

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of the effectiveness of Ultrasound and Deep transverse friction massage on pain relief and grip strength in lateral epicondylitis of humerus

#### Protocol summary

##### Summary

Goal: To compare two different methods, deep transverse friction massage and Ultrasound in reducing pain and increasing Hand grip in lateral epicondylitis  
Material: Patients who diagnosed of lateral epicondylitis according to examination and have duration of complain more than 6 weeks included in study. Recent trauma, injection or surgery, neck or shoulder pain, use of steroids or Nsaid's and previous history of rheumatologic disorders are exclusion criteria. Patients randomly entered to deep friction massage or ultrasound groups.  
Method: Patients in deep friction massage group were treated for 5 sessions, and patients in Ultrasound group were received treatment for 10 sessions. Pain during daily activities and in resisted physical examinations using visual analog pain scale and grip strength by hand dynamo meter were measured before study and just after last session and also in later one month follow up sessions.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201101293384N6**

Registration date: **2011-11-20, 1390/08/29**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2011-11-20, 1390/08/29

##### Registrant information

##### Name

Ameneh Ebrahim Valoojerdi

##### Name of organization / entity

Endocrine research center

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 8894 5247

##### Email address

info@lapsurg.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice chancellor for research, Tehran University of Medical Sciences

##### Expected recruitment start date

2011-04-04, 1390/01/15

##### Expected recruitment end date

2012-08-03, 1391/05/13

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of the effectiveness of Ultrasound and Deep transverse friction massage on pain relief and grip strength in lateral epicondylitis of humerus

##### Public title

Comparison of the effectiveness of Ultrasound and Deep transverse friction massage on pain relief and grip strength in lateral epicondylitis of humerus

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: All the patients who lateral humeral epicondylitis according to the examinations and the duration of their signs is more than 6 weeks  
Exclusion

criteria:Direct trauma history; previous surgical history ;previous injection history; elbow manipulation ; elbow physiotherapy in previous 6 month ;NSAID's use ; narcotics ; topical anesthetics ; photosensitivity ; generalized skin disease;rhumatoid disease ; mental disease ; pregnancy ; pacemaker

**Age**

No age limit

**Gender**

Both

**Phase**

2

**Groups that have been masked**

No information

**Sample size**

Target sample size: 50

**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**

The Ethics Committee of Tehran University of Medical Sciences

**Street address**

TUMS, Ghods St.,Keshavarz Blvd,

**City**

Tehran

**Postal code**

1417653761

**Approval date**

2011-06-21, 1390/03/31

**Ethics committee reference number**

130/1328

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

Lateral epicondylitis

**ICD-10 code**

M77.1

**ICD-10 code description**

Lateral epicondylitis

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

pain

**Timepoint**

alternate day ( 5 times )

**Method of measurement**

visual analog scale

**Secondary outcomes****1****Description**

provocative tests

**Timepoint**

alternative day (5 times )

**Method of measurement**

provocative tests

**2****Description**

Grip strength

**Timepoint**

Each therapeutic sessions

**Method of measurement**

Hand dynamometer

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

Intervention: deep friction massage

**Category**

Rehabilitation

**2****Description**

control: ultrasound therapy intensity 2w/cm2 and pulse 20%

**Category**

Rehabilitation

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Hazrat Rasoul Hospital

**Full name of responsible person****Street address****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 Fotuhi

**Street address**

Tehran University of Medical Sciences , Ghods street , Keshavarz street , Vice chancellor for research, Tehran University of Medical Sciences

**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**

Rasoul Akram Hospital

**Full name of responsible person**

Dr.Shahram Kharabian

**Position**

resident of sports medicine

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

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## Person responsible for scientific

## inquiries

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

Tehran university of Medical Science

**Full name of responsible person**

Dr.Ali Mazaherinezhad

**Position**

sports medicine specialist

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

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## Person responsible for updating data

**Contact****Name of organization / entity****Full name of responsible person**

Dr.Shahram Kharabian

**Position**

Sports medicine resident

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

Tehran, Sattarkhan St,Nizazesh St, Rasul Akram Hospital

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drshahramkh@gmail.com

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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*