

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

03 Jul 2026

### The Effect of Proprioceptive Neuromuscular Facilitation (PNF) on Quality of Life (QOL) of Patients with Stroke

#### Protocol summary

##### Study aim

The Effect of Proprioceptive Neuromuscular Facilitation Exercise on Quality of Life in Patients with Stroke

##### Design

Clinical trials with control group, Community based, With parallel groups, Not blind, Non-random

##### Settings and conduct

Satisfactory informed and written consent is obtained from eligible people who are willing to participate in the research. First, the quality of life is measured in both groups, then, the intervention is implemented. No action is taken in the control group. Immediately and 4 weeks after completing the exercises, quality of life will be measured in both groups. Exercises are done in the homes of patients

##### Participants/Inclusion and exclusion criteria

Inclusion: Personal and informed consent, Over 4 months to 2 years after stroke, Age more than 60 to 90 years, Once affected by stroke, The absence of spinal cord lesions, Lack of other chronic diseases, such as orthopedic and neurological diseases, Ability to communicate and answer questions Exclusion: Inability to communicate; Non-Residential in Yasuj; Passed less than 4 months and more than 2 years of stroke; Age less than 60 and more than 90 years

##### Intervention groups

Intervention: Proprioceptive neuromuscular facilitation exercise program are performed for 8 weeks and two sessions each week for 30-45 minutes based on the protocol in the intervention group. In this study, two motor patterns of upper and lower limbs are used. The first stage: A passive stretching or active within 10 to 20 seconds actions and target muscles gently used gradually the end range of motion. Second stage: Immediately or after a break of about 2 to 3 seconds of contraction unlike the therapist takes place. Third stage: Immediately or after a pause of about 2 to 3 seconds again to reach the target muscles twitching find a new point of range of motion. Control: There is no intervention

in the control group.

##### Main outcome variables

Quality of Life

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20160430027676N2**

Registration date: **2018-10-30, 1397/08/08**

Registration timing: **retrospective**

Last update: **2018-10-30, 1397/08/08**

Update count: **0**

##### Registration date

2018-10-30, 1397/08/08

##### Registrant information

##### Name

Yaghoub Parandvar

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 74 3322 4721

##### Email address

yaghoub.parandvar@yums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2018-08-23, 1397/06/01

##### Expected recruitment end date

2018-10-22, 1397/07/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**  
empty

**Scientific title**  
The Effect of Proprioceptive Neuromuscular Facilitation (PNF) on Quality of Life (QOL) of Patients with Stroke

**Public title**  
The Effect of Proprioceptive Neuromuscular Facilitation (PNF) on Quality of Life (QOL)

**Purpose**  
Supportive

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Personal and informed consent to attend the study Over 4 months to 2 years after stroke Definitive diagnosis of stroke by a neurologist Age more than 60 years to 90 years Once affected by stroke The absence of spinal cord lesions Failure to receive Proprioceptive Neuromuscular Facilitation Technique from 6 months ago Lack of other chronic diseases, such as orthopedic and neurological diseases Ability to communicate and answer Persian questions Residence in Yasuj  
**Exclusion criteria:**  
Disruption of the cognitive, alert and mental state of the patient Age more than 90 years old

**Age**  
From **60 years** old to **90 years** old

**Gender**  
Both

**Phase**  
3

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **60**

**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 Iids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics Committee on Research, Yasuj University of Medical Sciences

##### Street address

Vice chancellor of research and technology, Yasuj University of Medical Sciences, Motahari Blvd, Yasouj, Iran

##### City

Yasuj

##### Province

Kohgilouyeh-va-Boyerahmad

##### Postal code

7591741417

##### Approval date

2018-08-04, 1397/05/13

##### Ethics committee reference number

IR.YUMS.REC.1397.057

## Health conditions studied

### 1

#### Description of health condition studied

Cerebrovascular Accident

#### ICD-10 code

(I69.4)

#### ICD-10 code description

Stroke, not specified as haemorrhage or infarction

## Primary outcomes

### 1

#### Description

Quality of life for stroke patients

#### Timepoint

Before the intervention, Immediately after the intervention, 4 week after the intervention

#### Method of measurement

World Health Organization Quality of Life Short Form questioner

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: Proprioceptive neuromuscular facilitation exercise program was performed for 8 weeks and two sessions each week for 30-45 minutes (16 sessions within 2 months) based on the protocol and the relevant instruction in the intervention group. In this study, the pattern of motion of the arm (Upper Extremity ) and hip movement patterns (lower Extremity) are used. Patterns of the arm joint (upper extremity): D1 flexion pattern: Flexion, abduction, External rotation (elbow flexed and elbow extended). D1 extension pattern: Extension, adduction, internal rotation (elbow flexed and elbow extended). D2 flexion pattern: flexion, adduction, external rotation (elbow flexed and elbow extended). D2 extension pattern: extension, abduction, internal rotation (elbow flexed and elbow extended).

Patterns of knee joint(lower extremity): D1 flexion pattern: Flexion, abduction, internal rotation (knee flexed and knee extended). D1 extension pattern: Extension, adduction, external rotation (knee flexed and knee extended). D2 flexion pattern: Flexion, adduction, external rotation (knee flexed and knee extended). D2 extension pattern: Extension, abduction, internal rotation (knee flexed and knee extended). The therapist first places the member in the position according to the three axes of motion. In this case, the muscles are drawn as far as possible (not up to the latest range of motion). The first step: A passive stretching or active within 10 to 20 seconds actions and target muscle or muscles gently used gradually the end range of motion.This situation is maintained for a while. Second stage: Immediately or after a break of about 2 to 3 seconds of contraction unlike the therapist takes place. The contract period is typically 3 to 6 seconds. Third stage: Immediately or after a pause of about 2 to 3 seconds again to reach the target muscle or muscle twitching find a new point of range of motion. Immediately and 4 weeks after the last session of the exercise, the quality of life of the patients will be measured.

**Category**

Rehabilitation

**2**

**Description**

Control group: Before intervention, immediately after the intervention and 4 weeks after the end of the intervention,the quality of life will be measured using the relevant questionnaire.There will be no intervention in the control group.

**Category**

Rehabilitation

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Martyr Dr.Beheshti Hospital of Yasuj

**Full name of responsible person**

Dr.Hosseini Motlagh Amin

**Street address**

Martyr Dr.Beheshti Hospital, Martyr Mohammad Montazeri street, Yasuj

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y.parandvar@gmail.com

**Web page address**

**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Yasouj University of Medical Sciences

**Full name of responsible person**

Dr. Marie oriad, Hossein

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Yasouj University of Medical Sciences,Vice chancellor for research, motahari BLvd, Yasuj

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**Grant name**

**Grant code / Reference number**

**Is the source of funding the same sponsor organization/entity?**

No

**Title of funding source**

Yasouj University of Medical Sciences and Health Services

**Proportion provided by this source**

100

**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**

Yasouj University of Medical Sciences

**Full name of responsible person**

Parandvar Yaghoub

**Position**

Master science of Medical Surgical Nursing

**Latest degree**

Master

**Other areas of specialty/work**

Nursery

**Street address**

Department of ICU, Martyr Dr.Beheshti hospital , Martyr Mohammad Montazeri street, Yasuj

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Yasouj University of Medical Sciences  
**Full name of responsible person**  
parandvar yaghoub  
**Position**  
Master science of Medical Surgical Nursing  
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**Other areas of specialty/work**  
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## Person responsible for updating data

### Contact

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## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

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

### Study Protocol

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

### Statistical Analysis Plan

Undecided - It is not yet known if there will be 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

Not applicable

### Data Dictionary

Not applicable