

# Latest research on cognitive dysfunction in Multiple Sclerosis patients an eye opener

September 30 2015

---



Demyelination by MS. The CD68 colored tissue shows several macrophages in the area of the lesion. Original scale 1:100. Credit: [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/) Marvin 101/Wikipedia

In a paper published in *Nature Reviews Neurology*, researchers at Monash University have revealed that eye movement measures can help identify the presence and progression of Multiple Sclerosis (MS).

MS is a chronic disease of the central nervous system in which the immune system eats away at the protective covering of nerves. Patients experience a broad range of physical and [cognitive problems](#), depending on the location and frequency of repeated immune-related attacks on the system. These can include loss of balance, slurred speech, tremors, problems with memory and concentration, paralysis, and blindness. Unlike the physical problems, which are easily recognised and monitored, the cognitive issues are less clear and changes may go unnoticed.

By following simple visual commands, movement of the eye has been shown to reflect our cognitive or thought processes.

"Over the past 10 years, our studies have shown that eye movement measures can reveal abnormal cognitive processes in MS patients, at all stages of the disease, even where a diagnosis is only suspected. Further, we have been able to show that the degree of abnormality increases with disease duration," commented Dr Joanne Fielding from the School of Psychological Sciences at Monash University.

The ability to monitor the various symptoms of the disease is crucial for patient management, specifically for determining whether the disease is progressing or that a particular treatment is stalling [disease progression](#). According to Dr Fielding, the primary advantage of these measures lies in their sensitivity, especially in the earliest stages of the disease, and in their ease of use.

"We propose that it may be possible, therefore to use eye movement measures to assist with early diagnosis, especially given that [cognitive changes](#) are thought to be among the earliest changes seen in MS, to monitor disease progression over time, and to monitor responses to treatment. These are the aims of our ongoing studies," Dr Fielding said.

**More information:** "Ocular motor signatures of cognitive dysfunction in multiple sclerosis." *Nature Reviews Neurology* (2015) [DOI: 10.1038/nrneurol.2015.174](https://doi.org/10.1038/nrneurol.2015.174)

Provided by Monash University

Citation: Latest research on cognitive dysfunction in Multiple Sclerosis patients an eye opener (2015, September 30) retrieved 23 April 2024 from <https://medicalxpress.com/news/2015-09-latest-cognitive-dysfunction-multiple-sclerosis.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.