The Role of Auditory Feedback for Speech Intensity Regulation in Parkinson's Disease.

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Hypophonia (low speech intensity) has been found to be the most common speech symptom experienced by individuals with Parkinson's disease (PD). Findings from previous research suggest that in the PD population there may be abnormal integration of sensory information for motor production of speech intensity. The current study systematically manipulated auditory feedback in sensorimotor conditions that are known to modulate speech intensity in everyday contexts, such as speaking to a partner at a distance. Participants with PD and healthy controls read sentences and engaged in conversation tasks while hearing their own speech intensity randomly altered. Altered intensity feedback conditions included 5, 10 and 15dB reductions and increases in the feedback intensity. Outcome measures included speech intensity (dB) and loudness perception ratings obtained using a visual analogue scale. Preliminary results indicate that individuals with PD display a reduced response to the altered auditory feedback in conversation tasks, suggestive of abnormal of processing of auditory feedback for speech intensity regulation. Results are expected to contribute to our understanding of the role of auditory processing for speech impairments in PD.