# Mirror Arm Exercises for STROke

Submission date	Recruitment status No longer recruiting	[X] Prospectively registered		
18/11/2010		☐ Protocol		
Registration date 18/11/2010	Overall study status Completed	Statistical analysis plan		
		[X] Results		
<b>Last Edited</b> 23/04/2015	Condition category Circulatory System	[] Individual participant data		

## Plain English summary of protocol

Not provided at time of registration

# **Contact information**

## Type(s)

Scientific

#### Contact name

Miss Nessa Thomas

#### Contact details

University of Salford Centre for Rehabilitation and Human Performance Research Allerton Building Frederick Road Salford United Kingdom M6 6PU

•

n.thomas@salford.ac.uk

# Additional identifiers

**EudraCT/CTIS** number

**IRAS** number

ClinicalTrials.gov number

Secondary identifying numbers

9353

# Study information

#### Scientific Title

Mirror Arm Exercises for STROke

#### Acronym

**MAESTRO** 

#### Study objectives

A new technique, called mirror therapy, may improve the recovery of the upper limb. With this method, a mirror is placed alongside the 'good' arm so that the reflection looks as if the weak arm is moving. The patient moves both arms, as much as they can, while looking in the mirror. The appearance of both arms moving normally seems to strengthen the brain's attempts to 'rewire' the connections to produce movements of the weak limb. Ultimately we want to investigate whether mirror therapy works if used during stroke rehabilitation in a manner that is suitable for the NHS. Initially we want to test whether mirror therapy:

- 1. Is acceptable to patients and the clinical team
- 2. How much it is used by patients
- 3. Is practical to use in the NHS
- 4. Causes any side effects
- 5. Improves different types of problems such as weakness, numbness, awareness of the affected side, grips and grasps and use of the arm and hands

The results will also tell us how many patients we can recruit, how much therapy they are able to do and how variable their outcomes are; information that we will use in future studies.

Participants who are in a rehabilitation unit will be recruited at least 1 week after their stroke. They will be randomly divided to receive mirror or control therapy. The control treatment is exercises to the legs delivered in the same way as the mirror therapy (but with no mirror). Both groups will also receive usual treatment. Participants will aim to exercise for up to 30 minutes a day (in several sessions according to their ability and tolerance) for 4 weeks. We will assess how well the patient can move and use their weak arm and hand before and after the trial and again one month later. At the end of the treatment we will also assess how acceptable the patients and the clinical team found the therapy, how much the patients used the treatment and whether there were any side effects.

# Ethics approval required

Old ethics approval format

# Ethics approval(s)

Not provided at time of registration

# Study design

Multicentre randomised interventional phase II treatment trial

# Primary study design

Interventional

# Secondary study design

Randomised controlled trial

#### Study setting(s)

Hospital

#### Study type(s)

Treatment

#### Participant information sheet

#### Health condition(s) or problem(s) studied

Topic: Stroke Research Network; Subtopic: Rehabilitation; Disease: In hospital study

#### Interventions

Participants in a rehabilitation unit are recruited at least 1 week after their stroke and are randomly divided to receive mirror or control therapy. The control treatment is exercises to the legs delivered in the same way as the mirror therapy (but with no mirror). Both groups will also receive usual treatment. Participants will aim to exercise for up to 30 minutes a day (in several sessions according to their ability and tolerance) for 4 weeks.

#### Intervention Type

Behavioural

#### Primary outcome measure

How well the patient can move and use their weak arm and hand, measured at baseline, immediately after the trial, and one month after the trial

#### Secondary outcome measures

Measured at end of treatment:

- 1. Acceptability of therapy to patients and clinical team
- 2. How much the patients used the treatment
- 3. Side effects

#### Overall study start date

03/01/2011

#### Completion date

02/07/2012

# **Eligibility**

#### Key inclusion criteria

- 1. First time stroke at least 1 week previously and inpatient in a stroke rehabilitation unit
- 2. No premorbid conditions limiting upper limb function
- 3. Sufficient cognitive and communication skills to give consent (as judged by the clinical team)
- 4. Medically stable and able to participate in rehabilitation (as judged by the clinical team)
- 5. Upper limb weakness which limits activity (Motricity Index Upper Limb score less than 99)

#### Participant type(s)

Patient

#### Age group

#### Adult

#### Sex

Both

# Target number of participants

Planned sample size: 83

#### Key exclusion criteria

- 1. Unable to consent
- 2. Not a first time stroke
- 3. Previous condition limiting upper limb function
- 4. Unable to participate in rehabilitation
- 5. No upper limb weakness

#### Date of first enrolment

03/01/2011

#### Date of final enrolment

02/07/2012

## Locations

#### Countries of recruitment

England

**United Kingdom** 

# Study participating centre University of Salford

Salford United Kingdom M6 6PU

# Sponsor information

#### Organisation

University of Salford (UK)

#### Sponsor details

Centre for Rehabilitation and Human Performance Research Allerton Building Frederick Road Salford England United Kingdom M6 6PU

#### Sponsor type

University/education

#### Website

http://www.salford.ac.uk/

#### ROR

https://ror.org/01tmqtf75

# Funder(s)

#### Funder type

Government

#### **Funder Name**

National Institute of Health Research (NIHR) (UK) - Research for Patient Benefit (RfPB) Programme

# **Results and Publications**

## Publication and dissemination plan

Not provided at time of registration

Intention to publish date

Individual participant data (IPD) sharing plan

# IPD sharing plan summary

Not provided at time of registration

# Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	07/04/2015		Yes	No