

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### A comparison between vibration and ultrasound waves accompanied with stretching exercises on improving function in athletes with posterior neck muscles' myofascial trigger points

#### Protocol summary

##### Summary

This study aimed to compare the effect of vibration and ultrasound therapy accompanied with stretching exercises on myofascial trigger point of posterior neck muscles in athletes. Thirty patients with posterior neck muscles' myofascial trigger points were recruited through simple non probability sampling and they were randomly assigned to either a vibration (n=15) or an ultrasound therapy accompanied with stretching exercises group (n=15), in 2008-2009. A 10-session program which lasted 4 weeks, 3 sessions per week, and 30 minutes per session was performed for both groups. Before and after the intervention, neck disability (ordinal) was assessed with Neck Disability Index (NDI), neck pain with visual analog scale (ordinal) and Northwick Park Neck Pain Questionnaire (NPNPQ), and shoulder pain and disability with Shoulder Pain and Disability Index (SPADI).

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT138904131675N2**

Registration date: **2010-07-04, 1389/04/13**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2010-07-04, 1389/04/13

##### Registrant information

##### Name

Asghar Akbari

##### Name of organization / entity

Zahedan University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 54 1322 8445

##### Email address

akbaria@zdmu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Zahedan University of Medical Sciences

##### Expected recruitment start date

2008-08-22, 1387/06/01

##### Expected recruitment end date

2009-06-22, 1388/04/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

A comparison between vibration and ultrasound waves accompanied with stretching exercises on improving function in athletes with posterior neck muscles' myofascial trigger points

##### Public title

A comparison between vibration and ultrasound waves accompanied with stretching exercises on improving function in athletes with posterior neck muscles' myofascial trigger points

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: being athlete, age between 20-40, having trigger point at posterior neck muscle & 1/4 upper trunk, with main complaint: muscle pain without neurological sign, no history of respiratory or cardiac

diseases, surgery, and neck & thoracic structural disorders Exclusion criteria: no completion of the treatment, using other therapeutic modalities during study, trauma, surgery and exacerbation of signs during the study

**Age**

From **20 years** old to **40 years** old

**Gender**

Both

**Phase**

N/A

**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****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Tehran Payam-e- Noor University

**Street address**

No 233, Cross of Sepand, Shahid nejatolahi St.,

**City**

Tehran

**Postal code****Approval date**

2009-11-14, 1388/08/23

**Ethics committee reference number**

1002/111/7206

**Health conditions studied****1****Description of health condition studied**

Athletes with posterior neck muscles myofascial trigger point

**ICD-10 code**

M62

**ICD-10 code description**

Other soft tissue disorders

**Primary outcomes****1****Description**

Neck Pain

**Timepoint**

Before intervention, 4 weeks after intervention

**Method of measurement**

visual analog scale & Northwick Park Neck Pain Questionnaire

**2****Description**

Neck Disability

**Timepoint**

Before intervention, 4 weeks after intervention

**Method of measurement**

Neck Disability Index

**3****Description**

Shoulder Pain & Disability

**Timepoint**

Before intervention, 4 weeks after intervention

**Method of measurement**

Shoulder Pain& Disability Index

**Secondary outcomes**

empty

**Intervention groups****1****Description**

vibrator with low frequency, 2500 cycle per minute and moderate pressure.A 10 session program which lasted 4 weeks, 3 sessions per week, and 30 minutes per session

**Category**

Rehabilitation

**2****Description**

Ultrasound accompanied with stretching exercises: ultrasound with 1 MHz frequency, continuous mode, intensity 1.5 W/cm<sup>2</sup> and duration 4.5 min. Each subject performed 10 stretching exercise. A 10 session program which lasted 4 weeks, 3 sessions per week, and 30 minutes per session

**Category**

Rehabilitation

**Recruitment centers****1****Recruitment center**

**Name of recruitment center**

Tavana Physiotherapy clinic, Zahedan

**Full name of responsible person**

Sheideh Naroui

**Street address**

Opposite to Boali drugstore, Beheshti St.,

**City**

Zahedan

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+98 54 1322 8445

**Email**E-mail: akbari\_as@yahoo.com,  
akbari1341@hotmail.com**Web page address****Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Zahedan University of Medical Sciences

**Full name of responsible person**

Dr. Asghar Akbari

**Street address**Razmejo-Moghadam Laboratory, School of  
Rehabilitation Sciences, Zahedan University of  
Medical Sciences, Ayatoallah Kafami St.**City**

Zahedan

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

Yes

**Title of funding source**

Zahedan 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**

Zahedan University of Medical Sciences

**Full name of responsible person**

Dr. Asghar Akbari

**Position**Associate Professor, Head of Dept. of Physiotherapy,  
PhD**Other areas of specialty/work****Street address**Razmejo-Moghadam Laboratory, School of  
Rehabilitation Sciences, Zahedan University of  
Medical Sciences, Ayatoallah Kafami St.**City**

Zahedan

**Postal code**

64855-98136

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

Zahedan University of Medical Sciences

**Full name of responsible person**

Dr. Asghar Akbari

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akbari1341@hotmail.com**Web page address****Person responsible for updating data****Contact****Name of organization / entity**

Zahedan University of Medical Sciences

**Full name of responsible person**

Dr. Asghar Akbari

**Position**Associate Professor, Head of Dept. of Physiotherapy,  
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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*