

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

01 Jul 2026

### Effects of dry needling on pain and function of throwing athletes with scapular dyskinesia

#### Protocol summary

##### Study aim

Determination of the effects of dry needling on pain and function of throwing athletes with scapular dyskinesia

##### Design

Parallel groups, double-blinded, randomized clinical trial

##### Settings and conduct

After completing the informed consent form and being informed about the research, participants enter the research and randomly assigned to treatment or control groups. they won't be aware of which group they would be in; also assessment and treatment would be done by two therapists

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: age between 18 to 45 years; doing overhead sports; a positive indication of lateral scapular slide test or scapular dyskinesia test. Exclusion criteria: pain on both sides. recent history of injury to the ribs and cervical vertebrae; recent fracture or dislocation of the upper extremity; dry needling contraindication: using anticoagulant drugs; diabetes; immune system impairments; needle phobia; hypertension; local edema on the shoulder area; local infection or wound on the shoulder area; pregnancy

##### Intervention groups

In the intervention group, besides scapular mobilizations, each of the muscles upper trapezius, lower trapezius, subscapularis, pectoralis minor, and serratus anterior would be treated by using dry needling on trigger points. treatment is 3 sessions with two days in between. In the control group, patients with trigger points will be treated with 4 sessions of 10 minutes scapular mobilizations including 3 sets with 30 seconds rest in between. treatment will be carried out for 2 weeks (2 sessions a week)

##### Main outcome variables

Pain, function

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20190609043846N1**

Registration date: **2019-07-05, 1398/04/14**

Registration timing: **prospective**

Last update: **2019-07-05, 1398/04/14**

Update count: **0**

##### Registration date

2019-07-05, 1398/04/14

##### Registrant information

##### Name

Alireza Kheradmandi

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 71 3825 6191

##### Email address

alirezaa228@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2019-07-11, 1398/04/20

##### Expected recruitment end date

2020-01-10, 1398/10/20

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Effects of dry needling on pain and function of throwing athletes with scapular dyskinesia

## Public title

Effects of manual therapy and dry needling on shoulder pain

## Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

Engaging in overhead sports Positive indication of Lateral Scapular slide test or Scapular dyskinesia test Trigger points

### Exclusion criteria:

Any recent surgery & traumatic injury on shoulder Diabetics Any infections Any usage of any coagulant drugs

## Age

From **18 years** old to **45 years** old

## Gender

Both

## Phase

N/A

## Groups that have been masked

- Participant
- Data analyser

## Sample size

Target sample size: **40**

## Randomization (investigator's opinion)

Randomized

## Randomization description

Block randomization method

## Blinding (investigator's opinion)

Double blinded

## Blinding description

Participants won't be aware of which group they allocated to. patient assessment and treatment will be carried out by two different therapists

## 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

Opposite to Felestin Street, Zand Avenue

##### City

Shiraz

##### Province

Fars

## Postal code

1433671348

## Approval date

2019-05-15, 1398/02/25

## Ethics committee reference number

IR.SUMS.REHAB.REC.1398.010

## Health conditions studied

### 1

#### Description of health condition studied

Scapular dyskinesia

#### ICD-10 code

M99.9

#### ICD-10 code description

Biomechanical lesion, unspecified

## Primary outcomes

### 1

#### Description

Pain

#### Timepoint

Before and after treatment

#### Method of measurement

Numeric rating scale (NRS)

### 2

#### Description

Function

#### Timepoint

Before and after treatment

#### Method of measurement

Persian version of DASH questionnaire

### 3

#### Description

Changes of scapular dyskinesia ratio

#### Timepoint

Before and after treatment

#### Method of measurement

Scapular dyskinesia test, lateral scapular slide test

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: patients with pain and trigger points in each of the muscles: upper trapezius, lower trapezius, subscapularis, pectoralis minor and serratus anterior will be treated with 4 sessions scapular mobilizations and 3 sessions dry needling

**Category**

Rehabilitation

**2****Description**

Control group: patients with pain and trigger points in each of the muscles: upper trapezius, lower trapezius, subscapularis, pectoralis minor, and serratus anterior will be treated with 4 sessions scapular mobilizations

**Category**

Rehabilitation

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

Rehabilitation Sciences School of Shiraz University of Medical Sciences

**Full name of responsible person**

Alireza Kheradmandi

**Street address**

Abiverdi No.1 St., Shahid Chamran Blvd.

**City**

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alirezaa228@gmail.com

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

Shiraz University of Medical Sciences

**Full name of responsible person**

Dr. Younes Ghasemi

**Street address**

7th floor of Central Building of Shiraz University of Medical Sciences, In front of Felestin Street, Zand Avenue

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**Province**

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**Postal code**

7194733669

**Phone**

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**Email**

vcrdep@sums.ac.ir

**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**

Alireza Kheradmandi

**Position**

Student

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

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

Shiraz University of Medical Sciences

**Full name of responsible person**

Fahimeh Kamali

**Position**

Associate Professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

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

Shiraz University of Medical Sciences

**Full name of responsible person**

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**Position**

Student

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

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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**

Not applicable

**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**

Not applicable

**Title and more details about the data/document**

All data are shareable after samples unidentification

**When the data will become available and for how long**

9 months after the publication of results

**To whom data/document is available**

Researchers working in academic institutions

**Under which criteria data/document could be used**

In order to compare with similar studies

**From where data/document is obtainable**Alireza Kheradmandi; email: alirezaa228@gmail.com;  
phone number: 00989380275871**What processes are involved for a request to access data/document**

Applicants can request data retrieval 9 months after the publication of results, and the data will be sent after a maximum of one month.

**Comments**