Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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
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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
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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 scences
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

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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