

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The Effects of Manual Passive Muscle Shortening and Positional Release Therapy on Upper Trapezius Latent Myofascial Trigger Point: A randomized double blinded clinical trial

#### Protocol summary

2016-05-06, 1395/02/17

#### Summary

Positional release therapy (PRT) has been suggested as an effective treatment for myofascial trigger points (MTrPs). The aim of this double blinded parallel randomized clinical trial is to compare the immediate effects, on pain, pressure pain threshold (PPT) and active lateral flexion following three treatment sessions of latent trigger points in the upper trapezius muscle involving a new technique (Manual Passive Muscle Shortening-MPMS) and PRT. Thirty female university students who are identified with upper trapezius latent MTrP will participate in this study. Using a computer generated randomized block of numbers, subjects will be randomly allocated into 2 groups and will be blinded to allocation: Experimental group (n=15) which will be treated with MPMS and control group (n=15) which will be treated with PRT. Participants will take part in three treatments and a follow up session (one week after third session). Outcome measures are visual analogue scale (VAS), pressure pain threshold (PPT) and active range of cervical lateral flexion motion. Physiotherapist 1 who is blinded to treatment allocation of the subjects will record outcomes and Physiotherapist 2 who is blinded to pre-treatment data will apply the appropriate technique. Data analysis process will be blinded.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2015100724412N1**  
Registration date: **2016-05-06, 1395/02/17**  
Registration timing: **prospective**

Last update:

Update count: **0**

##### Registration date

#### Registrant information

##### Name

Sakineh Goljaryan

##### Name of organization / entity

Tabriz University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 41 3335 5921

##### Email address

goljaryan@tbzmed.ac.ir

#### Recruitment status

##### Recruitment complete

#### Funding source

Vice Chancellor for Research of Tabriz University of Medical Sciences (TUOMS).

#### Expected recruitment start date

2016-05-09, 1395/02/20

#### Expected recruitment end date

2016-07-10, 1395/04/20

#### Actual recruitment start date

empty

#### Actual recruitment end date

empty

#### Trial completion date

empty

#### Scientific title

The Effects of Manual Passive Muscle Shortening and Positional Release Therapy on Upper Trapezius Latent Myofascial Trigger Point: A randomized double blinded clinical trial

#### Public title

Effects of physiotherapy techniques on painful points of trapezius muscle

## Purpose

Treatment

## Inclusion/Exclusion criteria

Inclusion criteria: 18-35 years old; Subjects have to exhibit a latent trigger point in the upper trapezius muscle, either on the left or right side; Normal Body Mass Index (BMI); Local pain 3-7/10 on a visual analogue scale elicited by the application of 2.5 kg/cm<sup>2</sup> of pressure with an algometer; Non athletic Exclusion criteria: Diagnosis of cervical radiculopathy or myelopathy determined by their primary care physician; Diagnosis of fibromyalgia syndrome; neck or shoulder surgery within the past year; Having undergone myofascial pain therapy in the cervical region within the past month before the study; Any sensory disturbances in the trapezius region.

## Age

From **18 years** old to **35 years** old

## Gender

Female

## Phase

2-3

## Groups that have been masked

*No information*

## Sample size

Target sample size: **30**

## Randomization (investigator's opinion)

Randomized

## Randomization description

## Blinding (investigator's opinion)

Double blinded

## Blinding description

## Placebo

Not used

## Assignment

Parallel

## Other design features

Randomization will be applied using a computer generated randomized block of numbers

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics committee of Tabriz University of Medical Sciences

##### Street address

Third floor, No 2 Central Building, Tabriz University of Medical Sciences, Golgasht St.

##### City

Tabriz

##### Postal code

#### Approval date

2016-01-18, 1394/10/28

#### Ethics committee reference number

TBZMED.REC.13940940

## Health conditions studied

### 1

#### Description of health condition studied

Myofascial trigger points-Myofascial pain syndrome

#### ICD-10 code

M62.9

#### ICD-10 code description

Disorder of muscle, unspecified

## Primary outcomes

### 1

#### Description

Visual analogue scale

#### Timepoint

On first session before treatment, On third session five minutes after treatment, On follow up session one week after third session.

#### Method of measurement

VAS ruler

### 2

#### Description

Pressure pain threshold

#### Timepoint

On first session before treatment, On third session five minutes after treatment, On follow up session one week after third session.

#### Method of measurement

Algometer

### 3

#### Description

active range of motion of lateral flexion

#### Timepoint

On first session before treatment, On third session five minutes after treatment, On follow up session one week after third session.

#### Method of measurement

goniometer

## Secondary outcomes

### 1

#### Description

-

#### Timepoint

-

#### Method of measurement

-

## Intervention groups

## 1

### Description

Control group: Subjects in this group will be treated by classical Positional Release Therapy. The subject will be in supine with therapist standing on the affected side. Pressure is applied to the trigger point. The subject's head is laterally flexed toward the side of trigger point, then therapist grasps the subject's forearm and abducts shoulder to approximately 90°. The ideal position of comfort achieved (the point where a reduction in pain of at least 70% was produced) will be held for a period of 90 seconds and followed by a passive return of the body part to an anatomically neutral position. Technique will be repeated three times with one minute intervals.

### Category

Other

## 2

### Description

Intervention group: Participants in this group will be treated by Manual Passive Muscle Shortening. The participant will be in prone position with therapist standing on the affected side. Origin and insertion of the upper trapezius muscle will be approximated by the hands of therapist and this position will be hold for 90 seconds. Technique will be repeated three times with one minute intervals

### Category

Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

clinic of faculty of rehabilitation

##### Full name of responsible person

##### Street address

##### City

Tabriz

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Vice Chancellor for Research of Tabriz University of Medical Sciences (TUOMS).

##### Full name of responsible person

Mohammad-Reza Rashidi

##### Street address

International Relations Office, No 2 Central Building, Tabriz University of Medical Sciences, Golgasht St, University Street, Tabriz, PO Box: 5165665931, Iran.

##### City

Tabriz

##### 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 of Tabriz University of Medical Sciences (TUOMS).

#### 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

Tabriz University of Medical Sciences

#### Full name of responsible person

Sakineh Goljaryan

#### Position

PHD of physiotherapy- Assistant professor

#### Other areas of specialty/work

#### Street address

Faculty of rehabilitation, Tavanir street, Tabriz, Iran

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#### Web page address

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

Tabriz University of Medical Sciences

#### Full name of responsible person

Sakineh Goljaryan

#### Position

PHD of physiotherapy- assistant professor

#### Other areas of specialty/work

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## Person responsible for updating data

### Contact

**Name of organization / entity**

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**Full name of responsible person**

Ameneh Amini

**Position**

Bachelor of physiotherapy-MS student of  
physiotherapy

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

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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*