

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison the efficacy of therapeutic laser and phonophoresis of diclofenac on latent trigger points of upper trapezius muscle on 30 female students of Tehran university of Medical Sciences

#### Protocol summary

##### Summary

Objectives: the aim of this study is to determine the effects of two therapeutic methods on myofascial trigger points of upper trapezius muscle in 30 student girls. Design: the design of this study is not blinded randomized and based on repeated measures. Setting and conduct: the Patients will randomly allocate into two groups and the treatment will be done 3 weeks and 3 times per week for each group. Participants: patients with severe pain will not include in the study and any subject with history of systemic illness or history of surgery will exclude from the study. Interventions: for phonophoresis group, pulsed ultrasound with 1 MHz, 1.5 W/cm<sup>2</sup> and using Diclofenac 1% for 5 minute will be used and for second group, the laser will be used for one minute. Main outcome measures variables: some parameters such as pain, pain pressure threshold, and lateral cervical flexion range of motion will be measured using VAS, algometer and inclinometer respectively.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201108074134N2**  
Registration date: **2011-11-26, 1390/09/05**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2011-11-26, 1390/09/05

##### Registrant information

##### Name

Amir Ahmadi

##### Name of organization / entity

Rehabilitation collage of Iran university of medical science

##### Country

Iran (Islamic Republic of)

##### Phone

00982122227159 353 داخلی

##### Email address

amirahmadi@tums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice chancellor for research, Tehran University of Medical Sciences

##### Expected recruitment start date

2011-08-23, 1390/06/01

##### Expected recruitment end date

2012-02-20, 1390/12/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison the efficacy of therapeutic laser and phonophoresis of diclofenac on latent trigger points of upper trapezius muscle on 30 female students of Tehran university of Medical Sciences

##### Public title

Comparison the efficacy of therapeutic laser and phonophoresis of diclofenac on latent trigger points of upper trapezius muscle

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: Have at least one latent myofascial

trigger point on upper trapezius muscle ; Having pain less than 3 on VAS Exclusion criteria: History of systemic disease; History of surgery in upper extremity or spine

#### Age

From **18 years** old to **40 years** old

#### Gender

Female

#### Phase

2

#### Groups that have been masked

*No information*

#### Sample size

Target sample size: **30**

#### Randomization (investigator's opinion)

Randomized

#### Randomization description

#### 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

Nezam St., Shahnazari AV., Madar Sq.

###### City

Tehran

###### Postal code

##### Approval date

2011-09-25, 1390/07/03

##### Ethics committee reference number

130/1265/90/ص

### Health conditions studied

#### 1

##### Description of health condition studied

Myofascial Trigger point

##### ICD-10 code

M62.9

##### ICD-10 code description

Disorder of muscle, unspecified

### Primary outcomes

#### 1

##### Description

Cervical Lateral Flexion Range of Motion

##### Timepoint

In each session

##### Method of measurement

Cervical ROM

#### 2

##### Description

Pain

##### Timepoint

In each session

##### Method of measurement

Visual analogue scale

#### 3

##### Description

Pain Pressure Threshold

##### Timepoint

In each session

##### Method of measurement

Algometer

### Secondary outcomes

empty

### Intervention groups

#### 1

##### Description

phonophoresis: Dyclofenac 1% ; 1.2 W/Cm ; Freq of 1 Mega Hz (pulse) ; sata 0.2 ; Duration of 5min ; 3 weeks and 3 times per week

##### Category

Treatment - Other

#### 2

##### Description

Laser: 830 nm; 10 mV; 5000 Hz

##### Category

Treatment - Other

### Recruitment centers

#### 1

##### Recruitment center

###### Name of recruitment center

Physiotherapy clinic, Tehran University of Medical Sciences

###### Full name of responsible person

Mrs. Amini

###### Street address

Nezam St., Shahnazari AV., Madar Sq.

###### City

Tehran

## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**

Vice chancellor for research, Tehran University of Medical Sciences

**Full name of responsible person**

Dr. Akbar Fotohi

**Street address**

Gods St., Keshavarz Av., Tehran, Iran

**City**

Tehran

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Vice chancellor for research, Tehran University of Medical 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**

Tehran University of Medical Sciences

**Full name of responsible person**

Amir Ahmadi

**Position**

Assistant professor/PhD

**Other areas of specialty/work****Street address**

Nezam St., Shahnazari AV., Madar Sq., Tehran

**City**

Tehran

**Postal code****Phone**

+98 21 2222 7159

**Fax**

+98 21 2222 0946

**Email**

amirahmadi@tums.ac.ir

**Web page address**

## Person responsible for scientific inquiries

**Contact****Name of organization / entity**

Tehran University of Medical Sciences

**Full name of responsible person**

Amir Ahmadi

**Position**

Assistant professor/PhD

**Other areas of specialty/work****Street address**

Nezam St., Shahnazari AV., Madar Sq., Tehran

**City**

Tehran

**Postal code****Phone**

+98 21 2222 7159

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**Email**

amirahmadi@tums.ac.ir

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## Person responsible for updating data

**Contact****Name of organization / entity**

Tehran University of Medical Sciences

**Full name of responsible person**

Amir Ahmadi

**Position**

Assistant professor/PhD

**Other areas of specialty/work****Street address**

Nezam St., Shahnazari AV., Madar Sq., Tehran

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**Postal code****Phone**

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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*