

## **Effect of Overlapping Tasks on Vocal and Manual Responses in Parkinson Disease**

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Parkinson Disease (PD) has been found to influence cognition, especially during dual-task activities. The Psychological Refractory Period (PRP) Paradigm is an experimental paradigm used to examine response time delays attributed to limitations in central processing capacity when completing overlapping tasks. Tasks are made to overlap by varying the amount of time presented between the two stimuli (Stimulus Onset Asynchrony–SOA) used to elicit the responses to the two tasks. A few PRP studies have found that individuals with PD perform similarly to controls, while one study found increased response times in PD compared to controls during overlapping tasks. The current study used the PRP paradigm to examine vocal and manual response times in individuals with PD compared to healthy controls. Using a repeated-measures analysis of variance, the independent variables (Group: PD vs. controls; SOA: 50ms, 350ms or 450ms; and Response Modality: vocal vs. manual) were examined to determine their effect on response times. Results revealed a significant effect of task overlap (SOA) across all participants. Additionally, response times for individuals with PD were found to be more delayed for tasks in which more overlap occurred. Results are discussed relative to attentional processing changes resulting from PD.