

# Effect of virtual reality on physical and mental health in patient with stroke

<b>Submission date</b> 20/10/2014	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 29/10/2014	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 29/10/2014	<b>Condition category</b> Circulatory System	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

This study is aimed at comparing the effects of virtual reality (VR) based rehabilitation, group-based rehabilitation, and no rehabilitation at all on upper extremity (arms, upper body) function, daily activities, and general quality of life. Through this study, we would be able to suggest better ways of improving physical and mental health in people who have suffered a stroke and are living in the community.

### Who can participate?

People who have suffered a stroke and are at least 30 years old.

### What does the study involve?

Participants are randomly allocated into one of three groups. Those in group 1 take part in a newly developed VR-based rehabilitation programme. Those in group 2 take part in a conventional group-based rehabilitation programme. Those in group 3 are in a control group and don't receive any rehabilitation at all. Participants in both rehabilitation programmes attend 30 minute training sessions three times a week for eight weeks.

### What are the possible benefits and risks of participating?

The results of this study will be used to assess the success of VR-based and group-based rehabilitation which, in turn, will help in developing successful rehabilitation treatments for stroke patients in the community.

### Where is the study run from?

The Applied NeuroDynamics Laboratory of Korea University (South Korea).

### When is study starting and how long is it expected to run for?

August 2014 to December 2014.

### Who is funding the study?

The Korea National Rehabilitation Institute (South Korea)

Who is the main contact?  
Professor BumChul Yoon  
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## Contact information

**Type(s)**  
Scientific

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## Additional identifiers

## Study information

**Scientific Title**  
Effect of virtual reality on physical and mental health in patient with stroke: a randomized controlled trial

**Study objectives**  
This study is aimed at comparing the effects on upper extremity function, activities of daily living performance, and quality life between virtual reality-based rehabilitation, group-based rehabilitation, and non-rehabilitation.

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**  
The Institutional Review Board of Korea University. Seoul, Korea, 19/06/2014, ref: KU-IRB-14-76-A-2

**Study design**  
Randomized three arm controlled trial.

**Primary study design**  
Interventional

**Study type(s)**  
Treatment

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

Stroke

## Interventions

Newly developed motion free Virtual Reality (VR)-based rehabilitation and group-based rehabilitation will be conducted in a sitting position. Both rehabilitations will include 30-minute training program three times a week for eight weeks. Each of five-minute will be offered for a warm up and cool-down training. The therapeutic method, which were included in both rehabilitation is a proprioceptive neuromuscular facilitation (PNF) technique for the patient with unilateral stroke. Both interventions will be supervised by certified physical therapists for emergency.

## Intervention Type

Other

## Phase

Not Applicable

## Primary outcome(s)

Upper extremity function:

1. Fugl-Meyer Assessment (FMA), measured pre- and post-intervention
2. Manual Function Test (MFT), measured pre- and post-intervention
3. Box & Block Test (BBT), measured pre- and post-intervention

Activities of daily living performance:

1. Modified Bathel Index (MBI), measured pre- and post-intervention

Health-related quality of life:

1. Short Form Health Survey (SF-12), measured pre- and post-intervention

## Key secondary outcome(s)

1. Satisfaction (5 point Likert scale), measured post intervention
2. Intention to adherence (5 point Likert scale), measured post intervention
3. Expectation for therapeutic effect (5 point Likert scale), measured post intervention
4. Attendance rate, measured during intervention
5. Enjoyment, difficulty(0~10), measured post intervention

## Completion date

31/12/2014

## Eligibility

### Key inclusion criteria

1. Community-dwelling patient with stroke aged over 30 years
2. Onset of a unilateral stroke at least one month previously

### Participant type(s)

Patient

### Healthy volunteers allowed

No

**Age group**

Adult

**Sex**

All

**Key exclusion criteria**

1. Severe cognitive impairments unable to follow instructions
2. Listening or visual impairments
3. Dementia, headaches, or dizziness
4. Other neurologic, neuromuscular, or orthopedic disease

**Date of first enrolment**

01/08/2014

**Date of final enrolment**

31/12/2014

**Locations****Countries of recruitment**

Korea, South

**Study participating centre**

161 Jeongneung-ro, Seongbuk-gu

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**Sponsor information****Organisation**

Korea University (South Korea)

**ROR**

<https://ror.org/047dqcg40>

**Funder(s)****Funder type**

Government

**Funder Name**

The Korean National Rehabilitation Institute (South Korea)

**Results and Publications**

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**

Not provided at time of registration