

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

02 Jul 2026

### Comparison of the Effectiveness of Cupping and Proprioceptive Neuromuscular Facilitation (PNF) on neck and shoulder muscle pain and Range of Motion in neck and shoulder pain patients

#### Protocol summary

##### Study aim

-Determination of the effect of ventilation and neuromuscular facilitation of deep sense on pain intensity and range of motion of neck and shoulder area

##### Design

A clinical trial with two groups of intervention and control group, 4-of permutation blocks, No blinding

##### Settings and conduct

Participants are asked to attend the research site at Tehran University of Medical Sciences for a period of four weeks, three days a week. Prior to starting the first session, participants are asked to fill out a consent form, demographic information and, a pain questionnaire. Hold Relax method is used to perform PNF. Visual Analogue Scale (VAS) questionnaire is used to measure pain severity. In addition to the questionnaire, the goniometer is measured using the neck and shoulder range of motion in Extension, Flexion and, Rotation.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: People between 30 and 70 years with a history of neck pain over the past year or more, at least twice a week, unless the treating physician has specified a specific cause for neck pain and pain intensity based on visual acuity of pain greater than 30 mm: Exclusion criteria: People with severe osteoporosis, pregnancy, eczema, epilepsy, spine fractures, spine surgery history, and Whiplash during the past year

##### Intervention groups

1.cupping 2.Proprioceptive Neuromuscular Facilitation  
3.Control

##### Main outcome variables

The severity of neck and shoulder pain: Range of motion of the neck and shoulder

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20190918044812N1**  
Registration date: **2019-10-21, 1398/07/29**  
Registration timing: **registered\_while\_recruiting**

Last update: **2019-10-21, 1398/07/29**

Update count: **0**

##### Registration date

2019-10-21, 1398/07/29

##### Registrant information

###### Name

Fatemeh Noughani

###### Name of organization / entity

###### Country

Iran (Islamic Republic of)

###### Phone

+98 21 6693 6968

###### Email address

noghanif@sina.tums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2019-10-07, 1398/07/15

##### Expected recruitment end date

2019-10-22, 1398/07/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of the Effectiveness of Cupping and

Proprioceptive Neuromuscular Facilitation (PNF) on neck and shoulder muscle pain and Range of Motion in neck and shoulder pain patients

### Public title

The Effect of Cupping and Proprioceptive Neuromuscular Facilitation (PNF) on neck and shoulder muscle pain and Range of Motion

### Purpose

Supportive

### Inclusion/Exclusion criteria

#### Inclusion criteria:

People between the ages of 30 and 70 The history of neck pain over the past year or more, at least twice a week, with mechanical neck and shoulder pain The pain intensity was more than 30 mm according to the visual analogue scale.

#### Exclusion criteria:

severe osteoporosis Pregnancy Eczema Epilepsy Spine fractures Spine surgery history Whiplash over the past year

### Age

From **30 years** old to **70 years** old

### Gender

Both

### Phase

N/A

### Groups that have been masked

*No information*

### Sample size

Target sample size: **36**

### Randomization (investigator's opinion)

Randomized

### Randomization description

According to the method of permutation blocks of size 4, individuals are randomly divided into two equal groups.

### Blinding (investigator's opinion)

Not blinded

### Blinding description

### Placebo

Not used

### Assignment

Parallel

### Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics committee of Tehran University of Medical Sciences

##### Street address

School of Nursing and Midwifery, Tehran University of Medical Sciences, Nosrat St., Tohid Sq., Tehran I.IRAN

##### City

Tehran

### Province

Tehran

### Postal code

1419733171

### Approval date

2019-06-25, 1398/04/04

### Ethics committee reference number

IR.TUMS.FNM.REC.1398.068

## Health conditions studied

### 1

#### Description of health condition studied

Neck and shoulder pain

#### ICD-10 code

G89

#### ICD-10 code description

Pain, not elsewhere classified

### 2

#### Description of health condition studied

Neck and Shoulder Range of Motion

#### ICD-10 code

G89.29

#### ICD-10 code description

Other chronic pain

## Primary outcomes

### 1

#### Description

Severity of neck and Shoulder pain Visual Analogue scale questionnaire

#### Timepoint

Before intervention, at the beginning of each intervention session. End of intervention session

#### Method of measurement

Visual Analogue scale questionnaire

### 2

#### Description

Neck and Shoulder Range of Motion

#### Timepoint

Before intervention, at the beginning of each intervention session. End of intervention session

#### Method of measurement

Goniometer

## Secondary outcomes

### 1

#### Description

-

#### Timepoint

-

#### Method of measurement

-

## Intervention groups

### 1

#### Description

Intervention group1: Cupping(12 sessions 3 days a week hot and dry cupping for 10-20 minutes in the neck and shoulder area with glass mug and industrial alcohol).

#### Category

Treatment - Devices

### 2

#### Description

Intervention group2: Proprioceptive Neuromuscular Facilitation (PNF)(In Hold Relax method, where the volunteer is asked to sit on a chair, the researcher stands behind the volunteer and asks him to raise his hands so that the elbow rests on his shoulder, then the researcher with his hands Put the candidate's arms in front of him and ask him to move his hands for ten seconds against the resistance the researcher exerts on his arms (the researcher must adjust his strength with the strength of the volunteer). The volunteer finishes in relaxation mode within ten seconds and repeats the move for 3-5 times).

#### Category

Treatment - Devices

### 3

#### Description

Control group3: sample

#### Category

Treatment - Devices

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

tehran university of medical science

##### Full name of responsible person

Elham Janani

##### Street address

No.588,Food & Drug Administration Of Tehran,  
University Of Medical Science,Taleghani Ave,Qods  
Ave,Enqelab Ave, Tehran

##### City

Tehran

##### Province

Tehran

##### Postal code

۱۴۱۷۶۵۳۷۶۱

##### Phone

+98 21 6641 5727

##### Email

elham.jpt@gmail.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Tehran University of Medical Sciences

##### Full name of responsible person

Fatemeh Noghani

##### Street address

School of Nursing Midwifery ,Tehran University of  
Medical Sciences st. Tohid sq. Tehran I.IRAN

##### City

Tehran

##### Province

Tehran

##### Postal code

1419733171

##### Phone

+98 21 6105 4517

##### Email

elham.jpt@gmail.com

#### Grant name

#### Grant code / Reference number

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

Yes

#### Title of funding source

Tehran 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

Tehran University of Medical Sciences

##### Full name of responsible person

Fatemeh Noghani

##### Position

Associate professor

##### Latest degree

Ph.D.

##### Other areas of specialty/work

Psychology

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

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**Full name of responsible person**

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**Position**

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**Postal code**

1419733171

**Phone**

009861054517

**Email**

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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