

## Tongue Motion During Speech in Persons With Parkinson's Disease: Effects of Speech Modifications

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**Abstract:** Purpose: Parkinson's disease (PD) affects the ability to produce intelligible speech. Although speech characteristics of persons with PD are well-described in the literature (i.e., a soft-spoken voice, reduced speech precision) and speech deterioration is known to have profound effects on the person's communicative abilities, the specific articulatory deficits that underlie these speech problems and how they can be improved in therapy remains relatively unclear. This study sought to 1) identify disease-related articulatory deficits and 2) determine if speech behavioral modifications (i.e., loud and clear speech) improves articulatory performance in persons with PD.

Method: Six persons with PD and six controls repeated a sentence as they normally would speak, after which they were instructed to speak as clearly as possible, and to speak louder than their typical speech. The electromagnetic articulograph was used to measure the range of motion of the tongue during these sentence productions.

Results: Data analysis is currently underway. Range of tongue motion will be compared across speech conditions as well as between groups. Results will be discussed with regards to their implications for speech treatment.