

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

The effects of scapular non-elastic taping on upper limb performance and muscle strength, between overhead athletes with and without scapular dyskinesia

Protocol summary

Study aim

Evaluation of the effects of scapular taping on scapular muscles strength, upper limb performance and external/internal rotation range of motion in overhead athletes with scapular dyskinesia

Design

This is a one -way blinded randomized controlled trial study.

Settings and conduct

This study will be done in athlete clubs; participants will be randomly divided into intervention or control groups. At first, participant's height, weight and age will be recorded, then taping will be done. Strength of upper and lower trapezius, serratus anterior and infraspinatus muscles will be evaluated with a hand held dynamometer. Upper limb performance will be assessed with upper quarter y balance test, external/ internal rotation ROM will be measured with using goniometer then between and within groups differences will be compared

Participants/Inclusion and exclusion criteria

Inclusion criteria: Scapular dyskinesia, age between 18-30 y/o, more than 3 years' overhead sport experience and having overhead exercise at least 3 sessions per week: History of shoulder injury, surgery or repeated shoulder dislocation, History of neck pain or neck injury, History of systemic, rheumatologic and neurologic disease, obvious deformity, visible muscular atrophy, history of nerve involvement in neck area

Intervention groups

Intervention group: For mechanical correction of scapula, the non-elastic tape will be attached from the anterior aspect of coracoid process of scapula, near to upper clavicular region to upper trapezius muscle's bulk, for posterior aspect of trunk, the tape will be attached in parallel to the lower trapezius muscle fibers, to the terminal parts of thoracic vertebrae Control group:

Taping will be placebo with no mechanical correction.

Main outcome variables

Upper limb performance and muscles strength

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180805040702N1**

Registration date: **2018-10-25, 1397/08/03**

Registration timing: **prospective**

Last update: **2018-10-25, 1397/08/03**

Update count: **0**

Registration date

2018-10-25, 1397/08/03

Registrant information

Name

Zahra Mollaei

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 2289 5925

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-11-06, 1397/08/15

Expected recruitment end date

2018-11-26, 1397/09/05

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of scapular non-elastic taping on upper limb performance and muscle strength, between overhead athletes with and without scapular dyskinesia

Public title

The effect of scapular taping on upper limb performance and muscle strength

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Scapular dyskinesia Age between 18- 30 y/o More than 3 years' overhead sport experience Having overhead exercise at least 3 sessions per week

Exclusion criteria:

History of shoulder injury, surgery and repeated shoulder dislocation History of neck pain or neck injury History of systemic, rheumatologic , neurologic diseases Obvious deformity Visible muscular atrophy History of nerve involvement in neck area

Age

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

Gender

Female

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **36**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization would be simple and performed by the use of the coin flipping technique. The tail side would be assigned to the intervention group and the head side to the control group.

Blinding (investigator's opinion)

Single blinded

Blinding description

Blindness is one-way, and the participants will not know which group (control-intervention) they belong in.

Placebo

Used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics Committee at Iran University of Medical Sciences

Street address

Iran University Campus, Hemmat freeway, next to Milad tower

City

Tehran

Province

Tehran

Postal code

1449614535

Approval date

2017-08-28, 1396/06/06

Ethics committee reference number

IR.IUMS.FMD.REC 1396.9411452006

Health conditions studied**1****Description of health condition studied**

Scapular dyskinesia

ICD-10 code

M62.9

ICD-10 code description

Disorder of muscle, unspecified

Primary outcomes**1****Description**

Upper limb performance

Timepoint

Before and 20 minutes later

Method of measurement

Upper quarter y balance test

2**Description**

Muscle strength

Timepoint

Before and 20 minutes later

Method of measurement

Hand dynamometer

Secondary outcomes**1****Description**

Passive range of motion shoulder external and internal rotation

Timepoint

Before and 20 minutes later

Method of measurement

Goniometer

Intervention groups

1

Description

Intervention group: For mechanical correction of scapula for each athlete, non-elastic taping will be used from anterior aspect of coracoid process of scapula to the thoracic vertebrae. Muscles strength, range of motion and upper limb performance will be measured before and 20 minutes after intervention.

Category

Treatment - Devices

2

Description

Control group: Taping will be placebo with no mechanical correction in this group.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Shirodi sport complex

Full name of responsible person

Nikzad Shiri

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Sponsors / Funding sources

1

Sponsor

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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

Iran 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

Iran University of Medical Sciences

Full name of responsible person

Zahra Mollaei

Position

MSc student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Person responsible for updating data**Contact****Name of organization / entity**

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Full name of responsible person

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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