

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### A clinical trial on the effect of mirror therapy in comparison with routine physiotherapy on motor abilities of patients with stroke patients

#### Protocol summary

##### Summary

Hemiparesis and hemiplegia are the most common and the worse complications of stroke. This study aimed to observe the effect of mirror therapy on motor abilities of patients with stroke in Mashhad, Iran. In this Randomized Control Trial, 40 patients with stroke (more than 1 month after the last stroke) will be assigned randomly in two groups of mirror therapy (n=20) and control (n=20). The inclusion/ exclusion criteria will be age of 30-65 years old, score of 1-3 from motor recovery index, lack of cognitive, verbal and visual disorder, recurrence of stroke or any problem responsible for stopping rehabilitation program. Intervention will be include 20 sessions of 30-minute mirror therapy, i.e. will perform flexion and extension of upper and lower extremities of affected and healthy ones in front of mirror and observe just the mirror image. In addition to mirror therapy in both groups, the routine program (physiotherapy and neuromuscular stimulation) will be performed. Upper and lower extremity motor abilities will be assessed before, during and after treatment using motor recovery scale, function Index Measure, Function Ambulation Classification, Barthel Index Scale and the range of motion will be measured by goniometry then two groups will compared.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201204289575N1**  
Registration date: **2013-03-22, 1392/01/02**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2013-03-22, 1392/01/02

#### Registrant information

##### Name

Mahnaz Bahrami

##### Name of organization / entity

Mashhad University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 51 1842 1744

##### Email address

bahramim901@mums.ac.ir

#### Recruitment status

##### Recruitment complete

#### Funding source

Vice Chancellor for Research, Mashhad University of Medical Sciences

#### Expected recruitment start date

2012-11-21, 1391/09/01

#### Expected recruitment end date

2013-06-22, 1392/04/01

#### Actual recruitment start date

empty

#### Actual recruitment end date

empty

#### Trial completion date

empty

#### Scientific title

A clinical trial on the effect of mirror therapy in comparison with routine physiotherapy on motor abilities of patients with stroke patients

#### Public title

The effect of mirror therapy on rehabilitation of stroke patients

#### Purpose

Treatment

#### Inclusion/Exclusion criteria

Inclusion criteria: 1. At least 1 month after stroke. 2. Conducting routine rehabilitation program. 3. Score of

1-3 from motor recovery index. 4. No severe cognitive, verbal and visual disorder, history of dementia, Global aphasia or any visual disorder based on neurologist examination. 5. First experience of stroke. 6. No disease resulting in motor defects. Exclusion criteria: 1. Repetitive stroke. 2. No tendency for continuing rehabilitation program. 3. Any disease such as hemi anesthesia, trauma, severe infection, etc which cause to stop rehabilitation program. 4. Absent in 4 intermittent sessions or 2 subsequent sessions of course.

#### **Age**

From **30 years** old to **65 years** old

#### **Gender**

Both

#### **Phase**

2

#### **Groups that have been masked**

*No information*

#### **Sample size**

Target sample size: **40**

#### **Randomization (investigator's opinion)**

Randomized

#### **Randomization description**

#### **Blinding (investigator's opinion)**

Not blinded

#### **Blinding description**

#### **Placebo**

Not used

#### **Assignment**

Parallel

#### **Other design features**

Coin dropping will be use for random assignment in two groups of intervention and control. i.e. the clients with first session of physiotherapy in odd days will be assigned to test group and the others whose first session in even days will be assigned to control group.

## **Secondary Ids**

empty

## **Ethics committees**

### **1**

#### **Ethics committee**

##### **Name of ethics committee**

Ethics committee of Mashhad University of Medical Sciences

##### **Street address**

Mashhad Faculty of Nursing and Midwifery, Ebn-e Sina St. Doktora Crossroads.

##### **City**

Mashhad

##### **Postal code**

9137913199

#### **Approval date**

2012-10-27, 1391/08/06

#### **Ethics committee reference number**

91/563419

## **Health conditions studied**

### **1**

#### **Description of health condition studied**

stroke

#### **ICD-10 code**

167.9

#### **ICD-10 code description**

Cerebrovascular disease, unspecified

## **Primary outcomes**

### **1**

#### **Description**

motor ability of upper extremity

#### **Timepoint**

before, 5th, 10th, 15th and last sessions of intervention

#### **Method of measurement**

Goniometry, Barthel Index Scale, Motor Recovery Index.

### **2**

#### **Description**

motor ability of lower extremity

#### **Timepoint**

before, 5th, 10th, 15th and last sessions of intervention

#### **Method of measurement**

Goniometry, Function Ambulation Classification, Barthel Index Scale, Function Index Measure, Motor Recovery Index.

## **Secondary outcomes**

empty

## **Intervention groups**

### **1**

#### **Description**

Intervention will be 20 sessions of 30-minute mirror therapy, i.e. flexion and extension of upper and lower extremities of affected and healthy ones in front of mirror and observe just the mirror image. Upper and lower extremity motor abilities will be assessed before, at 5th, 10th, 15th and last sessions of intervention using motor recovery scale, function Index Measure, Function Ambulation Classification, Barthel Index Scale and the range of motion will be measured by goniometry.

#### **Category**

Rehabilitation

### **2**

#### **Description**

Control group will perform all physiotherapy exercises of upper and lower extremities without mirror.

#### **Category**

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

**Name of recruitment center**

Physiotherapy unit of Quaem Hospital

**Full name of responsible person**

Mohammad Javad Zarandi

**Street address**

Beginning of Ahmadabad Ave. Dr. shariati Sq.

**City**

Mashhad

### 2

#### Recruitment center

**Name of recruitment center**

Physiotherapy unit of Emam Reza Hospital

**Full name of responsible person**

Abbas Ramezani

**Street address**

Emam Reza Sq. Ebne Sina Ave.

**City**

Mashhad

## Sponsors / Funding sources

### 1

#### Sponsor

**Name of organization / entity**

Vice Chancellor for Research, Mashhad University of  
Medical Sciences

**Full name of responsible person**

Mohsen Tafaghodi

**Street address**

Faculty of Nursing and Midwifery, Ebn-e Sina St.  
Doktora Crossing,

**City**

Mashhad

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Vice Chancellor for Research, Mashhad 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**

Mashhad Faculty of Nursing and Midwifery

**Full name of responsible person**

Mahnaz Bahrami

**Position**

MS Nursing/Postgraduate student

**Other areas of specialty/work****Street address**

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## Person responsible for scientific inquiries

### Contact

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**Full name of responsible person**

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PhD

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## Person responsible for updating data

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**Web page address**

**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*