Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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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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

City
Rasht

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

Street address

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

City

Rasht

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

Street address

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

City

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 Physical Education and Sport Science, University

Other areas of specialty/work

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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