Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Post Isometric Relaxation and Bruegger's Exercises on Pain, Range of Motion and Disability in patients with Mechanical Neck Pain

Protocol summary

Study aim
To compare the effects of post isometric relaxation and bruegger’s exercises on pain, Range of motion and disability in patients with mechanical neck pain .

Design
It will Single blinded randomized clinical trial with parallel group design. 24 Participants will be allocated to two groups equally by random computer number generator

Settings and conduct
It will be conducted at Arif memorial teaching hospital. Outcome assessor will be kept blind.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Both male and female patients age ranged from 20-40 years and suffering from Mechanical neck pain for at least three months Exclusion criteria: any orthopedic or neurological condition surgery in the cervical spine or shoulder Patients having Inflammation, malignancy and metabolic disorder will be excluded Patients with neck pain radiating into arms and upper extremity will be excluded from this study Neck pain associated with headache and facial pain, recent surgery, Vertebrobasiliar insufficiency (VBI) positive will be exclusion criteria: History of recent trauma and fractures of cervical spine will be excluded

Intervention groups
Group A: Post isometric relaxation: Total 20 sessions will be given to each patient in 4 weeks with 3 sessions per week Group B: Bruegger’s exercise: Total 20 sessions will be given to each patient in 4 weeks with 3 sessions per week Baseline Treatment: Baseline treatment will be given as common treatment to both groups. It include Hot pack for 10-15 minutes

Main outcome variables
Pain: Numeric Pain Rating Scale (NPRS) ROM: Universal Goniometer Disability: Neck Disability Index (NDI)

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20220701055331N2**
Registration date: **2024-06-11, 1403/03/22**
Registration timing: **prospective**

Last update: **2024-06-11, 1403/03/22**
Update count: **0**

Registration date
2024-06-11, 1403/03/22

Registrant information
Name
Ifra Zulqarnain Awan
Name of organization / entity
Rashid Latif Medical College
Country
Pakistan
Phone
+92 333 4975431
Email address
ifra.awan@rlmc.edu.pk

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-06-15, 1403/03/26

Expected recruitment end date
2024-11-15, 1403/08/25

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effects of Post Isometric Relaxation and Bruegger's Exercises on Pain, Range of Motion and Disability in

patients with Mechanical Neck Pain

Public title
Effects of post isometric relaxation and Bruegger's exercises on pain, range of motion and disability in patients with mechanical neck pain

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Both male and female patients Age ranged from 20-40 years and suffering from Mechanical neck pain for at least three months

Exclusion criteria:
Any orthopedic or neurological condition surgery in the cervical spine or shoulder Patients having Inflammation, malignancy and metabolic disorder will be excluded Patients with neck pain radiating into arms and upper extremity will be excluded from this study Neck pain associated with headache and facial pain, recent surgery, Vertebrobasiliar insufficiency (VBI) positive will be excluded History of recent trauma and fractures of cervical spine will be excluded

Age
From **20 years** old to **40 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **24**

Randomization (investigator's opinion)
Randomized

Randomization description
Random computer number generator will be used for randomization. Assign unique identification numbers to participants, then use a reliable software tool to generate a list of random numbers. Match these numbers to participant IDs and allocate individuals to different study groups based on the sorted random numbers. Ensure that the randomization process is concealed and documented for transparency and integrity.

Blinding (investigator's opinion)
Single blinded

Blinding description
Single blinding in a study involves keeping the outcome assessor blind to the intervention received by the participants. This helps to minimize bias in assessing the study outcomes. To achieve single blinding, the outcome assessor is not informed about the treatment allocation of the participants and remains unaware of which group received the intervention being studied.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Institutional Review Board of Rashid Latif Medical College, Lahore.

Street address
35-KM Ferozepur Road Lahore

City
Lahore

Postal code
54600

Approval date
2023-12-25, 1402/10/04

Ethics committee reference number
IRB/2023/133

Health conditions studied

1

Description of health condition studied
Mechanical neck pain

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Pain

Timepoint
Before intervention and 4 weeks after intervention

Method of measurement
Numeric pain rating scale to measure pain

2

Description
Range of motion

Timepoint
Before intervention and 4 weeks after intervention

Method of measurement
Range of motion will be measured by Universal goniometer

3

Description
Disability

Timepoint
before intervention and 4 weeks after intervention

Method of measurement
Neck disability index (NDI) will be used to measure disability

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group A: Post isometric relaxation exercise: Total 20 sessions will be given to each patient in 4 weeks with 3 sessions per week.
Category
Rehabilitation

2

Description
Intervention group B: Bruegger's exercise: Total 20 sessions will be given to each patient in 4 weeks with 3 sessions per week.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Arif Memorial Teaching Hospital
Full name of responsible person
Dr. Ifra Zulqarnain Awan
Street address
35-km ferozepur road Lahore
City
Lahore
Postal code
54600
Phone
+92 333 4975431
Email
ifra.awan@rlmc.edu.pk

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Rashid Latif Medical College
Full name of responsible person
Dr. Ifra Zulqarnain Awan
Street address
35-km ferozepur road Lahore
City
Lahore
Postal code
54600
Phone
+92 333 4975431
Email
ifra.awan@rlmc.edu.pk
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
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
Rashid Latif Medical College
Full name of responsible person
Rouman Naseer
Position
Physiotherapist
Latest degree
Bachelor
Other areas of specialty/work
Physiotherapy
Street address
Rashid Latif Medical College 35-km Ferozpur Road Lahore
City
Lahore
Province
Punjab
Postal code
54600
Phone
+92 333 4975431
Fax
Email
ifra.awan@rlmc.edu.pk

Person responsible for scientific inquiries

Contact
Name of organization / entity
Rashid Latif Medical College
Full name of responsible person
Dr. Ifra Zulqarnain Awan
Position
Lecturer/Physiotherapist
Latest degree
Master
Other areas of specialty/work

Physiotherapy
Street address
Rashid Latif Medical College 35-km Ferozpur Road
Lahore
City
Lahore
Province
Punjab
Postal code
54600
Phone
+92 333 4975431
Fax
Email
ifra.awan@rlmc.edu.pk

Person responsible for updating data

Contact
Name of organization / entity
Rashid Latif Medical College
Full name of responsible person
Dr. Ifra Zulqarnain Awan
Position
Lecturer/Physiotherapist
Latest degree
Master
Other areas of specialty/work
Physiotherapy
Street address
Rashid Latif Medical College 35-km Ferozpur Road
Lahore
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54600
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+92 333 4975431
Fax
Email
ifra.awan@rlmc.edu.pk

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
Not applicable
Analytic Code
Not applicable
Data Dictionary
Not applicable