

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Evaluation of the effect of treadmill walking on elderly balance

Protocol summary

Summary

Objectives: to examine the effectiveness of forward and backward walking on treadmill to improve balance performance in elderly people. Design: randomized controlled trial. Setting: Shiraz university of medical sciences faculty of rehabilitation. Subjects: 29 community dwelling older adults who had Berg Balance Scale more than 30 were able to walk without aid divided to two groups, control(15) and experimental (14). Intervention: subjects in experimental group participated in 30 min of walking on treadmill three times per week for 4 weeks. Control group had their ordinary activity in their normal life. Measurement: using the force platform system to evaluate balance ability and postural sway. Anteroposterior (AP) and mediolateral (ML) displacement of center of pressure (COP) and AP ,ML and total velocity were measured. Data were collected in two different tests during quiet standing and tandem position and standing on foam before and after intervention in both groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201209199440N2**

Registration date: **2012-10-04, 1391/07/13**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2012-10-04, 1391/07/13

Registrant information

Name

Soraya Pirouzi

Name of organization / entity

School of Rehabilitation Sciences, Shiraz University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences

Expected recruitment start date

2012-09-19, 1391/06/29

Expected recruitment end date

2012-10-20, 1391/07/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of the effect of treadmill walking on elderly balance

Public title

Evaluation of the effect of the treadmill walking on elderly balance

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: 60 year-old and community dwelling older people and more with the Berg Balance Scale more than 30. Exclusion criteria: older adults with cardiopulmonary diseases , hypertension , hypotension, vertigo, severe pain and weakness in musculoskeletal systems ,orthopedic problem such as fractures , arthroplasty.

Age

From **60 years** old

Gender

Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: 29

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

Shiraz university of medical sciences

Street address

Central building of Shiraz university of medical sciences, Zand avenue

City

Shiraz

Postal code

Approval date

2012-07-26, 1391/05/05

Ethics committee reference number

ct-91-6161

Health conditions studied

1

Description of health condition studied

balance in elderly people

ICD-10 code

R26

ICD-10 code description

Abnormalities of gait and mobility

Primary outcomes

1

Description

displacement and velocity of Center Of Pressure

Timepoint

before and after intervention

Method of measurement

by a Force Platform

Secondary outcomes

1

Description

Berg Balance Test

Timepoint

before and after intervention

Method of measurement

clinical assesment

Intervention groups

1

Description

Intervention group : 30 minutes walking on treadmill 5 minutes warm up ,10 minutes forward walking, 10 minutes backward walking and 5 minutes cool down. speed was self-selected according to their ability 3 times for 4 weeks.

Category

Rehabilitation

2

Description

Control group had their normal life and activity.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

School of Rehabilitation Sciences, Shiraz University of medical sciences

Full name of responsible person

Soraya Piroozi

Street address

School of Rehabilitation Sciences

City

Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shiraz university of medical scences

Full name of responsible person

Dr. Hatam

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Central Building 7th floor, Zand avenue

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

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Person responsible for updating data

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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