

## Lee Silverman Voice Treatment

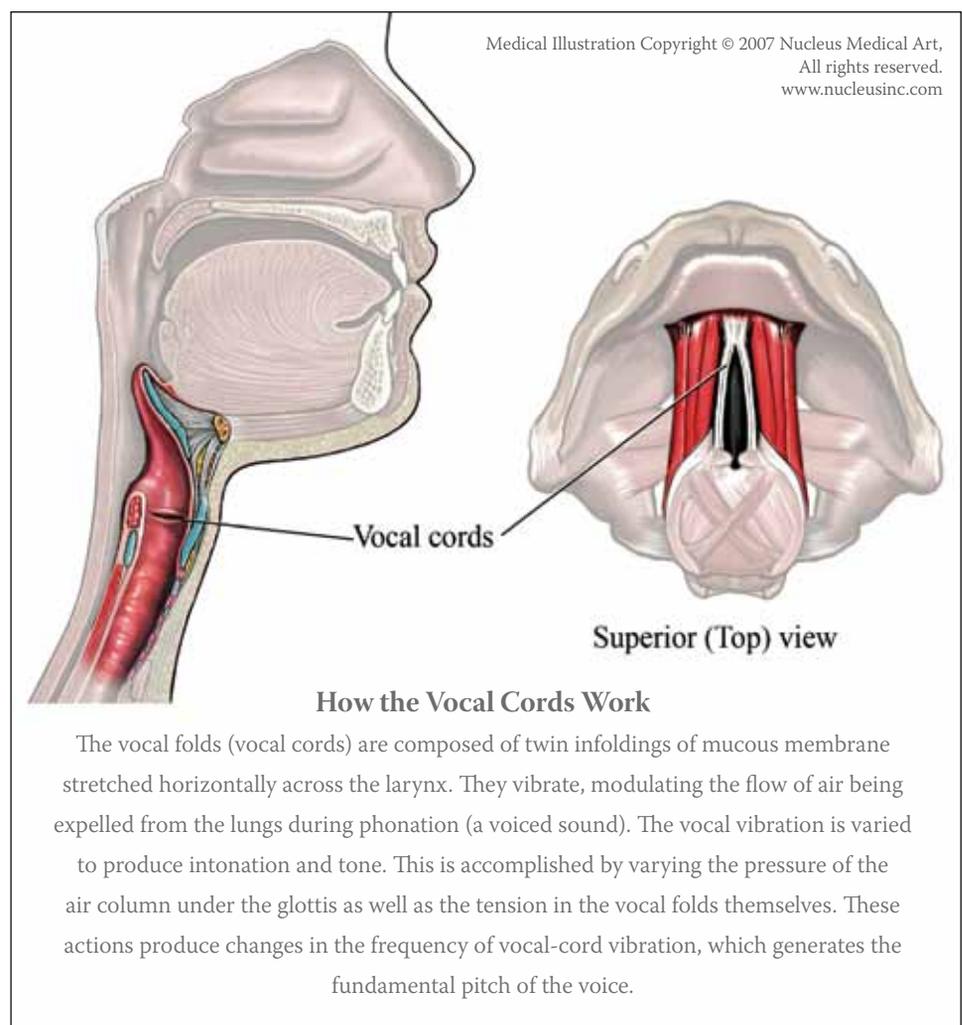
Neurological disorders can often impair speech and voice production, making communication difficult. One therapy, that has proven effective in treating patients with neurological disorders, specifically Parkinson's Disease, is the Lee Silverman Voice Treatment (LSVT®). Based upon nearly 15 years of research data, this treatment offers the opportunity to consistently improve speech and voice production in individuals with neurological disorders and significantly improve their quality of life. Designed exclusively for patients suffering from Parkinson's disease, LSVT is now being used to help individuals with swallowing dysfunctions, head trauma and multiple sclerosis.

Early research studies assessing the impact of LSVT in treating communication problems are yielding positive outcomes. The treatment offers powerful results to patients who previously had very limited opportunities to improve their speech and voice.

### Description

The LSVT program teaches patients to "think LOUD" and to focus their efforts on increasing voice volume. With intensive treatment and frequent encouragement, patients learn to consistently increase their voice volume. As patients progress in therapy, the length and complexity of their speech increases, as does their volume. Practice and feedback begin with a single sound to train the patient about the correct volume and the breath support required to produce increased sound. Training moves on to simple and frequently used phrases so that loudness becomes habitual. Speaking full sentences, reading aloud and engaging in conversation are also part of the therapy. Repetition and reinforcement are also essential parts of the program. Through constant practice, patients learn to

"recalibrate" and become accustomed to using a louder voice. Reinforcement from family and others in the community is also important to solidify the treatment gains. Patients practice with tape recorders and use sound pressure level meters for feedback. Currently, the LSVT treatment program requires four one-hour sessions with a qualified therapist each week over the course of a month. In addition, patients are required to complete home exercises for one to two hours each day in order for the therapy to be successful. The sessions are always lead by a trained speech language pathologists certified in LSVT.



## Lee Silverman Voice Treatment *continued*

### **Documented Results**

LSVT is the first and only documented efficacious speech treatment for individuals with Parkinson's disease – over 400 have been treated and included in efficacy research studies. Ninety percent of patients studied showed improvements in vocal intensity from pre- to post-treatment.

Approximately 80 percent maintained improvements in volume for 12-24 months post-treatment. Additional published data supports improvements in speech articulation, respiratory excursion, facial expression, communication gesture and neural functioning.

### **LSVT at Rainbow**

Rainbow Rehabilitation Centers has two speech-language pathologists certified in LSVT: Kerri Torzewski, MA, CCC-SLP and Angie McCalla, MS, CCC-SLP. Both clinicians were certified in April 2007 and have begun to employ the program with two patients, Jeff Terry and Yaseni Caballero-Amaya. Chosen based on the nature of their speech disorders – low volume and decreased mandibular excursion (movement of the jaw) – both have demonstrated significant improvements.

In just three weeks, Jeff's average length of sustained phonation (audible sound) improved from 11.16 to 17.6 seconds and his loudness (sound pressure level) for functional phrases gained a decibel.

Yaseni's therapy also yielded exciting results. For the past year, she has been unable to sustain voice for greater than a second in spite of consistent breathing exercises and voice training during therapy. A recent vocal cord surgery enabled her to speak just above a whisper, and she still struggled to articulate her words. She depended heavily on an alphabet board in order to communicate with others.

Using the LSVT program, her individual gains have been extraordinary. Her sustained phonation (audible sound) levels improved from 1.36 seconds to 2.42 with a range of up to 5.91 seconds. Her sound intensity (voice loudness) improved approximately 7 decibels for sustained phonation, words and phrases. These improvements took place in just two short months! Her therapists and family have noted that Yaseni's improved communication has bolstered her self-confidence and improved her social interactions.

### **Future Research**

The LSVT Foundation continues to advocate for future research. Research has begun in the areas of multiple sclerosis, ataxic dysarthria, swallowing, aging voice, vocal fold paralysis, cerebral palsy in children and down syndrome.

The LSVT Foundation is a nonprofit almost exclusively volunteer organization dedicated to preserving the quality of LSVT and facilitating access to this powerful treatment to patients worldwide. The organization also seeks to increase awareness among the medical community and advocate for LSVT. In addition, the foundation educates family members about ways they can help their loved one(s) maintain functional communication while living with the challenges of Parkinson's disease. ❖

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### Sources:

LSVT Foundation. (2007). Retrieved July 23, 2007.  
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Cleveland Hearing and Speech Center Fact Sheet