Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

The effect of throwers ten exercises on neck pain, disability, scapular position and function of male basketball players

Protocol summary

Study aim
The effect of throwers ten exercises on neck pain, disability, scapular position and function of basketball players in Shiraz and Isfahan, 2018

Design
Randomized controlled clinical trial, double blinded, parallel group design, 36 patients

Settings and conduct
Shiraz and Isfahan gyms, Throwers ten exercises will be given to the intervention group (before sport exercises).Control group do only the routine sport exercises. For both groups, the pain (VAS), functional disability level (NDI), scapular position (Lateral scapular slide test and the distance between acromion posterior part and the lying area), performance test (basketball shoot precision test) will be measured (before, 3 and 6 weeks after initiation and 4 weeks after the termination of interventions). The examiner will not know about the study groups.

Participants/Inclusion and exclusion criteria
Inclusion criteria: age 18-30 Y/O, pain in Shoulder and neck during throwing, minimum and maximum duration of pain: one month and six months respectively, last week average pain: minimum of 30 mm (VAS), maximum was at a level that would not result in exercise interruption, absence of a history of shoulder and neck trauma which has led to exercise interruptions for more than 24 hours in a month. Exclusion criteria: history of cervical disks, repeated shoulder dislocation, fracture in the shoulder and neck, Pain following spinal surgery, rheumatic diseases, receiving physiotherapy during last month due to neck pain.

Intervention groups
Intervention group: Throwers ten exercises; designed to improve strength, power, and endurance of shoulder complex musculature (besides the athletes routine sport exercises) Control group: No intervention (athletes do only the routine sport exercises).An exercise brochure will give them after finishing the study.

Main outcome variables
Neck pain; functional disability; scapular position; throwing function

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20181006041246N1**
Registration date: **2018-12-24, 1397/10/03**
Registration timing: **prospective**

Last update: **2019-01-26, 1397/11/06**
Update count: **1**

Registration date
2018-12-24, 1397/10/03

Registrant information

Name
Mehran Nasaji

Name of organization / entity

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Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2019-02-09, 1397/11/20

Expected recruitment end date
2019-05-10, 1398/02/20

Actual recruitment start date
empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of throwers ten exercises on neck pain, disability, scapular position and function of male basketball players

Public title

The effect of throwers ten exercises on neck pain, disability, scapular position and function of male basketball players

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age between 18 to 30 years old Athletes has pain at Shoulder and neck during throwing At least one month and a maximum of six months from the onset of pain Last week average pain: minimum of 30 mm (VAS), maximum was at a level that would not result in exercise interruption The absence of a history of trauma has led to discomfort in the shoulder and neck, resulting in interruptions in exercise for more than 24 hours in a month and the lack of remaining problems.

Exclusion criteria:

Having a history of cervical disks History of repeated dislocation of shoulder History of malignancy History of fracture in the shoulder and neck region Pain followed by spinal surgery, rheumatic and inflammatory diseases Receiving physiotherapy during last month due to neck pain.

Age

From **18 years** old to **30 years** old

Gender

Male

Phase

N/A

Groups that have been masked

- Investigator
- Outcome assessor
- Data analyser

Sample size

Target sample size: **36**

Randomization (investigator's opinion)

Randomized

Randomization description

Individuals entered into the study after the completion of the informed consent form are divided into two groups; test and control. The research randomization software and the permutation block method will be used to randomly divide the subjects to the two groups.

Blinding (investigator's opinion)

Double blinded

Blinding description

In this test, training exercises will be conducted by a physiotherapist and the tests will be done by another physiotherapist. Also the physiotherapist who will done the tests will not know the about the participants group.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Shiraz University of Medical Sciences

Street address

Vice-Chancellor for Research, Shiraz University of Medical Sciences, Zand Blvd., Shiraz, Iran

City

Shiraz

Province

Fars

Postal code

71345-1978

Approval date

2018-09-26, 1397/07/04

Ethics committee reference number

IR.SUMS.REC.1397.513

Health conditions studied

1

Description of health condition studied

Neck pain

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Neck pain in Visual Analogue Scale index

Timepoint

Neck pain measurement at the beginning of the study (before the intervention) and 3, 6 and 10 weeks after the intervention

Method of measurement

Measuring of pain by the Visual Analogue Scale index

Secondary outcomes

1

Description

Functional Disability Level

Timepoint

At the beginning of the study (before the intervention)

and 3, 6 and 10 weeks after the intervention began

Method of measurement

Neck Disability Index

2

Description

Function of athletes

Timepoint

At the beginning of the study (before the intervention) and 3, 6 and 10 weeks after the intervention began

Method of measurement

Basketball shoot precision test

3

Description

The scapular position test

Timepoint

At the beginning of the study (before the intervention) and 3, 6 and 10 weeks after the intervention began

Method of measurement

Assessment of the distance between acromion posterior part and the lying area, as well as assessing the Lateral scapular slide test in 3 situation

Intervention groups

1

Description

Intervention group: Before the regular team exercises, they carry out the Throwers ten exercises. This group performs the exercises three times a week for 6 weeks each 3 sets 10 repetitions of each exercise. After 3 weeks, as well as at the end of 6 weeks, the participants are evaluated in terms of variables such as pain, functional disability, scapular bone positioning, and basketball throwing accuracy testing. Also, to evaluate the effect of treatment survival, 4 weeks after the intervention in the test group, the evaluations will be carried out again. Throwers ten exercises are designed to practice the great muscle needed for throwing action. All of these exercises are specifically designed for throwers to increase the strength, strength, and endurance of the shoulder muscle complex. What is needed in these exercises includes a dumbbell weighing two pounds, a lightweight trabund, and a towel. For each exercise, a set of ten repetitions is recommended once or twice a week. Do not feel pain during or after exercises

Category

Rehabilitation

2

Description

Control group: The control group does not practice any exercise before regular team training and there is no intervention until the end of the study. After the end of the study, the controlling group is trained by a physiotherapist.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Basketball halls of shiraz and Isfahan

Full name of responsible person

Mehran Nasaji

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No. 19, Sadi Alley, Salman Ave., Daneshgah Blvd

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

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Web page address

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Shiraz University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

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
Shiraz University of Medical Sciences
Full name of responsible person
Mehran Nasaji
Position
Master student
Latest degree
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available
Study Protocol
Yes - There is a plan to make this available
Statistical Analysis Plan
Yes - There is a plan to make this available
Informed Consent Form
Yes - There is a plan to make this available
Clinical Study Report
Yes - There is a plan to make this available
Analytic Code
Not applicable
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available
Title and more details about the data/document
The results will be published as an article in the research international journals
When the data will become available and for how long
In the next 1 to 2 years
To whom data/document is available
Only people who ask the main investigator for the information
Under which criteria data/document could be used
With the permission through a written or oral request
From where data/document is obtainable
School of Rehabilitation Sciences. Shiraz University of Medical Sciences
What processes are involved for a request to access data/document
With a written request, they can access the library of Shiraz University of Medical Sciences, School fo rehabilitation Sciences
Comments