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## Parkinson's Disease

Parkinson's disease (PD) can occur when there is a loss of brain cells that produce a chemical called dopamine. It usually presents in people over the age of 60, but it can present in earlier life as well. About 500,000 people in the U.S. have been diagnosed with PD, with about 60,000 people being diagnosed each year according to the National Institute of Neurological Disorders and Stroke. The exact cause of PD and how it manifests itself is different in each individual. PD is still undergoing significant research to better understand the disease and treatment. Physical therapy and exercise have been shown to be effective methods of conservatively managing the symptoms of PD and improving quality of life if living with it.



### Get started with LSVT® BIG!

Call either of our offices for  
more information.

Visit the LSVT website  
[www.LSVTglobal.com](http://www.LSVTglobal.com)



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**Appalachian Physical Therapy**

*"Always Getting Better"*

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## LSVT® BIG & Parkinson's Disease

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**"It is possible to take  
charge of your life, even  
with Parkinson's. It is  
possible to override your  
brain. It is possible to have  
power over Parkinson's"**

*-- Sharon Kha*



### **Broadway**

171 East Springbrook Rd.  
Broadway, VA 22815  
540-901-9501

### **Harrisonburg**

2035 East Market St., Suite 45  
Harrisonburg, VA 22801  
540-209-8977

### **Strasburg**

105 Stony Pointe Way, STE 211  
Strasburg, VA 22657  
540-252-3892

### **Pinehurst**

211-L Central Park Ave.  
Pinehurst, NC 28374  
910-215-0541

[www.aptfc.com](http://www.aptfc.com)

# What is LSVT BIG?

LSVT® BIG is an exercise treatment program for people with PD. It is based on the principle of neuroplasticity, that the brain can learn and change. It has been formulated from an existing original program, Lee Silverman Voice Treatment (LSVT® LOUD), which helps with speech for people with PD. Research on LSVT® LOUD's use over the last 15 years has shown that it results in improvements in speech intelligibility and voice loudness. LSVT® BIG works on the same principle, using a single therapy focus (BIGNESS of movement) to improve movement and quality of life in PD. Research has shown that exercise is medicine when it comes to PD. It has specifically been demonstrated that exercise can improve brain functioning and may slow disease progression (Kleim & Jones, 2008; Ludlow et al, 2008).



## Movement problems in Parkinson's disease

People with PD have trouble moving normally. Their movements are often slower (bradykinesia) and smaller or they have difficulty initiating movement (hypokinesia). Specifically, people with PD have issues with sensory deficits and recognizing the appropriate amount of effort to perform normal movements, often producing smaller than normal movements as the disease progresses. They may shuffle or freeze when they walk. Some experience falls and problems with their balance. All of these things impede functional movement and overall quality of life. For most, movement problems can be overcome temporarily when they are cued or prompted to move better (i.e. "take a big step", "stand up big").

## How does LSVT® BIG work?

The aim of the intensive LSVT® BIG training is to improve people's ability to make bigger or large amplitude movements. It is administered in an intensive manner in order to challenge the impaired system. These movements can then be generalized for different functional activities and situations, tailored to each individual as indicated. Initial results of research show that LSVT® BIG training leads to:

- Faster walking with bigger steps
- Better balance
- Increased trunk rotation
- Improved quality of life



## How is LSVT® BIG different from usual physical therapy for PD?

LSVT® BIG is a standardized, research-based, specific treatment protocol. In LSVT® BIG patients simply focus on one goal, to think BIG! with all movements. LSVT® BIG is delivered by a specially trained physical therapist over 16 therapy sessions (four sessions a week for four weeks). Evaluation includes baseline testing to track and record functional ability. In each session, participants are encouraged to perform a variety of BIG movements with BIG effort in a series of specifically designed exercises. They are also given daily homework practice and carryover exercises to maximize the benefit of the program. Intensive high effort is driven throughout this protocol, as it teaches the amount of effort required to produce normal movements. These bigger movements are then translated into real world, everyday activities. The goal is for clients to use their "bigger" movements automatically in everyday living and for long-term carryover of increased amplitude.