

Identifying typical patterns in the progression towards Alzheimer's disease

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For the study, the team compared changes that occurred over many years in people with stable MCI with changes in people for whom MCI progressed to a diagnosis of Alzheimer's. Dr. Belleville worked with doctoral student Simon

Cloutier and a team of clinician researchers from Montreal. This study was funded by the Canadian Institutes of Health Research (CIHR) and was published in the *Journal of Alzheimer's Disease*.

The study showed that different cognitive areas (language, inhibition, visuo-spatial processing, working memory, executive functions, etc.) do not change in a uniform way. Cognitive decline does not occur in a linear fashion; instead, the path to dementia is complex and may sometimes be characterized by periods of stability followed by accelerated decline one or two years before diagnosis.

"We've identified a profile of changes that characterizes people who progress towards dementia. In reality, a quick decline in episodic and working memory associated with language problems appears to be the typical profile of people who have a high risk of developing [dementia](#) within a short amount of time," the researcher explained.

Instead of seeing this as bad news, Dr. Belleville views these results as hope for seniors who are worried about their memories. "Many people complain about their memories. However, the presence of a change is what determines the risk of progression. This study has let us characterize the parameters of decline in people who will eventually develop Alzheimer's, which means we can better identify both benign symptoms and those that warrant particular attention. Rapid memory decline suggests that the onset of symptoms is probably due to a loss of the brain's compensatory mechanisms."

Alzheimer's disease is diagnosed late in its progression and sometimes up to fifteen years after its first effects on the brain. It is important to identify the early indicators so that patients can receive treatment as soon as possible.

Provided by University of Montreal

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