

## **ABSTRACT**

Temporal differences in a quasi-speech task: A comparison of highly intelligible speakers with Multiple Sclerosis and neurologically intact speakers

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Purpose: The present study examined temporal aspects of laryngeal and articulatory timing during a slower than maximal quasi-speech syllable repetition task in individuals with MS and a dysarthria compared to neurologically intact speakers.

Methods: Fifteen highly intelligible individuals with MS and 15 pair-matched neurologically intact healthy speakers were studied while producing a quasi-speech syllable train task.

Voiceless interval and voice onset time ratio were analyzed in a series of one-way ANOVAs.

Results: Speakers with MS spent significantly more time transitioning from a voiced to a voiceless phoneme than neurologically intact speakers. Further, when controlling for syllable duration, speakers with MS produced longer VOTs than their non-impaired peers.

Conclusions: Results demonstrate that even in a task that is produced at slower than maximal rate, highly intelligible speakers with MS and a dysarthria take significantly longer than neurologically intact speakers transitioning from voiced to voiceless phonemes, and from voiceless to voiced phonemes. These results suggest that this submaximal task is sensitive to differentiate highly intelligible speakers with MS and a dysarthria from neurologically intact speakers.