

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

09 Jun 2026

### Comparison of the upper trapezius and the infraspinatus trigger point therapy by dry needling in overhead athletes with unilateral shoulder pain: a double-blind randomized clinical trial

#### Protocol summary

##### Summary

The original purpose of this study is to compare two effects of dry needling: direct effect of dry needling of upper trapezius and remote effect of dry needling of infraspinatus muscle on pain and tissue sensitivity of myofascial trigger points of upper trapezius muscle. method: 40 overhead athletes with shoulder impingement syndrome and active trigger points in both upper trapezius and infraspinatus has been entered the study. Exclusion criteria was common contraindications of dry needling and cognitive problems and trigger point treatment in the last month. Participants were divided randomly into 2 groups of direct needling of upper trapezius and needling of infraspinatus. Intervention was done in 3 sessions with 3 days interval. Assessment of subjective pain, pressure pain threshold and pain and disability index for upper extremity was done just before and after 2 days of treatment sessions.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2015120825437N1**  
Registration date: **2016-01-08, 1394/10/18**  
Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2016-01-08, 1394/10/18

##### Registrant information

##### Name

Maryam Morovati Ardakani

##### Name of organization / entity

Shiraz University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 71 3823 2869

##### Email address

m\_morovati@sums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Shiraz University of Medical Sciences

##### Expected recruitment start date

2015-03-06, 1393/12/15

##### Expected recruitment end date

2015-08-06, 1394/05/15

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of the upper trapezius and the infraspinatus trigger point therapy by dry needling in overhead athletes with unilateral shoulder pain: a double-blind randomized clinical trial

##### Public title

Remote effect of dry needling on pain and tissue sensitivity of muscles trigger points.

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

inclusion criteria: overhead athletes; between 18\_ 60 years old; shoulder impingement syndrome; active myofascial trigger points in both upper trapezius and infraspinatus muscles. exclusion criteria :local trauma and infection; anti-coagulant drugs consumption;

pregnancy with risk of abortion; heart disease and immune system disease; addiction; cognitive problems; history of surgery on neck and upper back; neurologic deficit; serious medical conditions; cervical radiculopathy; trigger treatment in the past month

#### Age

From **18 years** old to **60 years** old

#### Gender

Both

#### Phase

N/A

#### Groups that have been masked

*No information*

#### Sample size

Target sample size: **40**

#### Randomization (investigator's opinion)

Randomized

#### Randomization description

#### Blinding (investigator's opinion)

Double blinded

#### Blinding description

#### Placebo

Not used

#### Assignment

Parallel

#### Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Shiraz University of Medical Sciences

##### Street address

Zand blvd, Shiraz, Iran

##### City

Shiraz

##### Postal code

#### Approval date

2015-03-02, 1393/12/11

#### Ethics committee reference number

ct-9373-7403

## Health conditions studied

### 1

#### Description of health condition studied

shoulder and arm pain

#### ICD-10 code

M25.5, M79

#### ICD-10 code description

M25.5 pain in joint, M79.6 pain in limb

## Primary outcomes

### 1

#### Description

subjective pain

#### Timepoint

before and 3 days after intervention

#### Method of measurement

visual analogue scale

### 2

#### Description

tissue sensitivity (pressure pain threshold)

#### Timepoint

before and 3 days after intervention

#### Method of measurement

digital algometry

### 3

#### Description

disability index of upper extremity

#### Timepoint

before and 3 days after intervention

#### Method of measurement

DASH questionnaire

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

direct intervention group(control): upper trapezius trigger point dry needling in 3 sessions with 3 days interval

#### Category

Other

### 2

#### Description

indirect intervention group (intervention):infraspinatus muscle trigger point dry needling in 3 sessions with 3 days interval

#### Category

Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Iran Zamin polyclinic

##### Full name of responsible person

Maryam Morovati

**Street address**  
Golestan town  
**City**  
Shiraz

## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**  
Shiraz University of Madical Sciences  
**Full name of responsible person**  
Mr. MirAlaie  
**Street address**  
Rehabilitatin faculty, Abiverdi 1 avenue, Chamran  
blvd.  
**City**  
Shiraz

### Grant name

### Grant code / Reference number

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

Yes

### Title of funding source

Shiraz University of Madical Sciences

### Proportion provided by this source

100

### Public or private sector

*empty*

### Domestic or foreign origin

*empty*

### Category of foreign source of funding

*empty*

### Country of origin

### Type of organization providing the funding

*empty*

## Person responsible for general inquiries

### Contact

**Name of organization / entity**  
Shiraz University of Medical Sciences  
**Full name of responsible person**  
Dr. Fahimeh Kamali  
**Position**  
PHD- physiotherapist, university professor  
**Other areas of specialty/work**  
**Street address**  
Rehabilitation faculty, Abiverdi 1 avenue, Chamran  
blvd  
**City**  
Shiraz  
**Postal code**  
**Phone**  
+98 71 3627 1551  
**Fax**  
**Email**  
fahimehkamali@sums.ac.ir  
**Web page address**

## Person responsible for scientific

## inquiries

### Contact

**Name of organization / entity**  
Shiraz University of Medical Sciences  
**Full name of responsible person**  
Dr. Fahimeh Kamali  
**Position**  
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**Other areas of specialty/work**  
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fahimehkamali@sums.ac.ir  
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## Person responsible for updating data

### Contact

**Name of organization / entity**  
Shiraz University of Medical Sciences  
**Full name of responsible person**  
Dr. Fahimeh Kamali  
**Position**  
PHD- univesity professor  
**Other areas of specialty/work**  
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## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

*empty*

### Study Protocol

*empty*

### Statistical Analysis Plan

*empty*

### Informed Consent Form

*empty*

### Clinical Study Report

*empty*

### Analytic Code

*empty*

### Data Dictionary

*empty*