Before treatment and 4 weeks after treatment

#### Method of measurement

Sit to stand test

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: Group will be treated with Clamshell exercise. we will take diagnosed patients of Osteoarthritis and perform clamshell walking exercises. Firstly patient is positioned in supine lying regular period of 6 days in a week for application of hot pack over knee

for 10 min and start Clamshell walking in treadmill which includes clamshell walking two session per day (10 min per session) for 3 weeks on a treadmill at their maximum pace. The treatment duration will be 45 min in each session for a regular period of 6 days in a week. Both groups will receive hot pack for 10 min prior to exercise in order to warm up the muscle. Pre-test values will be taken on the first day and the post-test values will be taken after the total study duration of 3 week

#### Category

Treatment - Other

## 2

#### Description

Intervention group: Group B will be treated with , we take diagnosed patients of osteoarthritis and performed clamshell exercises along with retro walking exercises. Firstly, apply hot pack for 10 minutes in order to warm up and for improvement of circulation in muscles. Then we will strengthen the gluteus-medius to-tensor-fasciae latae by performing the clamshell and abduction exercises. unilateral wall-squat showed a significantly greater Gluteus med/TFL activation, side-lying hip abduction with anterior log-rolling position showed significantly greater Gluteus med activation, side-lying hip abduction exercise, side bridge exercise with knee flexion strengthen the Gluteus med/TFL muscle activation ratio than side bridge exercise or side bridge exercise with knee flexion and hip abduction

#### Category

Treatment - Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Arif memorial teaching hospital, Lahore

##### Full name of responsible person

Sidra Ishaq

##### Street address

35-KM, Ferozepur Road. Lahore.

##### City

Lahore

##### Postal code

54900

##### Phone

+92 311 6580724

##### Email

ishaqsidra8@gmail.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Rashid Latif Medical college

##### Full name of responsible person

Hafiza Nida Rasheed

#### Street address

35-KM, Ferozepur Road. Lahore.

#### City

Lahore

#### Postal code

54900

#### Phone

+92 336 4535979

#### Email

naddia.rasheed20@gmail.com

#### Grant name

#### Grant code / Reference number

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

Yes

#### Title of funding source

Rashid Latif Medical college

#### Proportion provided by this source

100

#### 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

Rashid Latif Medical College

##### Full name of responsible person

Sidra Ishaq

##### Position

Physical Therapist

##### Latest degree

Bachelor

##### Other areas of specialty/work

Physiotherapy

##### Street address

35-KM, Ferozepur Road. Lahore.

##### City

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##### Province

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##### Phone

+92 321 1185253

##### Email

ishaqsidra8@gmail.com

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

Rashid Latif Medical College

##### Full name of responsible person

Hafiza Nida Rasheed

**Position**

Physical Therapist

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

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## Person responsible for updating data

**Contact**

**Name of organization / entity**

Rashid Latif Medical College

**Full name of responsible person**

Hafiza Nida Rasheed

**Position**

Physical Therapist

**Latest degree**

Master

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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