Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of increasing treadmill speed on functional improvement in chronic stroke patients

Protocol summary

Summary

Functional improvement is an important aim of rehabilitation of stroke patients. Among rehabilitation paradigms developed to improve mobility in stroke subjects, the most popular is treadmill training, alone, or combined with partial body weight support. Such training paradigms, in which subjects are trained at their preferred speed, lead to improvements in gait speed that are modestly superior to those obtained by conventional gait training The aim of this study is to examine functional improvement in chronic stroke patients after walking retraining at faster than preferred walking speeds. The chronic stroke patients in Semnan city (n = 15) will participate in treadmill training with their self-selected preferred speed + 40%, three times per week for 4 weeks. Subjects will be assessed before and after the intervention and at follow-up after 45 days. Inclusions criteria - the participants will be more than six months post-stroke with an ability to walk at least 10 m independently. Functional improvement will be evaluated using Timed Up & Go, 6-Minute Walk test, 10 Meter Walk test, and lower extremity Fugl-Meyer Assessment Scale

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016042427562N1**
Registration date: **2016-05-30, 1395/03/10**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2016-05-30, 1395/03/10

Registrant information

Name

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Govermental

Expected recruitment start date

2016-05-30, 1395/03/10

Expected recruitment end date

2016-08-20, 1395/05/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of increasing treadmill speed on functional improvement in chronic stroke patients

Public title

The effect of fast walking in stroke patients

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: all subjects are able to walk at least 10 m Independently; all subjects are more than six months post stroke; the affected area is cerebral cortex; subjects are 45 to 70 years old Exclusion criteria: comprehensive aphasia; major cognitive impairment; incontinence; history of falling; sensory disturbance of the lower limbs; cerebellum impairment; and any condition (apart from

stroke) that affect their walking ability

Age
From **45 years** old to **70 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **15**

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
Semnan University of Medical Sciences

Street address
Semnan University of Medical Sciences, Basij Blvd, Semnan, Iran

City
Semnan

Postal code
Iran

Approval date
2016-03-17, 1394/12/27

Ethics committee reference number
IR.SEMUMS.REC.1394.195

Health conditions studied

1

Description of health condition studied
post-stroke

ICD-10 code
I64

ICD-10 code description
Stroke, not specified as haemorrhage or infarction

Primary outcomes

1

Description
Patient function

Timepoint
Befor,after and 45 dayes after intervention

Method of measurement
Timed Up & Go, 6-Minute Walk, 10 Meter Walk tests

Secondary outcomes

1

Description
Lower extermity function

Timepoint
Before, after, and 45 days after intervention

Method of measurement
Fugl-Meyer lower extremity assessment

Intervention groups

1

Description
The chronic stroke patients will train in treadmill with their self-selected preferred speed + 40%, for 30 min, three times per week for 4 weeks.

Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Neuromuscular Rehabilitation Research Center

Full name of responsible person
Roghayeh Mohammadi

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Neuromuscular Rehabilitation Research Center, Qods St, Mashahir Sq, Semnan, Iran

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Sponsors / Funding sources

1

Sponsor

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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
Semnan 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

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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