

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Sep 2026

The effect of postural restoration exercises on function and isokinetic torque of shoulder external and internal rotator muscles in amature athletes with shoulder internal impingement syndrome

Protocol summary

Study aim

The effect of postural restoration exercises on function and isokinetic torque of shoulder external and internal rotator muscles in amature athletes with shoulder internal impingement syndrome

Design

Clinical trial with a control group, with parallel groups, one-way blind, randomized, on 22 patients (2 groups of 11 people). Excel software rand function was used for randomization.

Settings and conduct

Neuromuscular Rehabilitation Research Center

Participants/Inclusion and exclusion criteria

Inclusion criteria: Age 18-35 years; History of back and shoulder pain and shoulder entrapment in the past month; A non-professional athlete who exercises an average of 6 to 8 hours per week. Exclusion criteria: People with a body mass index of more than 30; Previous history of shoulder surgery; Performed shoulder physiotherapy in the last 3 months; Shoulder deformation; Osteoporosis.

Intervention groups

Intervention group: In this group, athletes undergo postural post-retraining exercises with breathing according to the protocol. Exercises for 6 weeks, which are done 5 days a week and once a day and 4 times each time. Control group: There is no intervention and it is only for comparison with the intervention group.

Main outcome variables

Muscles performance level; Muscle strength.

General information

Reason for update

Sample size correction, how to blind from two sides to one side blind

Acronym

IRCT registration information

IRCT registration number: **IRCT20151228025732N58**

Registration date: **2020-10-26, 1399/08/05**

Registration timing: **registered_while_recruiting**

Last update: **2021-09-29, 1400/07/07**

Update count: **2**

Registration date

2020-10-26, 1399/08/05

Registrant information

Name

Alireza Emadi

Name of organization / entity

Semnan University of Medical Sciences, Semnan, Iran

Country

Iran (Islamic Republic of)

Phone

+98 23 3345 1336

Email address

are20935@semums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-10-06, 1399/07/15

Expected recruitment end date

2021-03-19, 1399/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of postural restoration exercises on function

and isokinetic torque of shoulder external and internal rotator muscles in amateur athletes with shoulder internal impingement syndrome

Public title

The effect of postural restoration exercises on function and isokinetic torque of shoulder external and internal rotator muscles in amateur athletes with shoulder internal impingement syndrome

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Age 18-35 years
History of back and shoulder pain and shoulder entrapment in the past month
A non-professional athlete who exercises an average of 6 to 8 hours per week

Exclusion criteria:

People with a body mass index of more than 30
Previous history of shoulder surgery
Performed shoulder physiotherapy in the last 3 months
Shoulder deformation
Osteoporosis

Age

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

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **22**

Randomization (investigator's opinion)

Randomized

Randomization description

Block randomization; Individual; Random Number Tables. Randomized permutation blocks (block 2). Using Excel software to generate random number tables

Blinding (investigator's opinion)

Single blinded

Blinding description

Participants are unaware of the allocation of study groups.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Semnan University of Medical Sciences

Street address

Semnan University of Medical Sciences, Basij Blvd

City

Semnan

Province

Semnan

Postal code

3514799442

Approval date

2020-06-02, 1399/03/13

Ethics committee reference number

IR.SEMUMS.REC.1399.077

Health conditions studied

1

Description of health condition studied

Internal shoulder impingement syndrome

ICD-10 code

M75.40

ICD-10 code description

Impingement syndrome of unspecified shoulder

Primary outcomes

1

Description

Muscles performance level

Timepoint

Before the intervention, after the end of the exercise therapy sessions, one month after the end of the exercise therapy sessions.

Method of measurement

Disabilities of the Arm, Shoulder and Hand questionnaire (DASH)

2

Description

Muscle strength

Timepoint

Before the intervention, after the end of the exercise therapy sessions, one month after the end of the exercise therapy sessions.

Method of measurement

Biodex Pro-4, Isokinetic Shirley, New York

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: In this group, athletes undergo postural post-retraining exercises with breathing according to the protocol. Exercises for 6 weeks, which are done 5 days a week and once a day and 4 times each

time.
Category
Rehabilitation

2

Description

Control group: There is no intervention and it is only for comparison with the intervention group.

Category
Diagnosis

Recruitment centers

1

Recruitment center

Name of recruitment center
Neuromuscular Rehabilitation Research Center
Full name of responsible person
Atefeh Aminianfar
Street address
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
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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

Semnan 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
Semnan University of Medical Sciences
Full name of responsible person
Atefeh Aminianfar
Position
Associate professor
Latest degree
Ph.D.
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Person responsible for updating data

Contact

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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

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available