

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

11 Sep 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

mitra.mtwo@gmail.com

##### 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

##### Street address

South Mofateh Ave

##### City

Tehran

##### Province

Tehran

##### Postal code

1573613131

##### Phone

+98 21 8882 6489

##### Email

N.shiri@yahoo.com

##### Web page address

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Iran University of Medical Sciences

##### Full name of responsible person

Kazem malakouti

##### Street address

Iran University of Medical Sciences, Hemmat highway, next to Milad tower

##### City

Tehran

##### Province

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##### Postal code

1449614535

##### Phone

+98 21 8670 2520

##### Fax

+98 21 8670 2515

##### Email

research.rcco@iums.ac.ir

##### 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

##### Street address

School of Rehabilitation Sciences, Madadkaran St, Shahnazari St, Madar Sq, Mirdamad Blvd

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##### Province

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##### Postal code

1545913487

##### Phone

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mitra.mtwo@gmail.com

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

Iran University of Medical Sciences

##### Full name of responsible person

Ali Amiri

**Position**

Associate professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Physiotherapy

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**Person responsible for updating data****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**

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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