

Clinical Trial Protocol

Iranian Registry of Clinical Trials

21 Jun 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

Roghayeh Mohammadi

Name of organization / entity

Semnan University of Medical Sciences

Country

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Recruitment status

Recruitment complete

Funding source

Governmental

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

Before, after and 45 days after intervention

Method of measurement

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

Secondary outcomes**1****Description**

Lower extremity 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
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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

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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**Contact****Name of organization / entity**

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Full name of responsible person

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Position

PhD, Assistant professor

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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