

## **Effects of clear speech on the silent interval duration in speakers with Parkinson disease**

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Speakers with Parkinson disease (PD) often exhibit differences in speech timing. Additionally, data suggest that speakers with PD may not make adjustments to pause timing that are typically expected for clear speech styles. The current study examines the effect of clear speech on silent interval duration in speakers with and without PD. Silent intervals lasting at least 15 ms in duration were analyzed. The negatively skewed distributions of silent interval durations from each sample were log transformed, yielding a bimodal distribution. Means of each mode were then calculated using a Gaussian Mixture Model analysis. Additionally, the syntactic and phonemic context surrounding each interval was categorized. The data revealed that while the duration of longer pauses increased for all speakers between habitual and clear speech, only the control speakers exhibited increases in short silent interval durations with clear speech. Phonemic-level analyses confirmed that speakers with PD exhibited significantly less clarity-related increase in silent interval duration than controls for intervals that were preceded by a final stop consonant or followed by a continuant. Findings suggest that the magnitude of clarity-related changes may be less for individuals with PD compared to control speakers.