

Scientists link slowed processing speed with executive deficits in MS

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Kessler Foundation researchers have published a study supporting the role of slowed processing speed in the executive deficits found in individuals with multiple sclerosis (MS). "Does slowed processing speed account for executive deficits in multiple sclerosis? Evidence from neuropsychological performance and structural neuroimaging," was published online ahead of print on August 18 by [Rehabilitation Psychology](#).

The authors are Victoria Leavitt, PhD, of the Manhattan Memory Center, formerly of Kessler Foundation. Co-authors are Foundation scientists Glenn Wylie, DPhil, Denise Krch, PhD, Nancy Chiaravalloti, PhD, John DeLuca, PhD, and James Sumowski, PhD.

Cognitive deficits, which affect half the population with MS, are disabling symptoms that adversely affect quality of life. To evaluate the role of processing speed in deficits of [executive function](#), scientists compared the performance of tasks with and without the element of processing speed in 50 patients with MS with 28 controls. Disease progression was estimated by the degree of cerebral atrophy on neuroimaging.

"Our results point to slowed processing speed as the mechanism underlying deficits in executive function," said Dr. Chiaravalloti.

"Understanding this association is an important step toward the development of effective cognitive rehabilitation strategies for individuals with MS. We should focus our efforts on two key domains -

processing speed and memory."

"Additional neuropsychological measures should be included in future studies," she added. "We also need to focus on the contribution of specific brain pathology, such as frontal atrophy and lesion load, to executive deficits."

Provided by Kessler Foundation

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