

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Comparison of the effect of Pilates exercises and unstable support surface balance exercises on parameters of gait cycle and falling risk in patients with Parkinson's disease

Protocol summary

Summary

The aim of this control trial is to compare the effect of Pilates exercises and unstable support surface balance exercises on parameters of gait cycle and falling risk in patients with Parkinson's disease. The research statistical population includes all patients with PD who referred to neurologists in 2016 in Guilan Province. From among the desired people, 48 patients with IPD select through available targeted non-random method and they randomly and consecutively divide into two experimental groups and one control group. Also participants and assessors will be blinded. The research entry criteria include having IPD at moderate levels (levels II and III) and age over 50 years old and exit criteria include pain, any disorder influencing the security of practice program and unwillingness to be present at the research process. Pilates and balance exercise program will be done three 1-hour sessions per week for 8 weeks for experimental group, while control group will start walking in the duration similar to experimental groups. Before and after 8 weeks, parameters of gait cycle and falling risk indicators will be evaluated in three groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016071228885N1**
Registration date: **2016-08-04, 1395/05/14**
Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2016-08-04, 1395/05/14

Registrant information

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Shaghayegh Sayyar

Name of organization / entity

Guilan University

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Recruitment status

Recruitment complete

Funding source

University of Guilan

Expected recruitment start date

2016-08-05, 1395/05/15

Expected recruitment end date

2016-10-06, 1395/07/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effect of Pilates exercises and unstable support surface balance exercises on parameters of gait cycle and falling risk in patients with Parkinson's disease

Public title

the effect of exercises on motor symptoms of Parkinson's disease

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: having IPD at moderate levels (levels II

and III); age over 50 years old; passage of at least 3 years after the disease diagnosis; lack of other neurological diseases or any acute and chronic physical or mental disorder; lack of cognitive disorders with the approval of a specialist physician; the ability to stand and walk independently; not using assistive devices for keeping balance and walking; the history of balancing and walking disorders due to PD; non-participation in sports activities and or physiotherapy treatments influencing the research process; the ability to participate in practice sessions regularly. Exclusion criteria: pain; limbs' deformation and any disorder influencing the security of practice program; unwillingness to be present at the research process.

Age

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

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **48**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double 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 Guilan University of Medical Sciences

Street address

Office center of Guilan University of Medical Sciences, Parastar St., Rasht, IRAN

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Postal code

4193893345

Approval date

2016-02-02, 1394/11/13

Ethics committee reference number

IR.GUMS.REC.1394.460

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

Parkinson's disease

ICD-10 code

G20

ICD-10 code description

Parkinson disease

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

Paremeters of gait cycle

Timepoint

before and after intervention

Method of measurement

two-dimensional motion analysis

Secondary outcomes**1****Description**

Functional balance

Timepoint

before and after intervention

Method of measurement

Fullerton Balance Scale

2**Description**

Falling risk

Timepoint

before and after intervention

Method of measurement

Timed Up and Go test, self report

Intervention groups**1****Description**

Pilates exercises (Experimental group)

Category

Rehabilitation

2**Description**

unstable support surface balance exercises (experimental group)

Category

Rehabilitation

3**Description**

Walking (control group)
Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Poursina Medical & Educational Center

Full name of responsible person

Dr. Babak Bakhshayesh

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Office center of Guilan University of Medical Sciences,
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Faculty of Physical
Education and Sport Science, University of Guilan

Full name of responsible person

Dr. Mehrali Hematinezhad

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Khalij Fars highway (5th kilo meter of Ghazvin road),
Rasht, Iran

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Rasht

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice chancellor for research, Faculty of Physical
Education and Sport Science, University of Guilan

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

Faculty of Physical Education and Sport Science,
University of Guilan

Full name of responsible person

Dr. Mehrali Hematinezhad

Position

Professor/ Vice chancellor for research, Faculty of
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Other areas of specialty/work

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Web page address<http://guilan.ac.ir/fe>**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*