

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Efficacy comparison between virtual reality and its modified form on children with hemiplegic CP

#### Protocol summary

##### Summary

The aim of the present study is to improve upper limb performance in children with hemiplegic cerebral palsy. A total of fifteen children with hemiplegic cerebral palsy will be recruited and assigned into the following 3 groups, before the initiation of the intervention. The first group receives virtual reality with restraint that exercises are done with E-Link system, the second group receives only Virtual reality treatment without restraint, and the third group is control group, without any intervention. Measurement sessions are done at the baseline, after the intervention, and three month after the intervention.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201010164945N1**  
Registration date: **2011-01-21, 1389/11/01**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2011-01-21, 1389/11/01

##### Registrant information

##### Name

Hamid Reza Rostami

##### Name of organization / entity

Ahvaz Jundishapur University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 61 1374 3101

##### Email address

rostamihr@ajums.ac.ir

#### Recruitment status

##### Recruitment complete

##### Funding source

Ahvaz Jundishapur University of Medical Sciences

##### Expected recruitment start date

2010-09-23, 1389/07/01

##### Expected recruitment end date

2011-03-16, 1389/12/25

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Efficacy comparison between virtual reality and its modified form on children with hemiplegic CP

##### Public title

Efficacy comparison between virtual reality and its modified form on children with hemiplegic CP

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: Hemiplegic Children, age between 3 and 10 Year, range of motion: 20 degrees in wrist joint and 10 degrees in MP and IP Joints from full flexion, standing balance Exclusion criteria: Deformity, botulinium Toxin Therapy over 6 months prior to the study, history of seizure over 6 months prior to the study, balance problems

##### Age

From **4 years** old to **14 years** old

##### Gender

Both

##### Phase

N/A

##### Groups that have been masked

*No information*

##### Sample size

Target sample size: **15**  
**Randomization (investigator's opinion)**  
Randomized  
**Randomization description**  
**Blinding (investigator's opinion)**  
Single blinded  
**Blinding description**  
**Placebo**  
Not used  
**Assignment**  
Parallel  
**Other design features**

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ahvaz Jundishapur University of Medical Sciences

##### Street address

Ahvaz

##### City

Ahvaz

##### Postal code

#### Approval date

2010-06-19, 1389/03/29

#### Ethics committee reference number

U-89071

## Health conditions studied

### 1

#### Description of health condition studied

cerebral palsy

#### ICD-10 code

G80.2

#### ICD-10 code description

Spastic hemiplegic cerebral palsy

## Primary outcomes

### 1

#### Description

hand function

#### Timepoint

Baseline and 3 weeks and 3 months after the intervention

#### Method of measurement

functional test

## Secondary outcomes

### 1

#### Description

speed and range of motion

#### Timepoint

Baseline and 3 weeks and 3 months after the intervention

#### Method of measurement

functional tests

## Intervention groups

### 1

#### Description

First Group: virtual reality by E-Link system

#### Category

Rehabilitation

### 2

#### Description

Second Group: Virtual Reality by E-Link system with restraint of non involved upper limb

#### Category

Treatment - Drugs

### 3

#### Description

Control group: no intervention

#### Category

N/A

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Ahvaz Hospitals

##### Full name of responsible person

##### Street address

##### City

Ahvaz

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Ahvaz Jundishapur University of Medical Sciences

##### Full name of responsible person

Mrs Jaderi

##### Street address

Ahvaz Jundishapur University of Medical Sciences

##### City

Ahvaz

#### Grant name

#### Grant code / Reference number

#### Is the source of funding the same sponsor

**organization/entity?**

Yes

**Title of funding source**

Ahvaz Jundishapur 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**

Ahvaz Jundishapur University of Medical Sciences

**Full name of responsible person**

Hamid Reza Rostami

**Position**

Msc

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

School of Rehabilitation Sciences

**City**

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**Postal code****Phone**

+98 935 525 5800

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**Web page address****Person responsible for scientific inquiries****Contact****Name of organization / entity**

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**Full name of responsible person**

Hamid Reza Rostami

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

Ahvaz

**Postal code****Phone****Fax****Email****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*