



Non-Pharmacological
Intervention Society

Non Pharmacological Interventions Registry

Notice : High-Intensity Endurance exercise program for Parkinson's Disease

Health Problem : Risk of fall



Bodily

Sheet Code

NPIS-0000000111

Designation

High-Intensity Endurance Exercise Program for Parkinson's Disease

Abbreviation

EHIP

Category

Bodily

Main Indication

To improve the motor symptoms caused by Parkinson's disease.

How does it work?

An intensive exercise program, supervised by a trained professional, can help people with Parkinson's disease better control their movements. It works in several ways: by stimulating the brain to remain adaptable, strengthening muscles and the heart, improving coordination, and helping people better manage the effects of the disease in their daily lives.

Other Benefits

- Improved gait and walking speed.
- Improved balance and mobility.
- Improved grip strength.
- Improved cognitive function (working memory, attention, and processing speed).
- Improved mood (reduction in symptoms of depression and anxiety).
- Better sleep quality.
- Improved quality of life

Direct Risks

This NPI is relatively safe, with few major adverse events when the program is supervised by a trained professional, is appropriately tailored, and includes a preliminary medical evaluation and monitoring (heart rate, shortness of breath, tolerance).

- Falls.
- Freezing (temporary, involuntary inability to move, usually affecting the legs).
- Orthostatic hypotension (drop in blood pressure upon standing or after exertion, which may cause dizziness or a fall).
- Rare cardiovascular complications.
- Rare respiratory complications (oxygen desaturation or shortness of breath during prolonged exertion).
- Functional decompensation.
- Pain in the tendons or muscles.

Risks of interaction

- Dietary proteins and gastrointestinal issues can reduce or make the absorption of levodopa unpredictable. An exercise program can affect bowel movements and the timing of medication doses, which is why it is important to have a schedule that coordinates

medication intake with exercise sessions.

- Sedatives or anxiolytics may reduce exercise tolerance and increase the risk of falls.

Contraindications

- Advanced stage of the disease and significant functional limitations preventing the patient from reaching the intended intensity during the session.
- Severe cognitive impairment
- Severe cardiorespiratory comorbidities (heart failure, unstable COPD).
- Autonomic nervous system disorders, such as a drop in blood pressure upon standing, causing dizziness.
- Significant muscle or joint pain or bone fragility that limits movement.
- Severe and unstable involuntary movements (marked dyskinesias).
- Significant lack of energy or motivation, untreated depression.
- High-risk anticoagulant therapy or history of bleeding.
- Lack of family or logistical support, making it difficult to participate in the program.

Duration

The program lasts 26 weeks.

Sessions per week

4 sessions

Precautions

- Review current medications before starting the program (levodopa and its dosing schedule, antihypertensives, anticoagulants, psychotropic medications, etc.).
- A preliminary medical evaluation must be conducted (cardiopulmonary, ENT if necessary) and a stress test performed if risk factors are present.
- The program must begin in the presence of a physical therapist trained to adjust the intensity and ensure safety.
- Sessions are scheduled during the "ON" period whenever possible, and the patient brings their day/night self-assessment log.
- Blood pressure and heart rate are measured before and after the first week, then periodically thereafter.
- Identify and document signs of orthostatic hypotension, dizziness, dyskinesias, and other

motor complications.

- Stay hydrated in the event of orthostatic hypotension, including after exercise.
- Stop immediately in the event of chest pain.
- Break up the exercise into shorter intervals in the event of respiratory desaturation.
- Monitor for and report warning signs (excessive shortness of breath, chest pain, dizziness, pallor, hemoptysis, or hoarseness) to stop immediately and seek medical evaluation.
- Ensure an emergency plan is in place with established local protocols, medical contacts, and access to a defibrillator if necessary.

Regulatory provisions

By prescription and under medical supervision.

This practice must be performed by a professional trained at the INM for people with Parkinson's disease, in a healthcare facility, even if some sessions are conducted at home and others are supervised remotely.

Main Initiator

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