

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

27 Jun 2026

### To Evaluate the Effectiveness of Whole Body Vibration on Strength and Endurance of Core muscles in Ambulant Individuals with Multiple Sclerosis

#### Protocol summary

##### Summary

The aim of this study is to evaluate the effectiveness of Whole Body Vibration on Strength and Endurance of Core muscles in Ambulant Patients with Multiple Sclerosis (MS). Patients with MS who experiences the last two months of relapse and does not have attack and aged between 20 and 50 years are enrolled. Patients with corticosteroids injection at least 28 days before the intervention are excluded. The sample size for this pilot study is 25 patients in each group. Patients are randomly divided into two groups. Intervention group are treated with Whole Body Vibration for 6 weeks, 3 times a week. The control group will not receive any treatment. Strength is measured using a dynamometer and endurance is evaluated with endurance tests before and after the intervention. A month after the intervention quality of life questionnaire will be assessed again.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2017041328447N6**

Registration date: **2017-06-19, 1396/03/29**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2017-06-19, 1396/03/29

##### Registrant information

##### Name

Amin Kordi Yoosefinejad

##### Name of organization / entity

Shiraz University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 71 3626 1081

##### Email address

yoosefinejad@sums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

School of Rehabilitation Sciences, Shiraz University of Medical Sciences

##### Expected recruitment start date

2017-06-05, 1396/03/15

##### Expected recruitment end date

2017-09-21, 1396/06/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

To Evaluate the Effectiveness of Whole Body Vibration on Strength and Endurance of Core muscles in Ambulant Individuals with Multiple Sclerosis

##### Public title

To Evaluate the Effectiveness of Whole Body Vibration on Strength and Endurance of Core muscles in Ambulant Individuals with Multiple Sclerosis

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: People with mild to moderate disability (EDSS=1-5.5) the ability to ambulate 10 meters with or without assistive device; Confirmed diagnosis of MS by physician; Lack of mental problems, Fracture and have an implant in the body; No history of attacks and

relapses during the past 2 months; Having no experience of vibration during the last 3 months; Age range of 20-50 years Exclusion criteria: Implant in the body; Epilepsy; Tumors; Corticosteroid injection 28 days before the intervention; Osteoporosis; Discopathy; Diabetes; Severe wounds and scarring; Attacks during the application of WBV

**Age**

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

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **50**

**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**

Shiraz University of Medical Science

**Street address**

Zand Ave, Building of Shiraz University of Medical Science

**City**

Shiraz

**Postal code**

713451733

**Approval date**

2017-01-22, 1395/11/03

**Ethics committee reference number**

IR.SUMS.REC.1395.167

**Health conditions studied****1****Description of health condition studied**

Multiple Sclerosis

**ICD-10 code**

G35

**ICD-10 code description**

Multiple sclerosis

**Primary outcomes****1****Description**

Isometric Strength of Flexor Muscles of Trunk

**Timepoint**

Before and After Intervention

**Method of measurement**

Measuring Isometric Strength with Dynamometer a specified period

**2****Description**

Isometric Strength of Extensor Muscles of Trunk

**Timepoint**

Before and After Intervention

**Method of measurement**

Measuring Isometric Strength with Dynamometer a specified period

**3****Description**

Isometric Strength of Lat Flexor Muscles of Trunk

**Timepoint**

Before and After Intervention

**Method of measurement**

Measuring Isometric Strength with Dynamometer a specified period

**4****Description**

Endurance of Flexor Muscles of Trunk

**Timepoint**

Before and After Intervention

**Method of measurement**

Measuring Isometric Strength with Dynamometer a specified period

**5****Description**

Endurance of Extensor Muscles of Trunk

**Timepoint**

Before and After Intervention

**Method of measurement**

Measuring Isometric Strength with Dynamometer a specified period

**6****Description**

Endurance of Lat Flexor Muscles of Trunk

**Timepoint**

Before and After Intervention

**Method of measurement**

Measuring Isometric Strength with Dynamometer a specified period

## Secondary outcomes

1

### Description

Quality of Life

### Timepoint

One Month After Intervention

### Method of measurement

Questionnaire

## Intervention groups

1

### Description

Intervention group: Patients are treated for 6 weeks, 3 sessions per week, 5 sets per session by Whole Body Vibration apparatus. The vibration exercise to rest ratio is 30:60 for the first two weeks (Vibration: 30 seconds and rest: 60 seconds), 45:60 for the third week and fourth weeks and 60:60 for the fifth and sixth weeks.

### Category

Rehabilitation

2

### Description

Control group: This group does not receive any treatment and continue their normal life

### Category

Rehabilitation

## Recruitment centers

1

### Recruitment center

#### Name of recruitment center

MS Society of Shiraz and Neurology Clinics affiliated to Shiraz University of Medical Science

#### Full name of responsible person

#### Street address

#### City

Shiraz

## Sponsors / Funding sources

1

### Sponsor

#### Name of organization / entity

Shiraz University of Medical Science

#### Full name of responsible person

Dr. Gholamreza Hatam

#### Street address

Zand Av, Shiraz University of Medical Science

#### City

Shiraz

#### Grant name

#### Grant code / Reference number

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

Yes

### Title of funding source

Shiraz 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

### Contact

#### Name of organization / entity

Shiraz School of Rehabilitation Science

#### Full name of responsible person

Maryam Abbasi

#### Position

Master student

#### Other areas of specialty/work

#### Street address

Abiverdi1, chamran Blvd, shiraz, Iran

#### City

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#### Postal code

713451733

#### Phone

+98 71 3626 5108

#### Fax

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#### Email

abbasi\_pt90@yahoo.com; yoosefinejad@sums.ac.ir

#### Web page address

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

Shiraz School of Rehabilitation Science

#### Full name of responsible person

Dr. Amin Kordi Yoosefinejad

#### Position

Ph.D of Physiotherapy

#### Other areas of specialty/work

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**Email**

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**Web page address****Fax****Email**

abbasi\_pt90@yahoo.com

**Web page address****Person responsible for updating data****Contact****Name of organization / entity**

Shiraz School of Rehabilitation Science

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Master student

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

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**Phone**

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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*