



**BRIAN GRANT  
FOUNDATION**



# **EXERCISE FOR PARKINSON'S**

RECOMMENDATIONS FOR MANAGING SYMPTOMS

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**The Brian Grant Foundation** provides tools to improve the well-being of people with Parkinson's. Our programs focus on exercise and nutrition to help people with Parkinson's manage their symptoms, improve their overall health and prevent other serious illnesses.

Every month, we publish an email newsletter filled with tips, expert interviews, profiles of people with Parkinson's and more.

Sign up today! [www.briangrant.org](http://www.briangrant.org)

## EXERCISE FOR PARKINSON'S OVERVIEW

Exercise is important for everyone. For people with Parkinson's, exercise can improve quality of life and may help alleviate some of the most difficult motor and non-motor symptoms of the disease. Overall, exercise can benefit people with Parkinson's in the following important ways:

### Motor Symptom Management:

Research has shown that exercise improves flexibility, balance, coordination, agility, gait and strength.

### Non-Motor Symptom Management:

Exercise may positively impact depression, anxiety, apathy, cognition and sleep difficulties.

### Delay Mobility Decline:

Studies suggest that exercise may help delay some of the common symptoms of the disease.

## A WORD ON PARKINSON'S EXERCISE RESEARCH

Studies suggest that exercise may improve how the brain uses and protects dopamine. Researchers are also looking at how specific activities may help counteract some of the common symptoms of Parkinson's. For example, Tai Chi is great for improving balance whereas boxing can help with quickness and sequencing. The Brian Grant Foundation (BGF) works with researchers at the Oregon Health & Science University (OHSU) Balance Disorders Laboratory to develop evidence-based exercise programs.

Learn more at [www.briangrant.org](http://www.briangrant.org).

## SAFETY CONSIDERATIONS

Exercise is essential for people with Parkinson's. But balance problems and other symptoms can increase the risk of falling. Here are some things to consider when engaging in an exercise routine:

### Talk To Your Health Care Provider

Make sure you've talked to a health care provider about your exercise program, especially if you're considering a new physical activity or if you're experiencing new or worsening symptoms.

### Time Your Medications

Many people with Parkinson's have "on times" when their medications are most effective at alleviating symptoms. Exercising during on times may be more effective, and it could reduce the risk of falling.

### Stay Hydrated

Staying hydrated can help with low blood pressure and dizziness, and may help reduce fall risk.

### Be Mindful of Symptoms

Remember both motor and non-motor symptoms can increase fall risk.

# RECOMMENDATIONS FOR EXERCISE FOR PARKINSON'S

## Recommendations for Exercise Intensity and Duration

Remember, any exercise is better than none! Parkinson's patients enrolled in exercise programs for longer than six months, regardless of intensity, have shown significant gains in function. However, greater intensity reaps greater benefits. That's why experts recommend that people with Parkinson's exercise with as much intensity as is safely possible, for as long as possible. The exercise sessions should be challenging, requiring focus, effort and full attention. For example, walking on a treadmill is good, but you might also try walking quickly outside with distractions, obstacles and changes in terrain.

As for how much and when to exercise, people with Parkinson's should aim for the following:

- Begin training in the early stages of Parkinson's
- Train most days of the week for at least one hour
- Add mental challenges when appropriate and safe
- Train at higher intensity levels, meaning you can still talk while training but in short bursts

## Recommendations for Types of Exercises

Above all, do what you enjoy! Remember, any exercise is beneficial. For people with Parkinson's, aerobic activities combined with movements that address specific symptoms can help you practice and maintain everyday motor functions that directly impact quality of life. The exercise principles that follow can help you understand how physical activity can help manage the common symptoms of Parkinson's.



# EXERCISE FOR PARKINSON'S PRINCIPLES

## 1. Build stamina through aerobic activity.

- Research suggests aerobic activity supports positive changes in the brain. Aerobic activity can include high intensity walking or biking followed by other higher intensity activities, like lunges.

## 2. Target specific areas for better flexibility.

- Rigidity along the spine causes “stooped” posture. Some of this rigidity comes from increased muscle tone in flexor muscles.
- Stretching is especially important. Focus on flexor muscles, including the chest, shoulders, abdominals, hip flexors, gluteals, hamstrings, hip adductors, and calves.
- Activities that rotate the spine, such as kayaking, are also helpful for improving rigidity.

## 3. Improve and maintain flexibility with dynamic stretching.

- Improving flexibility can facilitate better posture and better movement. A whole body stretching routine, like those done in yoga, can be particularly beneficial.

## 4. Strengthen extensor muscle groups to improve posture.

- Extensor muscles help facilitate upright posture and may reduce back pain.
- Practice extension exercises that strengthen the back, hips and triceps.

## 5. Use BIG, full amplitude, whole-body movements. Vary patterns and sequence.

- Slow, small movements are a common symptom of Parkinson's. People with Parkinson's tend to think a move looks big, but it will actually be undersized.
- Thinking BIG helps you move BIG. Think about exaggerating your movements.
- Use the whole body. Move in all directions, practice turning and emphasize weight shifting

## 6. Practice dual tasks and cognitive challenges.

- People with Parkinson's can have difficulty performing more than one task at a time or shifting from one task to another. Practicing dual physical tasks (combining two physical activities, such as walking while doing triceps extension) can help improve this symptom.
- People with Parkinson's will eventually experience cognitive challenges. Adding counting or singing and other more complex cognitive challenges to a movement can help improve this.

## 7. Practice self-initiated and self-paced movement.

- People with Parkinson's can also experience problems initiating movement, which can lead to abruptly halting or “freezing.” Keeping up a pace can also be challenging.
- Practice self-initiated and self-paced movements. Counting can help you keep a pace. Imagining yourself doing a movement before you perform it can help initiate movement.

## 8. Develop reciprocal motions.

- Uneven or non-swinging arms are common in Parkinson's and can lead to balance problems.
- Practicing reciprocal, coordinated arm and leg movements may help address this problem. Using very light wrist weights (or holding rolled up magazines) can help increase arm swings too.

## 9. Develop erect postural alignment.

- Stooped posture is a common symptom of Parkinson's that can affect balance and movement.
- Focus on maintaining a tall posture while doing physical activities.
- Think about keeping your chest lifted upwards, your shoulders back and down, the top of your head is lifted toward the ceiling, and your chin parallel to the floor.

## 10. Use strong voices.

- Soft and slow speech is a common symptom of Parkinson's. Practicing strong voices (speaking loudly and with intention) while exercising can help improve voice quality and movement.

## 11. Improve sensory-motor integration for balance.

- Sensory-motor integration refers to the communication between our senses and our muscles. In people with Parkinson's, sensory-motor integration can become impaired.
- Balance pads, varying surfaces and inclines may help you adapt to changing conditions in the environment.
- Reducing visual input may also help improve sensory-motor integration. Darken the room, close one eye, or put on sunglasses to reduce dependence on sight.

## 12. Practice speed and quickness.

- Parkinson's can cause slowness. Practicing fast movements, like footwork in boxing, can help.

## 13. Build mind/body connections.

- Building mind/body connections can help promote awareness of our own movement, which can become impaired in Parkinson's.
- Mind/body connections can promote relaxation and self-awareness, both of which can positively affect anxiety and depression.
- Doing activities that require planning or sequencing can help build mind/body connections.
- Connecting breathing patterns to movement or relaxation, such as in yoga, is also helpful.

## 14. Do activities that are challenging, engaging, fun, social and safe.

- You're more likely to stick with an activity if it's fun! Make sure you also choose activities that are safe, and talk with your health care provider before engaging in new exercise programs.

Table 1. Activities that can help manage common symptoms of Parkinson's.

SYMPTOM	SUGGESTED MOVEMENT PRINCIPLES	SUGGESTED ACTIVITIES
<p><b>Rigidity:</b> Stooped posture and decreased range of motion in the neck, trunk and hips</p>	<ul style="list-style-type: none"> <li>▪ Rotating movements</li> <li>▪ Reciprocal movements</li> <li>▪ Rhythmic movements</li> <li>▪ Extension exercises</li> <li>▪ Tall, “charge up” posture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Torso rotation exercises</li> <li>▪ Pilates and yoga</li> <li>▪ Chest stretches</li> <li>▪ Upper back strengthening exercises</li> </ul>
<p><b>Bradykinesia:</b> Slow movements</p> <p><b>Hypokinesia:</b> Small movements and narrow base</p>	<ul style="list-style-type: none"> <li>▪ Whole body movement</li> <li>▪ Wide base of support</li> <li>▪ Extensor muscle strengthening</li> <li>▪ BIG and fast steps</li> <li>▪ BIG arm swings</li> </ul>	<ul style="list-style-type: none"> <li>▪ Walking and agility exercises</li> <li>▪ Lunging in all directions</li> <li>▪ Boxing</li> <li>▪ Kettlebell swings</li> </ul>
<p><b>Akinesia:</b> Impaired sequential coordination (includes freezing)</p>	<ul style="list-style-type: none"> <li>▪ Preplanning tasks</li> <li>▪ Quickly changing movements</li> <li>▪ Practice moving in small spaces</li> <li>▪ Understand and use external cues</li> <li>▪ Adding a second task (dual tasks)</li> <li>▪ Sequencing movements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Walking and agility exercises</li> <li>▪ Obstacle courses</li> <li>▪ Quick turns in corners</li> <li>▪ Lunging in all directions</li> <li>▪ Boxing</li> <li>▪ Kettlebell swings</li> </ul>
<p><b>Impaired Sensory Integration:</b> Problems processing sensory information</p>	<ul style="list-style-type: none"> <li>▪ Practice balance on different surfaces and environments</li> <li>▪ Reducing reliance on vision and external cues</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stability ball exercises</li> <li>▪ BOSU ball exercises</li> <li>▪ Exercises with eyes closed</li> <li>▪ Exercises with head turns</li> <li>▪ Stand on a foam pad</li> </ul>
<p><b>Impaired Balance</b></p>	<ul style="list-style-type: none"> <li>▪ Balance specific exercises adding visual and surface changes</li> <li>▪ Weight shifting</li> <li>▪ Strengthening hips and legs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stability ball exercises</li> <li>▪ Lunging</li> <li>▪ Tai Chi</li> <li>▪ Boxing</li> </ul>

# EXERCISE FOR PARKINSON'S TRAINING FOR PROFESSIONALS

BGF developed the Exercise for Parkinson's Training for Professionals program based on research from OHSU's Balance Disorders Laboratory. The training is open to exercise instructors, personal trainers, physical therapists and physical therapist assistants. BGF hosts the training in select cities throughout the year. The training is also available online.

Learn more at [training.briangrant.org](http://training.briangrant.org).

## ONLINE EXERCISE VIDEOS

BGF has also developed a Boot Camp for Parkinson's routine that includes a variety of activities that target common symptoms of the disease. The basic activities for the boot camp are described in Table 2. The goal of each boot camp class is to incorporate these principles into each class – and to have fun!

Follow along with a boot camp class online at [www.briangrant.org/exercise-videos](http://www.briangrant.org/exercise-videos).

Table 2. Example boot camp class activities.

ACTIVITY	GOALS
Warm Up	Gentle warm up and dynamic stretches
Aerobic Activity	Use high intensity and/or interval training to build stamina
Agility Course	Switch attention between agility course and cognitive tasks
Lunges	BIG whole-body steps with reciprocal arm swings
Boxing	Sequencing, quickness and cognitive training
Tai Chi	Balance, sequencing, relaxation and meditation
Pilates & Yoga	Transitions for everyday skills

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