# The effect of rectus femoris transfer on stroke survivors walking with a stiff knee gait.

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Determine the effect of rectus femoris transfer on stroke survivors walking with a stiff knee gait on functional-, activity- and participation level.

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| **Ethical review** | Approved WMO |
| **Status** | Recruitment stopped |
| **Health condition type** | Central nervous system vascular disorders |
| **Study type** | Observational non invasive |

## Summary

### ID

NL-OMON41870

**Source**
ToetsingOnline

**Brief title**
Rectus femoris transfer on stroke survivors walking with a stiff knee gait.

### Condition

- Central nervous system vascular disorders
- Soft tissue therapeutic procedures

**Synonym**
'Stroke' en 'hemiplegia'

**Research involving**
Human

### Sponsors and support

**Primary sponsor:** Revalidatiecentrum Het Roessingh
**Source(s) of monetary or material Support:** Subsidie gelden beschikbaar gesteld door Roessingh Research and Development

## Intervention

**Keyword:** Rectus femoris transfer, Stiff knee gait, Stroke

## Outcome measures

### Primary outcome

Primary study outcome is knee flexion in swing phase

### Secondary outcome

Secundary study outcomes are hip , knee ankle kinematics. EMG actvity of

muscles of the under extremity, BORG- and VAS questionnaires on tonus,

Duncan-Ely test for m. rectus femoris, six minutes walking test,

pulmonary-function test, Timed Up and Go (TUG), L-test, Timed Up Stairs test,

Motricity Index, Rivermead Mobility Index en the Stroke Impact scale (SIS).

# Study description

### Background summary

Falling and tripping are due to foot clearence problems in stroke patients who have a Stiff Knee Gait (SKG). SKG is defined as diminished and delayed peak knee flexion in swing. One main cause of stiff-knee gait in stroke patients is spasticity in the rectus femoris muscle. A treatment to increase diminished knee flexion in SKG is a rectus femoris transfer (RFT). This surgery (RFT) is often applied in cerebral palsy children and stroke patients, the m. rectus femoris will be fixed from ventral side of the knee (extensor) to dorsal side of the knee (flexor). Therefore, the m. rectus femoris function will switch from a knee flexor to a knee extensor. RFT intervention is limited review with subjective measurements in stroke patients.

### Study objective

Determine the effect of rectus femoris transfer on stroke survivors walking with a stiff knee gait on functional-, activity- and participation level.

### Study design

One group pretest-posttest.

**Study burden and risks**

Nature and extent of the burden with participation are two half days for measurements. The measurements take place at Roessingh Research and Development. The patients have to walk eight times a distance of 7.5 meters in three different velocities. After that, patients have to fill in three questionnaires and they have to do some little tests. The risks associated with participation are limited during measurements.

## Contacts

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

**Age**
Adults (18-64 years)
Elderly (65 years and older)

### Inclusion criteria

- Patient has eligible for a rectus femoris transfer surgery by treating physiatrist/orthopedist and has been informed about the surgery.
- Age > 18 years
- More than 6 months after stroke
- Patient walks independently (FAC >=3)
- Patient knows time, place and person. Patient could understand motor-,cognitive and communicative instructions.

### Exclusion criteria

- Neurological impairments that are not due to stroke
- Progressive disease that influence gait

## Study design

### Design

**Study type:** Observational non invasive

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|---|---|
| Masking: | Open (masking not used) |
| Control: | Uncontrolled |
| Primary purpose: | Treatment |

### Recruitment

NL

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|---|---|
| Recruitment status: | Recruitment stopped |
| Start date (anticipated): | 19-05-2015 |
| Enrollment: | 17 |
| Type: | Actual |

## Ethics review

Approved WMO

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| Date: | 16-04-2015 |
| Application type: | First submission |

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| Review commission: | MEC-U: Medical Research Ethics Committees United (Nieuwegein) |

# Study registrations

## Followed up by the following (possibly more current) registration

No registrations found.

## Other (possibly less up-to-date) registrations in this register

ID: 21849
Source: Nationaal Trial Register
Title:

## In other registers

| Register | ID |
|---|---|
| Other | 21900 |
| CCMO | NL51373.044.14 |