

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Effect and Comparison of two manual therapy methods on Glenohumeral Internal Rotation in 18-35 years old male overhead athlete with glenohumeral internal rotation deficit

Protocol summary

Summary

We investigated about the effect of mobilization and stretching therapy on shoulder internal rotation in this study. The study comprised 30 asymptomatic male participants who were randomly (using block randomization) assigned to 1 of 2 groups: stretching only (n:15) and stretching plus scapulothoracic and glenohumeral joint mobilizations (n:15). All had a between shoulder difference of 15 degrees or more in internal rotation. Exclusion criteria included a history of shoulder surgery, shoulder symptoms requiring medical treatment in the last year or shoulder pain at the time of study. One group performed the cross-body stretch alone by passively pulling the humerus across the body into horizontal adduction with the opposite arm. Each athlete performed 5 repetitions of the cross-body stretch, holding each for 30 seconds. The second group performed the cross-body stretch as described for the first group; in addition they received joint mobilization. Athletes were treated with grade III and IV joint mobilizations (oscillatory method) with 10 repetitions. The intervention has been performed on three sessions every other day. Active and passive range of motion measurements were taken at the initiation and completion of the study.

General information

Acronym

GIRD

IRCT registration information

IRCT registration number: **IRCT2016050724149N31**

Registration date: **2016-10-07, 1395/07/16**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-10-07, 1395/07/16

Registrant information

Name

Fahimeh Kamali

Name of organization / entity

Shiraz University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research of Shiraz University of Medical Science

Expected recruitment start date

2015-12-20, 1394/09/29

Expected recruitment end date

2016-04-19, 1395/01/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect and Comparison of two manual therapy methods on Glenohumeral Internal Rotation in 18-35 years old male overhead athlete with glenohumeral internal rotation deficit

Public title

Effect of manual therapy on shoulder internal rotation

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: Male over head athletes with 15 or more GIRD (difference in internal rotation between dominant and non dominant shoulders); age range between 18 and 35 years. Exclusion criteria: Shoulder surgery; shoulder pain requiring treatment or medication during the last year; shoulder pain during the study period; shoulder injuries and fractures of the shoulder girdle during the last year; cancer and rheumatic diseases; substance abuse; communication disorders; history of surgery on neck and shoulders; history of neurological deficit (central or peripheral); coagulation disorders; radicular pain from cervical vertebrae.

Age

From **18 years** old to **35 years** old

Gender

Male

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Randomization in this study has been performed using block randomization method.

Secondary Ids

1

Registry name

-

Secondary trial Id

-

Registration date

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Shiraz University of Medical Sciences

Street address

Postal code: 71345-1733, Abivardi St, Chamran Blv

City

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Approval date

2015-12-13, 1394/09/22

Ethics committee reference number

IR.SUMS.REC.1394.169

Health conditions studied

1

Description of health condition studied

GIRD (glenohumeral internal rotation deficit)

ICD-10 code

13

ICD-10 code description

Diseases of the musculoskeletal system and connective tissue

Primary outcomes

1

Description

ROM (active and passive shoulder internal rotation)

Timepoint

Before intervention and after 3 sessions of intervention

Method of measurement

Imaging and measuring the angle by ImageJ software

Secondary outcomes

1

Description

ROM (active and passive shoulder external rotation)

Timepoint

Before intervention and after 3 sessions of intervention

Method of measurement

Imaging and measuring the angle by ImageJ software

Intervention groups

1

Description

Intervention group 1 : One group performed the cross-body stretch alone by passively pulling the humerus across the body into horizontal adduction with the opposite arm. Each athlete performed 5 repetitions of the cross-body stretch, holding each for 30 seconds.

Category

Other

2

Description

Intervention group 2 : The second group performed the cross-body stretch as described for the first group; in addition they received joint mobilization.

Category

Other

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

Country Clubs

Full name of responsible person

Davood Nejati

Street address

Shiraz, Fars, Iran

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

Vice chancellor for research, Shiraz University of Medical Sciences

Full name of responsible person

Fahimeh Kamali

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Grant name

-

Grant code / Reference number

-

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

Yes

Title of funding source

Vice chancellor for research, Shiraz University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

empty

Person responsible for general inquiries**Contact****Name of organization / entity**

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Position

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty