

PARKINSON'S HEALTH

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"Our mission is to empower and educate people about the changes their bodies go through and teach them how to reconnect on a neuromuscular level and heal themselves in a way that allows them to optimize their function and restore their core foundation so they can return to their desired fitness levels safely and with better long term results."

Parkinson's disease is the second most common degenerative brain disorder affecting adults. Parkinson's disease was first defined as only a "motor" (movement) disease, but research has shown that it also causes "nonmotor" symptoms (such as lightheadedness when standing up) in other systems of the body. People with PD are at risk of falling and sustaining other injuries due to their movement and balance challenges. Treatment includes a combination of medication and physical therapy—and in some cases surgery. Physical therapists partner with people with PD and their families to manage their symptoms, maintain their fitness levels, and help them stay as active as possible.

HOW IS IT DIAGNOSED

Because there is no definitive test for Parkinson's Disease, it can be difficult to diagnose. A diagnosis is usually made based on a person's medical history and a neurological examination. If your physical therapist suspects that you have symptoms of PD, you may be referred to a neurologist for further examination.

A diagnosis of PD may be made if a person is found to have:

- Slowing of motion and tremor when resting, or muscle rigidity
- A significant improvement in symptoms when taking a medication to treat PD.
- Initial symptoms on 1 side of the body only.

FREEZING EPISODES

Freezing episodes feel like your foot is stuck to the floor. It often happens during a change of floor surface. For example, carpet transition to tile, making a turn, or in doorways. A rhythmic movement or beat helps get feet moving forward again. Rocking the shoulders from left to right. The audio focus in the neuropathways will help loosen the feet. People can carry their phones with music programmed. The use of a yoyo or bouncing a tennis ball is rhythmic and helps with freezing feet. Caregivers can count 1, 2, 3 or place their foot in front of the patient and have the patient step over the caregivers' foot. Neurologists have also found that moving the foot to the side or pulling the knee toward the chest, skating movements, or side to side shuffle, utilizing walking poles can aid in movement.

Planning your activities helps work around the disease. Other useful tips: Staying focused on one task, singing, dancing, crosswords, sharing your skills, joining support groups, speaking your truth, and having boundaries.

 **"Proud to have one of the only Doctors of Physical Therapy in the area that has Parkinson's Disease certification"**

PWR! Moves and LSVT BIG are both research-based treatment protocols designed specifically to address the motor, sensory, and non-motor symptoms that many people with Parkinson's Disease face. Whether "small motor" tasks like buttoning a shirt or "large motor" tasks like getting up from a seated position or maintaining balance while walking.

SIGNS & SYMPTOMS

Nonmotor symptoms of PD, such as a decreased sense of smell, sleep problems, and lightheadedness when first standing up, can begin many years before motor (movement) symptoms develop. Motor symptoms of PD, which typically include muscle and joint stiffness (rigidity), shaking (tremors) in the hands and limbs, slowed movement, and balance problems, most often begin at or around age 60. However, early-onset PD can affect people at a younger age. The motor symptoms of PD can be very mild at first. A common early symptom is a tremor in 1 hand, most often when you are at rest. It might look like you are rolling a pill between your thumb and forefinger. Tremors also can occur in your legs or jaw when you are at rest. Since the tremors are most apparent during rest, they usually go away when moving and typically don't interfere substantially with daily functions.

As the condition progresses, people with PD may notice other motor symptoms, such as:

- Movements that become smaller, possibly resulting in:
 - Shuffling when walking.
 - The arms swinging less when walking.
 - The voice becoming quieter.
- Muscle stiffness or rigidity, causing discomfort in the neck, trunk, or shoulders.
- Pain due to muscle stiffness.
- Postural instability, resulting in poor balance and a greater risk of falling.
- Movements that become slower during daily activities such as dressing, showering, or moving in bed.
- A feeling of the feet being "frozen" to the floor, making it hard to take a first step, or to turn around when walking.
- Stooped posture.
- Difficulty speaking at a normal voice level.
- Difficulty swallowing.
- Difficulty performing tasks that were once easy to do, such as gardening or swinging a tennis racquet or golf club.
- Difficulty making facial expressions.
- Difficulty holding and releasing urine (bladder urgency and incontinence).

Nonmotor symptoms might include:

- Difficulty paying attention to a task for a long period of time or dividing attention between 2 or more tasks.
- Fatigue.
- Lack of motivation.
- Lightheadedness.
- Depression.
- Anxiety.
- Disturbed sleep.

HOW CAN A PHYSICAL THERAPIST HELP?

Because Parkinson's Disease affects each person differently, your physical therapist will partner with you to manage your specific situation—now and as your condition changes. You are not alone!

Following a diagnosis of PD, your physical therapist will conduct a comprehensive evaluation, including tests to examine your posture, strength, flexibility, walking, endurance, balance, coordination, and attention with movement. Based on your test results, your physical therapist will develop an individualized treatment plan to help you stay as active and as independent as possible. Your program will include exercises and techniques to combat the symptoms of Parkinson's.

Depending on the nature and severity of your condition, your treatment program may focus on activities and education to help you:

- Improve your fitness level, strength, and flexibility.
- Develop more effective strategies to get in and out of bed, chairs, and cars.
- Turn over in bed more easily.
- Stand and turn to change directions more efficiently.
- Improve the smoothness and coordination of your walking.
- Improve your ability to perform hand movements.
- Decrease your risk of falling.
- Improve your ability to climb and descend stairs and curbs.
- Perform more than 1 task at a time more efficiently.
- Participate in activities that are important to you.

Some of the medications designed to manage PD symptoms may have an immediate positive effect. For example, movement is typically much easier shortly after you begin taking certain PD medications. Your physical therapist will know how to time treatments, exercise, and activity based on both the schedule and the effects of your medications to get the best results.

Amplitude Training

Amplitude training is a physical therapy strategy designed to reduce bradykinesia and hypokinesia. Bradykinesia is a slowness of movement and one of the main symptoms of Parkinson's disease. Hypokinesia refers to small movements and is another common symptom of Parkinson's disease.

With amplitude training, patients practice making exaggerated movements, such as swinging their arms or taking high steps. This therapy form helps retrain your muscles and prevent you from taking small, slow movements.

Reciprocal Movements

Reciprocal movements happen at the same time in opposite directions. For example, swinging your arms as you walk is a reciprocal movement. Parkinson's disease may impair a person's ability to make reciprocal movements which can cause balance issues, but physical therapy can help.

Your physical therapist might have you use a stationary bike or elliptical machine to strengthen reciprocal patterns.

They may also recommend that you practice reciprocal movements on your own by focusing on swinging your arms as you walk. Dancing and tai chi can also improve your ability to move.

Parkinson's disease can make daily activities seem frustrating and time-consuming. Your physical therapist will become a partner with you and your family to help you combat and manage the symptoms of PD. As your condition changes, your treatment program will be adjusted to help you be as independent and as active as possible.

Some people with PD benefit from using a cane or a walker. Your physical therapist can work with you to determine if any of these devices may be helpful to you. If you need physical assistance to help you with moving in bed or getting out of a chair, your physical therapist can team with you and your family to develop strategies to make moving easier and help prevent injury. In addition, your physical therapist can make suggestions on changes to your home environment to optimize safe and efficient daily function at home.



Benefits of Aquatic Therapy

- Increase in joint flexibility
- Muscles relaxation
- Muscle strength and endurance improvement
- Lower pain
- Abnormal tone, spasticity, and rigidity.
- Loss of fear of falling or getting hurt.
- Reducing stress and promoting relaxation
- Enhancing the healing process to decrease recovery time
- Improving coordination and balance
- Improving flexibility and movement
- Assisting with locomotion and gait
- It's fun

RESOURCES



Knowledge
is
POWER

Educational Resources

Some sources of online support groups:

- The Parkinson's Buddy Network is an online community
- NeuroTalk has a robust Parkinson's disease community.
- Caring.com hosts a Parkinson's support group.
- HealthUnlocked has Parkinson's community pages.
- Smart Patients Parkinson's Disease Community offers self-care tips.
- PatientsLikeMe has a Parkinson's forum.
- Optimal Physical Therapy local neurological disease support group on FaceBook. Local community support

<https://www.parkinson.org>

<https://www.wiparkinson.org>.

<https://www.michaeljfox.org/>

<https://www.apdaparkinson.org/>

themighty.com

<https://davisphinneyfoundation.org/>

TIPS FOR PROGRESS

When you suffer from a chronic illness, you should use the tips below (in no particular order) to help ensure that your rehabilitation process is a success.

1. Choose a progressive program that fits your goals and challenges you to move forward without causing any unnecessary flare-ups.
2. Set goals, and work to achieve them. Use the SMART procedure to rehab from your pain or injury.
3. Determine your start point and move forward, with the assistance of a trained physical therapist.
4. Set realistic goals that you can meet, such as your healing timeline.
5. Maintain a rehabilitation diary, and mark when you have met a goal or made significant progress in your physical therapy recovery process.
6. Learn about flare-up management, and how to manage it effectively.
7. Use a mirror or actual people to give you feedback. You can improve your movement patterns, and change the approaches you are taking during your rehab process.
8. Choose an environment where you can solely concentrate on your recovery and healing process.
9. Rehabilitation consists of various aspects, including education, endurance, posture, functional exercise, motor control, and strength.
10. Vary the tasks you have outlined for yourself. This is a learning process, and in order to recover from your injury and eliminate any chronic soreness that you have, you will need to learn what forms of treatment and exercise work; you will learn as you go.

Balance is a state of equilibrium. When you can control your body's center of mass over its base of support, you remain upright and steady.

To achieve greater balance, your brain must combine information from all levels of your nervous and musculoskeletal systems. The basal ganglia, part of the brain responsible for motor control, plays an important role in balance. The basal ganglia is also the part of the brain impacted by Parkinson's. The neurodegeneration of the SNpc dopaminergic neurons and loss of dopamine depresses the nigrostriatal pathway, and motor activity—including balance—becomes impaired.

Parkinson's impact on the brain can also cause delays in a person's reaction time, speed of movements, and postural "righting reflexes." (This means if your body sways off its base of support, it might take too long to "right" itself.) All of these increase the risk of falling.

RESEARCH MATTERS

Overview of Recent Randomized Controlled Trials Investigating Physical Therapy Interventions for Gait Disorders in People With Parkinson Disease done by Meg E. Morris, Clarissa L. Martin, Margaret L. Schenkman. the full article can be read here:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2816030/>. The Conclusion is as follows, "Comprehensive, client-centered physical therapy for people with PD is based on compensatory strategies to bypass the defective basal ganglia, strategies to improve motor learning and performance through practice, management of secondary sequelae affecting the musculoskeletal and cardiorespiratory systems, and fall education, as well as on assisting people to make lifelong changes in physical activity habits. The extent to which strategies, exercises, and health education are used varies according to individual needs and changes over time as the person ages and the disease progresses. Overall, the aim is to enable the person with PD to live well by providing effective physical therapy interventions at optimal times to promote health and well-being and by educating the individual regarding long-term self-management strategies."

NO REFERRAL NEEDED



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