Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

The effect of Isometric Exercises on Disability and Balance in MS Patients

Protocol summary

Summary

Aim: The effect of isometric exercise on disability and balance in MS patients. Study Design: After obtaining informed consent from 60 patients with multiple sclerosis, by clinical examinations scores of disability status scale (EDSS) and Berg balance score are determined and randomly put them in the study and control groups. How the study: the experimental group participate in 8 weeks of isometric exercise programs that involves the muscles of the trunk, neck and lower extremities . These exercises include squats methods, wall squats, launch, Plank, isometric exercises in the neck and trunk and launch movements in their biceps. These exercises are taught and practiced during the two sessions. During this period, the control group received only the usual apps are prescribed medication. The daily follow-up in experimental group was done, and in control group weekly follow up was done. This exercise duration was 8 weeks. Inclusion criteria were confirm the diagnosis by a neurologist and the ability to perform movements and exclusion criteria was acute phase of the illness and the inability to exercise. Interventions: 8 isometric exercises movements, main outcome variables: the balance and disability in multiple sclerosis patients.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017011732000N1**
Registration date: **2017-04-05, 1396/01/16**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-04-05, 1396/01/16

Registrant information

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Nasrin Zahmatkeshan
Name of organization / entity
Yasuj university Of Medical Scince
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Recruitment status

Recruitment complete

Funding source
Vice chancellor for research, Yasuj University of Medical Science

Expected recruitment start date

2016-06-01, 1395/03/12

Expected recruitment end date

2017-03-30, 1396/01/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of Isometric Exercises on Disability and Balance in MS Patients

Public title

The effect of Isometric Exercises on Disability and Balance in MS

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion Criteria:Approved Their Diagnosis by neurologist, have medical chart in special disease center in Yasuj university of medical science pass 2 years old of their disease time, are not in Acute phase, desire to participate in the study, Ability of communication.

Exclusion criteria: Acute phase of disease, lack of desire to take part in the study, do not ability to doing exercise.

Age

From **20 years** old to **50 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

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 Yasuj University of Medical Science

Street address

Dr. Jalil Street, Yasuj University Of Medical Science Campus, Yasuj, Iran

City

Yasuj

Postal code

Approval date

2016-01-04, 1394/10/14

Ethics committee reference number

yums.REC.1394.101

Health conditions studied

1

Description of health condition studied

Multipe Sclerosis

ICD-10 code

G35

ICD-10 code description

Demyelimnating Disease of Central Nervous Syste

Primary outcomes

1

Description

Disability

Timepoint

Before intervention, 4 weeks after intervention, 8 weeks after intervention

Method of measurement

EDSS scale

2

Description

Balance Status

Timepoint

Before intervention, 4 weeks after intervention, 8 weeks after intervention

Method of measurement

Berg balance Scale

Secondary outcomes

empty

Intervention groups

1

Description

Intervention2: The control groups received routine medical program in this period and weekly followed by telephone. EDSS score and balance scores were measured in 4weeks and 8weeks of program start.

Category

Treatment - Other

2

Description

Intervention 1: In this study in intervention groups, advised 8 exercise movement in 8 weeks of start intervention period. These exercises include squat, wall squat, lunge, biceps curls with band, plank exercise and neck and trunk exercises movements. Duration of every movements are 30 seconds in start of program and then increased. In intervention group daily telephone follow up was done. In 4weeks and 8weeks of program start, EDSS score and Berg balance score were measured again.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Yasuj University Of Medical Sceince

Full name of responsible person

Nasrin Zahmatkeshan

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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice chancellor of research Yasuj University of Medical Science
Full name of responsible person
Hossein Mari oryad
Street address
Motahhari Street, Vice chancellor of research, Yasuj University of Medical Science, Yasuj, Iran
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Yasuj
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Vice chancellor of research Yasuj University of Medical Science
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

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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