

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Immediate effect of hip abductor muscles kinesio taping on static and dynamic balance before and after muscular fatigue induction in elderly people

#### Protocol summary

##### Study aim

According to the role of hip abductor muscles in controlling balance and their function in preventing falls in the elderly, the purpose of this research is to study the immediate effect of hip abductors muscles Kinesio Taping before and after induction of fatigue in elderly population.

##### Design

a randomized, triple-blinded, sham-controlled clinical trial with a parallel group design of 13 participants in each group which were randomized by concealed cards put in a pocket.

##### Settings and conduct

The study was carried out in the biomechanic laboratory of Tehran University of medical sciences. Firstly, the balance tests were assessed. Then KT was applied to hip abductor muscles followed by assessing balance tests. Finally, muscle fatigue was induced followed by assessment of balance tests.

##### Participants/Inclusion and exclusion criteria

eligibility criteria: age between 60 to 75 years old, independence of instrumental walking aids, ability to perform activities of daily living independently. The following are not eligible for the study: decompensated heart failure, neurological or muscular disease, significant visual changes, complaints of dizziness, history of hip or knee arthroplasty, unconsolidated fractures, open wounds or scar tissues in the region of applying KT.

##### Intervention groups

Intervention group: applied KT with tension Control group: Applied KT without tension<sup>26</sup>

##### Main outcome variables

Single leg stance test; maximum gait speed; star excursion balance test

#### General information

##### Reason for update

##### Acronym

KT = kinesiotape

##### IRCT registration information

IRCT registration number: **IRCT20230205057324N1**

Registration date: **2023-03-11, 1401/12/20**

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

Last update: **2023-03-11, 1401/12/20**

Update count: **0**

##### Registration date

2023-03-11, 1401/12/20

##### Registrant information

##### Name

Mohsen Rezvani

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 51 4221 8531

##### Email address

pt.rezvani@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2023-03-01, 1401/12/10

##### Expected recruitment end date

2023-05-21, 1402/02/31

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

### Scientific title

Immediate effect of hip abductor muscles kinesio taping on static and dynamic balance before and after muscular fatigue induction in elderly people

### Public title

Immediate effect of hip abductor muscles kinesio taping on static and dynamic balance before and after muscular fatigue induction in elderly people

### Purpose

Prevention

### Inclusion/Exclusion criteria

#### Inclusion criteria:

age between 60 and 75 years old independence for using instrumental aids independence for activities of daily living normal or controlled blood pressure with medicine

#### Exclusion criteria:

decompensated Heart Failure neurologic diseases or conditions such as MSA, TBI, CVA, MS and CP presence of muscular dysfunctions such as myopathies, fibrositis and MG presence of dizziness complains of visual problems which interfere with balance control history of knee or hip arthroplasty surgery presence of unconsolidated fractures diabetes mellitus interfering with detection of application in the soles of the feet presence of open wounds in lower limbs presence of unhealed scar tissues in the region of applying KT

### Age

From **60 years** old to **75 years** old

### Gender

Both

### Phase

N/A

### Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

### Sample size

Target sample size: **26**

### Randomization (investigator's opinion)

Randomized

### Randomization description

Randomization will be based on a single sequence (simple randomization) and the random number table method will be used, so that the table is read from the above and even numbers are considered for the intervention group (Kinesio taping with tension) and odd numbers are for the control group. allocation concealment will be done using sealed opaque envelopes and each of the random sequences will be recorded on a card and the cards will be placed inside the envelopes. In the end, after gluing the lid of the envelopes they will be placed inside a box. 26 envelopes will be placed inside the box. at the beginning of the study, one of the envelopes will be opened in order and the assigned group for each participant will be revealed.

### Blinding (investigator's opinion)

Triple blinded

### Blinding description

Participants will be aware of the method of taping being used on them, but they will not be aware of which group they have been allocated to. Participants are not aware of how the KT is used for the other group. Participants will not meet each other. The evaluating researcher does not know which group the participants belong to and a comfortable wearing hides the region in which KT is applied. The data analyzer is blinded for the Sham or Intervention group and knows the groups by the name 1 and 2.

### Placebo

Used

### Assignment

Other

### 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

No. 179, Somayyeh Ave, Tehran, Iran

##### City

Tehran

##### Province

Tehran

##### Postal code

۱۵۸۱۷۴۹۷۱۱

#### Approval date

2023-02-01, 1401/11/12

#### Ethics committee reference number

IR.TUMS.FNM.REC.1401.159

## Health conditions studied

### 1

#### Description of health condition studied

-

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

single leg stance time

#### Timepoint

Baseline assessment, after applying KT, after inducing muscle fatigue

#### Method of measurement

stopwatch

## 2

### **Description**

reached distances in Star Excursion Balance Test

### **Timepoint**

Baseline assessment, after applying KT, after inducing muscle fatigue

### **Method of measurement**

tape measure

## 3

### **Description**

Maximum gait speed

### **Timepoint**

Baseline assessment, after applying KT, after inducing muscle fatigue

### **Method of measurement**

utilization of speed measurement formula (distance divided by time)

## **Secondary outcomes**

empty

## **Intervention groups**

### 1

#### **Description**

Intervention group: Gluteus Medius excitatory taping method was used for the intervention group. 2 I shaped tapes in which only the middle third was held in 35% tension was attached to the skin, one from the anterior part of the Iliac crest to the greater trochanter of the femur, and the other from the posterior part of the iliac crest to the greater trochanter of the femur. tape length was measured for each individual separately. Messon KT made in China was utilized in this study. In this brand of KT, in a 10-centimeter cut of tape, when held in 35% tension, a 2-centimeter increase in length happens.

#### **Category**

Rehabilitation

### 2

#### **Description**

Control group: only one I shape piece of KT with no tension in horizontal direction will be placed in the lateral side of hip joint, on the skin of abductor muscles region.

#### **Category**

Rehabilitation

## **Recruitment centers**

### 1

#### **Recruitment center**

##### **Name of recruitment center**

Rehabilitation school of Tehran University of Medical Sciences

##### **Full name of responsible person**

Mohsen Rezvani

#### **Street address**

No 179, Somayyeh Ave, Tehran, Iran

#### **City**

Tehran

#### **Province**

Tehran

#### **Postal code**

۱۵۸۱۷۴۹۷۱۱

#### **Phone**

+98 51 4221 8531

#### **Email**

pt.rezvani@gmail.com

## **Sponsors / Funding sources**

### 1

#### **Sponsor**

##### **Name of organization / entity**

Tehran University of Medical Sciences

##### **Full name of responsible person**

Akbar Fotouhi

##### **Street address**

Vice Chancellor for research and Technology, Sixth Floor, Central University Organization, corner of Quds Street, Keshavarz Boulevard

##### **City**

Tehran

##### **Province**

Tehran

##### **Postal code**

1417653761

##### **Phone**

+98 21 8163 3639

##### **Email**

research@tums.ir

#### **Grant name**

#### **Grant code / Reference number**

#### **Is the source of funding the same sponsor organization/entity?**

Yes

#### **Title of funding source**

Tehran University of Medical Sciences

#### **Proportion provided by this source**

100

#### **Public or private sector**

Public

#### **Domestic or foreign origin**

Domestic

#### **Category of foreign source of funding**

empty

#### **Country of origin**

#### **Type of organization providing the funding**

Academic

## **Person responsible for general inquiries**

#### **Contact**

##### **Name of organization / entity**

Tehran University of Medical Sciences

##### **Full name of responsible person**

Mohsen Rezvani

**Position**  
student  
**Latest degree**  
Bachelor  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
No 179, Somayyeh Ave, Tehran, Iran  
**City**  
Tehran  
**Province**  
Tehran  
**Postal code**  
۱۵۸۱۷۴۹۷۱۱  
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**Latest degree**  
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**Other areas of specialty/work**  
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۱۵۸۱۷۴۹۷۱۱  
**Phone**  
+98 51 4221 8531  
**Fax**  
**Email**  
pt.rezvani@gmail.com

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Tehran University of Medical Sciences  
**Full name of responsible person**  
Nastaran Ghotbi  
**Position**  
Professor  
**Latest degree**  
Ph.D.  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
School of rehabilitation, Piche-Shemiran, Enghelab Street  
**City**  
Tehran  
**Province**  
Tehran  
**Postal code**  
1148965111  
**Phone**  
+98 21 7752 8468  
**Email**  
nghotbi@sina.tums.ac.ir

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Tehran University of Medical Sciences  
**Full name of responsible person**  
Mohsen Rezvani  
**Position**

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

### Study Protocol

Yes - There is a plan to make this available

### Statistical Analysis Plan

Yes - There is a plan to make this available

### Informed Consent Form

Yes - There is a plan to make this available

### Clinical Study Report

Yes - There is a plan to make this available

### Analytic Code

Yes - There is a plan to make this available

### Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available

### Title and more details about the data/document

All data will be available after unidentification.

### When the data will become available and for how long

The access period starts 3 months after the article is published

### To whom data/document is available

For researchers working in academic, scientific and hospital institutions.

### Under which criteria data/document could be used

Researchers working in the field of elderly rehabilitation

### From where data/document is obtainable

Applicants could contact Mr. Rezvani via E-mail:  
pt.rezvani@gmail.com

### What processes are involved for a request to access data/document

After identification of the applicant, the data will be sent to their mail.

### Comments