

# Treating Parkinson's Speech Therapy in PD



*"If I have no voice, I have no life."*

This is a direct quote from an individual who lives with Parkinson's disease (PD). It reflects the devastating impact that a speech and voice disorder can have on the quality of life of a person with PD.

This person is not alone. Research shows that 89 percent of people with PD experience speech and voice disorders, including soft, monotone, breathy and hoarse voice, and imprecise articulation. As a result, people with Parkinson's report that they are less likely to participate in conversation, or to have confidence in social settings, than healthy individuals in their age group.

For years, speech and voice disorders in people with PD were resistant to treatment. The effects of conventional treatments — whether medical or surgical — were neither significant nor lasting. The recognition that speech therapy could be tailored to the specific problems of a person with PD led to the development of a method aimed at improving vocal loudness: the Lee Silverman Voice Treatment (LSVT<sup>®</sup> LOUD) method.

## Speech and Voice Disorders in PD

There are several reasons why people with PD have reduced loudness, and a monotone and hoarse, breathy voice. One reason is directly related to the disordered motor system that accompanies Parkinson's disease, including rigidity, slowness of movement and tremor. For example, the inadequate muscle activation that leads to bradykinesia (slow movement) and hypokinesia (small movements) in the limbs can also trigger a speech disorder. For speaking, the problem with muscle activation can result in reduced movements of the respiratory system (reduced breath support), larynx (reduced vocal loudness) and articulation (reduced clarity of speech).

Another cause of speech and voice impairment in Parkinson's is a deficit in the sensory processing that is related to speech. Clinical observations suggest that people with PD may simply not be aware that their speech is getting softer and more difficult to understand; they may even insist that others have hearing problems. When people in this situation are asked to bring their voice to normal loudness, they will often complain that they feel as though they are shouting, even though they are perceived by listeners to be speaking normally.

A third cause of this condition is that people

with Parkinson's may have a problem with "cueing" themselves to produce speech with adequate loudness. Individuals with PD can respond to an external cue (e.g., an instruction from someone else to "speak loudly!"), but their ability to cue themselves internally to use a louder voice is impaired. These problems can be frustrating both for the person and for the family.

These motor sensory and cueing problems have made people with PD particularly resistant to speech treatment. As a result, conventional speech therapy has not been considered a valuable addition to the treatment of PD.

## Speech Therapy: LSVT<sup>®</sup> LOUD

Over the past 15 years, studies have demonstrated that LSVT<sup>®</sup> LOUD is an effective speech treatment for people who live with PD. Those who have used it have improved their vocal loudness, intonation and voice quality, and maintained these improvements for up to two years after treatment. Recent research studies have also documented the effectiveness of this therapy in meeting the common problems of disordered articulation, diminished facial expression and impaired swallowing.

In addition, two brain-imaging studies have documented evidence of positive changes in the brain following administration of the therapy.

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LSVT LOUD improves vocal loudness by stimulating the muscles of the voice box (larynx) and speech mechanism through a systematic hierarchy of exercises. Focused on a single goal — “speak LOUD!” — the treatment improves respiratory, laryngeal and articulatory function to maximize speech intelligibility. It does not train people for shouting or yelling; rather, the treatment uses loudness training to bring the voice to an improved, healthy vocal loudness level with no strain.

The program is administered in 16 sessions over a single month (four 60-minute sessions per week). This intensive mode of administration is consistent with theories of motor learning and skill acquisition, as well as with principles of neural plasticity (i.e., the capacity of the nervous system to change in response to signals), and it is critical to attaining optimal results. In addition to stimulating the motor speech system, the treatment incorporates sensory awareness training to help individuals with PD recognize that their voice is too soft, convincing them that the louder voice is within normal limits, and making them comfortable with their new louder voice.

People with PD are trained to self-generate (that is, internally cue) the adequate amount of loudness to make their speech understood. While LSVT LOUD has been successfully administered to individuals in all stages of PD, it has been most effective among those who are in the early or middle stages.

### How to Find LSVT LOUD

If you are experiencing any changes in your speech or voice, be sure to tell your doctor. Ask for a referral and a prescription for a speech evaluation and treatment. If you have not noticed changes in your speech, but a spouse, caretaker, or friend has pay attention to their comments. One aspect of the speech disorder is that the person with PD is often unaware of the changes in speech or voice. The sooner you obtain a speech evaluation and start speech therapy, the better.

Speech therapists work in a variety of settings, including hospitals, out-patient rehabilitation centers and private practice offices. To locate one in your area, contact the American Speech-Language-

Hearing Association (ASHA) at [www.asha.org](http://www.asha.org), or find an LSVT-certified speech therapist by visiting [www.lsvtglobal.com](http://www.lsvtglobal.com).

Ideally, you should see a speech therapist face-to-face for a complete voice and speech evaluation and treatment. However, if a speech therapist is not available in your area, LSVT LOUD is offered in select states via internet and webcam technology. The speech therapist interacts with you in your home or office “live” through your computer screen.

Speech disorders can progressively diminish quality of life for a person with PD. The earlier a person receives a baseline speech evaluation and speech therapy, the more likely he or she will be able to maintain communication skills as the disease progresses. Communication is a key element in quality of life and positive self-concept and confidence for people with PD.

For information on LSVT LOUD, contact the LSVT Foundation by calling (888) 438-5788 or email [info@lsvtglobal.com](mailto:info@lsvtglobal.com). For a full list of the research studies referenced in this article, visit [www.pdf.org](http://www.pdf.org) or [www.lsvtglobal.com](http://www.lsvtglobal.com).

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### Related fact sheets:

- Physical Therapy in PD
- The PD Partnership
- Cognitive Changes in PD

If you have or believe you have Parkinson's disease, then promptly consult a physician and follow your physician's advice. This publication is not a substitute for a physician's diagnosis of Parkinson's disease or for a physician's prescription of drugs, treatment or operations for Parkinson's disease.