

# Posterior Tibial Tendon Transfer in Foot Drop; Description and Analysis of the Circumtibial Route

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To assess the range and strength of dorsiflexion of the ankle and the percentage of AFO-use after executing a variation on the circumtibial route of the posterior tibial tendon transfer, performed in our center on patients with foot drop.

<b>Ethical review</b>	Not approved
<b>Status</b>	Will not start
<b>Health condition type</b>	Peripheral neuropathies
<b>Study type</b>	Observational non invasive

## Summary

### ID

NL-OMON56697

### Source

ToetsingOnline

### Brief title

Posterior Tibial Tendon Transfer in Foot Drop

### Condition

- Peripheral neuropathies
- Bone and joint therapeutic procedures

### Synonym

Foot drop, peroneal nerve palsy

### Research involving

Human

### Sponsors and support

**Primary sponsor:** Leids Universitair Medisch Centrum

**Source(s) of monetary or material Support:** Ministerie van OC&W

## Intervention

**Keyword:** Foot drop, Orthopedic surgery, Peroneal palsy, Tendon transfer

## Outcome measures

### Primary outcome

The need for AFO after surgery compared to before surgery.

### Secondary outcome

Active dorsiflexion of the ankle after tendon transfer surgery compared to before surgery. Furthermore, pain, range of motion of the ankle, muscle strength of the ankle, limitations during daily life activities and complications

## Study description

### Background summary

Foot drop is an invalidating loss of dorsiflexion of the ankle as a result of damage of the peroneal nerve. For years a transfer of the posterior tibial tendon has been a surgical options for patients with foot drop. The goal of this type of surgery is to restore dorsiflexion limiting the dependence from ankle-foot orthoses (AFO). Most surgeons perform a tibial tendon transfer trough the interosseous membrane. As an alternative, the circumtibial route of posterior tibial tendon transfers has been described in patients suffering from leprosy. This technique is easier to perform, and has potentially similar results with a lower complication rate. In our center, the circumtibial route has been the standard surgical approach, but literature lacks studies in traumatic foot drop patients. Our hypothesis is that the circumtibial route offers a safe surgical technique that significantly restores ankle dorsiflexion resulting in a reduced dependency on AFO.

### Study objective

To assess the range and strength of dorsiflexion of the ankle and the percentage of AFO-use after executing a variation on the circumtibial route of the posterior tibial tendon transfer, performed in our center on patients with

foot drop.

## **Study design**

Case series

## **Study burden and risks**

There are no risks associated with participation.

## **Contacts**

### **Public**

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Leiden 2333 ZA  
NL

### **Scientific**

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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 with a drop foot due to a traumatic peripheral nerve injury treated with a posterior tibial tendon transfer.

## Exclusion criteria

- No informed consent
- Central neurological disorders (e.g. cerebrovascular events, leprosy)
- Previous surgery such as ankle arthrodeses or other operations or disabilities influencing ankle function.
- History of a malignancy in the affected limb
- History of muscle dystrophy or metabolic disease
- History of rheumatoid arthritis
- Insufficient Dutch language skills.

## Study design

### Design

**Study type:** Observational non invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Treatment

### Recruitment

NL

Recruitment status: Will not start

Enrollment: 30

Type: Anticipated

## Ethics review

Not approved

Date: 26-03-2024

Application type: First submission

Review commission: METC Leiden-Den Haag-Delft (Leiden)

metc-ldd@lumc.nl

## Study registrations

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

No registrations found.

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

No registrations found.

### In other registers

Register	ID
CCMO	NL84161.058.23