



The Value of the Speech-Language Pathologist (SLP) in Treating People with Parkinson's Disease (PD)



SLP Treatment for People with PD Improves Communication, Swallowing and Quality of Life (QoL).

Communication

For people with PD, intensive SLP voice treatment leads to . . .

Improved Speech and Communication

- Increased communicative effectiveness **(24.5%)**¹
- Improved turn-taking **(143%)**, initiation of communication **(125%)**, and participation in communication overall **(11.8%)**^{1,2}
- Increased speech intelligibility as reported by care partners **(27%)** and objective measures **(4.7%–31.5%)**³⁻⁶
- Reduced severity of dysarthria **(13.2%–22.8%)**⁷
- Reports of fewer repetitions and increased verbal communication in **60%** of people with PD⁸

Improved Prosody and Loudness

- Increased loudness in **55%–87%** of people with PD, with increased loudness in monologues **(2.9–8.4 dB)**, picture description **(5.3–7.9 dB)**, conversation **(3.0–7.0 dB)**, and phonemic fluency tasks **(4.6–8.3 dB)**^{1,3,8-26}
- Improved prosody in **50%–87.5%** of people with PD, with increased vocal range **(4.9–10.5 Hz)**^{2,11,24,27}
- Improved listener reports of reading prosody **(8.2%)** and self-perception of prosody **(24.5%–27.6%)**^{12,27,28}

Improved Voice Quality

- Improved acoustic measures of dysphonia **(20.5%–56.5%)** as well as audio-perceptual measures of hoarseness **(50.3%)** and breathiness **(48.5%)**^{1,11,29,30}
- Reduced time speaking with hoarse vocal quality **(18.6%–21.9%)**¹²
- Improved voice-related quality of life (VRQoL; **27%–61%**), with reduced impact of voice disorder on daily activities **(30.3%–52.9%)**, vocal symptoms **(31.6%)**, and emotional well-being **(53.3%)**^{1,3,8,24,31,32}

Swallowing

Following intensive SLP treatment, people with PD experience a **22.7%** increase in pleasure of eating,³³ with . . .

- Improved swallowing-related QoL **(8%–15.7%)** and function **(61.3%)**³⁴⁻³⁶
- Reduced severity **(59.7%–61.1%)** and frequency **(7.5%–20.1%)** of dysphagia symptoms^{33,35-39}
- Improved swallow initiation **(45%)**, pharyngoesophageal segment opening duration **(9%)**, and measures of spontaneous cough **(12%)**^{37,40}
- Reduced dysphagia severity **(35.9%–51.6%)** and presence of swallowing motility disorders **(51%)**^{41,42}
- Reduced presence **(74.6%)**, severity **(40.8%)**, and volume **(43.7%)** of pharyngeal residue^{33,37,43}
- Reduced swallowing-related fear **(20.8%)** and emotional impact **(58.6%)**^{36,37}
- Higher likelihood **(88%)** of maintaining or improving Penetration Aspiration Scale (PAS) scores during the course of treatment, with **33%–70%** of therapy participants demonstrating improved PAS scores.^{44,45,46}

Following SLP-led compensatory strategy training and diet modification, aspiration is eliminated in **61%** of patients with PD.⁴⁷

Multidisciplinary Treatment

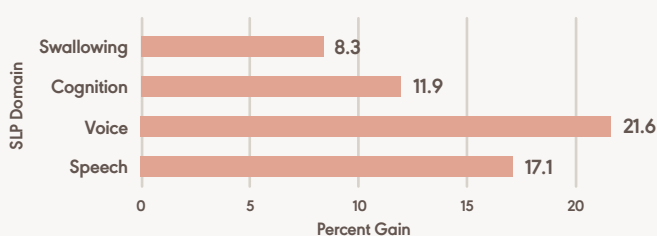
Following multidisciplinary SLP care, individuals with PD demonstrate improvements in VR-QoL **(24.9%)**⁴⁸ and health-related quality of life (HR-QoL; **15.5%–41.4%**),⁴⁹⁻⁵² with . . .

- Improved QoL for mental health **(20%–42.7%)**, cognition **(30.2%–34.2%)**, and communication **(36.4%–48.6%)**^{49,51}
- Increased knowledge regarding PD for care partners **(93%)** and people with PD **(95.4%)**⁵³
- Reduced anxiety **(10%)** and depression **(8.2%)**^{54,55}
- Reduced perceived burden and extent of disease **(14.5%–30.7%)**.^{51,56,57}

Following weekly multidisciplinary SLP voice treatment, individuals with PD increase vocal loudness by **4.7 dB** in monologues.⁵⁸

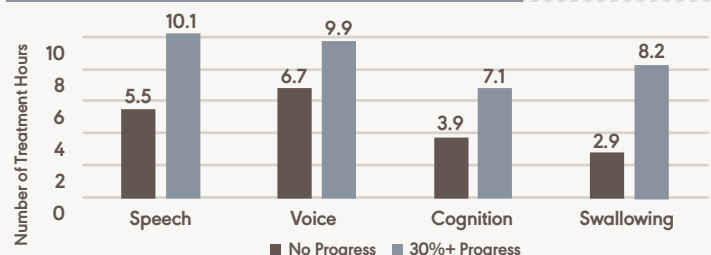
Following inpatient multidisciplinary SLP treatment, patients with PD demonstrate reduced dependence for cognitive-based tasks **(22.8%)**,⁵⁹ with improved performance on cognitive measures of visuospatial **(32.8%)** and abstract reasoning **(12.4%)**.⁶⁰

Percent Gain in Functionality



Patients with PD made an **8.3%–21.6%** average gain in functionality following SLP treatment.⁶¹

Treatment Hours and Progress



Compared with those who made no progress, patients with PD who made a **30%+** functional gain received an average of **3.2–5.3** additional hours of treatment.⁶¹



The Value of the Speech-Language Pathologist (SLP) in Treating People with Parkinson's Disease (PD)



Lasting Impact of SLP Treatment on Communication, Swallowing and Quality of Life (QoL)



Intensive SLP Voice Treatment

Following intensive SLP voice treatment, people with PD experience lasting improvements at . . .

1-2 months:

- Sustained improvement in voice related quality of life (VR-QoL; **23.9%**)¹

3-6 months:

- Sustained improvement in VR-QoL (**22.6%**)¹
- Sustained improvement in functional communicative effectiveness (**8%-24.3%**)^{1,12}
- Sustained improvement in loudness for conversation (**4.1 dB**)²³

6-12 months:

- Sustained improvement in loudness for monologues (**3.7-7.3 dB**)^{12,17,62}
- Sustained improvement in VR-QoL (**44.4%**)³
- Sustained reduction in impact of voice disorder on daily activities (**35.3%**) and emotional well-being (**40%**)³

24 months:

- Sustained improvement in loudness in monologues (**2.3 dB**) and voice-related function (**29.4%**)
- Sustained reduction in voice-related emotional impact (**53.5%**)^{3,16}



Intensive SLP Treatment

Following intensive SLP treatment, people with PD experience lasting improvements at . . .

1 month:

- Sustained improvement in pleasure of eating (**31.5%**), social functioning (**14.2%**), and desire to eat (**17.2%**)³³
- Sustained reduction in swallowing related burden (**19.4%**), emotional impact (**35.8%**), and symptom frequency (**20%**)³³

3 months:

- Sustained reduction in swallowing related emotional impact (**55.2%**)³⁶
- Sustained performance on Penetration Aspiration Scale scores in **91%** of individuals with PD^{44,45}
- Sustained reduction in pharyngeal residue severity (**20.8%**)⁴³
- Sustained reduction in dysphagia symptoms (**59%**)³⁶

6 months:

- Sustained improvement in swallowing-related social functioning (**14.2%**) and desire to eat (**11.7%**)³³
- Sustained reduction in swallowing-related burden (**13.4%**), emotional impact (**37.5%**), and symptom frequency (**15.7%**)³³
- Sustained reduction in pharyngeal residue volume (**43.8%**)³⁷
- Sustained reduction in symptom severity (**60.2%**)³⁷



Multidisciplinary Treatment

Following multidisciplinary care involving SLPs, people with PD experience lasting improvements at . . .

3 weeks:

- Sustained improvements in health-related QoL (**8%**) and self-perception of ability to cope with difficult life demands (**6.9%**)⁶³

3 months:

- Sustained improvements in health-related QoL (**11%**)⁴⁹
- Sustained improvements in QoL regarding emotional well-being (**18.6%**), cognition (**23.7%**), and communication (**27.3%**)⁴⁹



Maintenance Treatment



With swallowing treatment sessions every 3 months, **62.5%** of individuals with PD preserved or improved swallow function at 5 years.⁶⁴

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