

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

13 Jun 2026

### The Effect Aquatic Training on the Muscle Strength Lower Extremity in Patients with Chronic Ischemic Stroke: A Randomized Clinical Trial

#### Protocol summary

2020-01-25, 1398/11/05

#### Study aim

The Effect Aquatic Training on the Muscle Strength Lower Extremity in Patients with Chronic Ischemic Stroke: A Randomized Clinical Trial

#### Design

This clinical trial study with pretest and posttest design was performed on 30 patients with chronic ischemic stroke by available sampling method and classified into 3 groups equal 10: experimental group1 (shallow practice); experimental group 2 (deep training) and control group

#### Settings and conduct

Examination in the hospital and the protocol for water therapy in the pool. In general, the stages of this research include: 1. Preparing the subjects along with examining the criteria for entering and preparing the data collection tool: General information

#### Participants/Inclusion and exclusion criteria

A score of 21 to 44 from the berg balance scale

#### Intervention groups

groups did the aquatic exercise therapy program that included of 18 sessions in 6 weeks and 3 sessions per week for 30 minutes. But the control group did not experience any aquatic exercise

#### Main outcome variables

Lower Extremity Muscle Strength

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20180513039626N3**

Registration date: **2020-01-25, 1398/11/05**

Registration timing: **retrospective**

Last update: **2020-01-25, 1398/11/05**

Update count: **0**

##### Registration date

#### Registrant information

##### Name

Hossein Babaeipour

##### Name of organization / entity

دانشگاه ولی عصر رفسنجان

##### Country

Iran (Islamic Republic of)

##### Phone

+98 34 3432 2717

##### Email address

h.babaei@vru.ac.ir

#### Recruitment status

##### Recruitment complete

#### Funding source

#### Expected recruitment start date

2018-03-17, 1396/12/26

#### Expected recruitment end date

2018-04-04, 1397/01/15

#### Actual recruitment start date

empty

#### Actual recruitment end date

empty

#### Trial completion date

empty

#### Scientific title

The Effect Aquatic Training on the Muscle Strength Lower Extremity in Patients with Chronic Ischemic Stroke: A Randomized Clinical Trial

#### Public title

The Effect of Hydrotherapy in Patients with Stroke

#### Purpose

Prevention

#### Inclusion/Exclusion criteria

##### Inclusion criteria:

Patients with cerebral stroke and chronic, ischemic stroke Patients with hemiparesis (slight motor weakness)

Have at least 6 months from the onset of the disease and have a maximum of 2 years Have the ability to stand without help (at least 5 minutes) All subjects must be able to walk with or without the aid (at least 10 meters) To have the ability to follow orders Not participating in regular physical activity and not having a physical therapy program during the study Desire to participate in the research The first stroke Patients 50 to 70 years

**Exclusion criteria:**

Absence in training for 3 sessions Having a certain diseases

**Age**

From **50 years** old to **70 years** old

**Gender**

Male

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **30**

**Randomization (investigator's opinion)**

Not randomized

**Randomization description**

**Blinding (investigator's opinion)**

Not blinded

**Blinding description**

**Placebo**

Not used

**Assignment**

Parallel

**Other design features**

**Secondary Ids**

empty

**Ethics committees**

**1**

**Ethics committee**

**Name of ethics committee**

Ethics committee of Rafsanjan University of Medical Sciences

**Street address**

Rafsanjan University of Medical Sciences, Ali Bin Abitaleb Square

**City**

Rafsanjan

**Province**

Kerman

**Postal code**

7717933777

**Approval date**

2018-03-15, 1396/12/24

**Ethics committee reference number**

IR.RUMS.REC.1396.207

**Health conditions studied**

**1**

**Description of health condition studied**

Stroke

**ICD-10 code**

I63.9

**ICD-10 code description**

Cerebral infarction, unspecified

**Primary outcomes**

**1**

**Description**

Lower Extremity Muscle Strength

**Timepoint**

At the beginning of the study (before the intervention) and after six weeks of aquatic training

**Method of measurement**

Medical Research Council (MRC)

**Secondary outcomes**

empty

**Intervention groups**

**1**

**Description**

Intervention group: The first group (shallow) intervenes in depth, with water up to the height of the pelvis, the subjects performed this training session for 6 weeks (18 sessions) and 3 sessions per week for the implementation of the water exercise protocol.

**Category**

Rehabilitation

**2**

**Description**

Intervention group: The second group of interventions (deep) takes place deep in the water to the height of the chest, the subjects performed this training session for 6 weeks (18 sessions) and 3 sessions per week for the implementation of the water exercise protocol.

**Category**

Rehabilitation

**3**

**Description**

Control group: (Without exercise) that the group did not experience any blueprints that had their normal routine during these six weeks.

**Category**

Rehabilitation

**Recruitment centers**

## 1

### Recruitment center

**Name of recruitment center**

Ali ibn Abi Talib Rafsanjan Hospital

**Full name of responsible person**

Hossein Babaei Pour

**Street address**

Bldv Imam Ali (AS) , Central Organization

**City**

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**Phone**

+98 34 3432 2717

**Email**

hosseinbabaei1906@yahoo.com

## Sponsors / Funding sources

### 1

#### Sponsor

**Name of organization / entity**

Rafsanjan University of Medical Sciences

**Full name of responsible person**

Dr, Alireza Vakilian

**Street address**

Bldv Imam Ali (AS) , Central Organization

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**Email**

alirezavakilian7@gmail.com

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

No

**Title of funding source**

Rafsanjan University of Medical Sciences

**Proportion provided by this source**

50

**Public or private sector**

Public

**Domestic or foreign origin**

Domestic

**Category of foreign source of funding**

*empty*

**Country of origin****Type of organization providing the funding**

Academic

## Person responsible for general inquiries

### Contact

**Name of organization / entity**

The University of Valiasr Rafsanjan

**Full name of responsible person**

Hossein Babaeipour

**Position**

Assistant Professor Valiasr University Rafsanjan

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Sport Injuries and Corrective Exercises

**Street address**

Rafsanjan, Bahman 22 Field, Valiasr University

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## Person responsible for scientific inquiries

### Contact

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**Full name of responsible person**

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## Person responsible for updating data

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**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

**Study Protocol**

Yes - There is a plan to make this available

**Statistical Analysis Plan**

Yes - There is a plan to make this available

**Informed Consent Form**

Undecided - It is not yet known if there will be a plan to make this available

**Clinical Study Report**

Undecided - It is not yet known if there will be a plan to make this available

**Analytic Code**

Undecided - It is not yet known if there will be a plan to make this available

**Data Dictionary**

Undecided - It is not yet known if there will be a plan to make this available

**Title and more details about the data/document**

Physical and mental dimension of the patient

**When the data will become available and for how long**

After submitting and confirming the article

**To whom data/document is available**

All researchers in this area

**Under which criteria data/document could be used**

After submitting and confirming the article

**From where data/document is obtainable**

Hossinbabaei1906@yahoo.com

**What processes are involved for a request to access data/document**

Every time you order

**Comments**