

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

03 Jul 2026

### The effect of lumbar muscle kinesiotaping on postural control of healthy adults after lumbar muscle fatigue

#### Protocol summary

##### Summary

The objectives of this study are to investigate the effect of lumbar muscle fatigue on the postural sway and to examine the effect of kinesiotaping on the postural sway after lumbar muscle fatigue. Fifteen healthy young men will be recruited in this study after giving consent. Participants should not have orthopedic problems in the lower extremities, Cardio-vascular diseases and neurological disorders that disturbed the balance. The mean velocity and sway area of the subjects will be assessed in the bilateral standing position with eyes closed in the two following conditions: non-taping (NT); kinesiotaping (KT). First, postural sway will be measured as the baseline. For the KT condition, kinesiotape will be applied on the lumbar extensor muscles before fatigue protocol. Then lumbar extensor fatigue will be produced by maintaining 60% of the maximum voluntary isometric contraction against the Dynamometer. Immediately after Fatigue, sway variables will be measured. For the NT condition, the tape will not be applied and measurement will be performed after fatigue as before. To avoid any bias, the order of the two conditions will be randomly assigned to each subject and the KT and NT conditions will be conducted by at least 7 days interval. Interventions of the study are fatigue and kinesiotaping of lumbar extensor muscles. Effects of interventions on sway speed and total area of participants will be measured by Kistler force plate unit.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201306297057N3**  
Registration date: **2013-10-25, 1392/08/03**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2013-10-25, 1392/08/03

##### Registrant information

###### Name

Mohammad Akbari

###### Name of organization / entity

Dept. of Physical Therapy, School of Rehabilitation,  
Tehran University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 21 2222 8051

###### Email address

akbari\_mo@tums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice chancellor for research of Tehran University of  
Medical Sciences

##### Expected recruitment start date

2013-09-01, 1392/06/10

##### Expected recruitment end date

2014-01-14, 1392/10/24

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effect of lumbar muscle kinesiotaping on postural  
control of healthy adults after lumbar muscle fatigue

##### Public title

The effect of lumbar muscle kinesiotaping on balance

##### Purpose

Treatment

## Inclusion/Exclusion criteria

Inclusion criteria: Healthy male aged 20 to 40 years without history of low back pain, orthopedic problems in the lower extremities, Cardio-vascular diseases and neurological disorders that disturbed the balance.  
Exclusion criteria: Appearance of any problem after recruiting subjects that affect data collection such as low back pain and unwillingness of participants to keep on the study.

## Age

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

## Gender

Male

## Phase

N/A

## Groups that have been masked

*No information*

## Sample size

Target sample size: **2**

## Randomization (investigator's opinion)

N/A

## Randomization description

## Blinding (investigator's opinion)

Not blinded

## Blinding description

## Placebo

Not used

## Assignment

Single

## 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

Ghods St., Keshavarz Blvd.,

##### City

Tehran

##### Postal code

##### Approval date

2013-07-29, 1392/05/07

##### Ethics committee reference number

92-01-32-21385-87560

## Health conditions studied

### 1

#### Description of health condition studied

Healthy male subjects with lumbar extensor muscle fatigue.

#### ICD-10 code

T73.3

#### ICD-10 code description

Exhaustion due to excessive exertion

## Primary outcomes

### 1

#### Description

Total sway area

#### Timepoint

First it was measured after including subjects, next one week later

#### Method of measurement

By using the Kistler force plate unit.

### 2

#### Description

Sway speed

#### Timepoint

First it was measured after including subjects, next one week later.

#### Method of measurement

By using the Kistler force plate unit.

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Lumbar extensor muscle fatigue will produce by maintaining 60% of the maximum voluntary isometric contraction against the Dynamometer

#### Category

Rehabilitation

### 2

#### Description

Kinesiotape will apply over the lumbar extensor muscles from twelfth thoracic vertebrae to second sacral vertebral level.

#### Category

Treatment - Drugs

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

School of Rehabilitation, Physiotherapy Lab. Number1

##### Full name of responsible person

Mehdi Ahmadi

##### Street address

Nezam Al., Shahnazari St., Madar Sq., Mirdamad Blvd.,

**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**  
Azadeh Shadmehr

**Street address**  
Nezam Al., Shahnazari St., Madar Sq., Mirdamad Blvd., Tehran.

**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**  
Vice research, School of Rehabilitation, Tehran University of Medical Sciences

**Full name of responsible person**  
Azadeh Shadmehr

**Position**  
Vice research

### Other areas of specialty/work

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Dept. of Physical therapy, School of Rehabilitation, Tehran University of Medical Sciences.

**Full name of responsible person**  
Mohammad Akbari

**Position**  
Ph.D

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## Person responsible for updating data

### Contact

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Dept. Of Physical Therapy, School of Rehabilitation, Tehran University of Medical Sciences

**Full name of responsible person**  
Mehdi Ahmadi

**Position**  
Master of Sciences student

### Other areas of specialty/work

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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*