

Clinical Trial Protocol

Iranian Registry of Clinical Trials

06 Jul 2026

Evaluation of immediate effect of heel lift on mobility and functional balance in elderly with Leg-Length Discrepancy after total knee replacement

Protocol summary

Study aim

Evaluation of the immediate effect of heel lift on mobility and functional balance in the elderly with leg length discrepancy after knee arthroplasty

Design

The study will be before after (single group) with and without heel lift on 20 elderly people

Settings and conduct

Balance and mobility in this study were measured by Timed up and go test and berg balance scale. Then, based on the shortness of limbs of the people present in the study, a suitable heel lift was prepared and placed in the shoes of the people and the tests were repeated. This study was conducted in Ilam.

Participants/Inclusion and exclusion criteria

Inclusion criteria: age over 60 years; Structural shortness of the lower extremities, More than 20 mm. Non-inclusion criteria: history of fracture, orthopedic or neurological injury in the lower limb; Taking medications that have a significant effect on nervous system and balance.

Intervention groups

One intervention group: consists of people who use heel lifts for half an hour based on the shortness of their legs.

Main outcome variables

Functional balance; mobility

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20140219016643N9**

Registration date: **2021-08-04, 1400/05/13**

Registration timing: **prospective**

Last update: **2021-08-04, 1400/05/13**

Update count: **0**

Registration date

2021-08-04, 1400/05/13

Registrant information

Name

Behshid Farahmand

Name of organization / entity

Iran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 2222 0947

Email address

farahmand.b@iums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-08-23, 1400/06/01

Expected recruitment end date

2021-09-06, 1400/06/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of immediate effect of heel lift on mobility and functional balance in elderly with Leg-Length Discrepancy after total knee replacement

Public title

Effect of heel lift on balance in in elderly with Leg-Length Discrepancy

Purpose

Treatment

IR.IUMS.REC.1400.291

Inclusion/Exclusion criteria

Inclusion criteria:

At least six months have passed since the joint replacement Knee arthroplasty in one side Structural shortening of the limb more than 20 mm Ability to walk without a cane or assistive devices

Exclusion criteria:

History of fracture, orthopedic or neurological injury in the lower limb professional athlete Existence of any deformity or disorder in the lower limb other than structural shortening History of damage to the vestibular system or brain damage, specific visual impairment that affects a person's daily activities Taking medications that have a significant effect on a person's nervous system and balance

Age

From **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

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 Iran University of Medical Sciences

Street address

School of Rehabilitation Sciences, Madadkaran Alley., Shahnazari Street., Madar Square, Mirdamad Blvd.

City

Tehran

Province

Tehran

Postal code

1545913487

Approval date

2021-06-29, 1400/04/08

Ethics committee reference number

Health conditions studied

1

Description of health condition studied

Knee arthroplasty

ICD-10 code

Z96.65

ICD-10 code description

Presence of artificial knee joint

Primary outcomes

1

Description

Mobility based on Timed up and go test

Timepoint

Before and immediately after the intervention

Method of measurement

Timed up and go test

2

Description

Balance based on berg balance scale

Timepoint

Before and immediately after the intervention

Method of measurement

Berg balance scale

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Use a heel lift based on leg length discrepancy of each person for half an hour.

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

Zagros orthopedic center

Full name of responsible person

Nabi Ramezani

Street address

Zagros orthopedic center, corner of Adib Alley, South Saadi Ave

City

Ilam

Province

Ilam
Postal code
6931976337
Phone
+98 84 3336 9198
Email
miladzamani.to@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Seyyed Abbas Motevalian

Street address

5th Floor, Iran University of Medical Sciences, next to
Milad Tower, Hemmat Highway, Tehran

City

Tehran

Province

Tehran

Postal code

۱۴۴۹۶۱۴۵۳۵

Phone

+98 21 8670 2503

Email

research-m@iums.ac.ir

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

Yes

Title of funding source

Iran 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**

Iran University of Medical Sciences

Full name of responsible person

Behshid Farahmand

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Orthotics and Prosthetics

Street address

School of Rehabilitation Sciences of Iran University of
Medical Sciences, Shahnazari St., Mother Square,
Mirdamad Blv, Tehran, Iran

City

Tehran

Province

Tehran

Postal code

۱۳۴۸۷ - ۱۵۴۵۹

Phone

+98 21 2222 2059

Email

farahmandb1@yahoo.com

Person responsible for scientific inquiries

Contact**Name of organization / entity**

Iran University of Medical Sciences

Full name of responsible person

Behshid Farahmand

Position

Assistant professor

Latest degree

Ph.D.

Other areas of specialty/work

Orthotics and Prosthetics

Street address

School of Rehabilitation Sciences of Iran University of
Medical Sciences, Shahnazari St., Mother Square,
Mirdamad Blv, Tehran, Iran

City

Tehran

Province

Tehran

Postal code

1545913487

Phone

+98 21 2222 2059

Email

farahmandb1@yahoo.com

Person responsible for updating data

Contact**Name of organization / entity**

Iran University of Medical Sciences

Full name of responsible person

Milad Zamani

Position

Msc student

Latest degree

Bachelor

Other areas of specialty/work

Orthotics and Prosthetics

Street address

3rd floor, Baran Complex, Next to Provincial
Broadcasting Organization, Keshvari Sq, Beheshti
Blvd

City

Ilam
Province
Ilam
Postal code
6931436299
Phone
+98 84 3323 3108
Email
miladzamani.to@gmail.com

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

Not applicable

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

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

Descriptive information as well as research variables including pre-test and post-test data can be shared.

When the data will become available and for how long

Six months after printing results

To whom data/document is available

Researchers working in academic and scientific institutions

Under which criteria data/document could be used

To write a systematic review and meta-analysis study.

From where data/document is obtainable

Corresponding author Dr. Behshid Farahmand Via email to farahmandb1@yahoo.com

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

The complete information of the applicant should be sent by e-mail along with a letter indicating that the data is used to write a systematic review or meta-analysis.

Comments