

Further evidence statins could help control multiple sclerosis

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Credit: University College London

A dose of the drug simvastatin results in cognitive improvement in people with secondary progressive multiple sclerosis (SPMS), according to research published in *The Lancet Neurology*.

Researchers, led by Dr Jeremy Chataway (UCL Institute of Neurology), previously reported the effect of a high dosage of simvastatin, a type of statin widely used to reduce cholesterol and already known to be safe, on brain atrophy (shrinkage) in SPMS in 2014.

Now after studying the same cohort of patients from that trial, the team have confirmed a positive effect of simvastatin on frontal lobe function and physical quality of life.

This study used simvastatin at 80mg versus a placebo in 140 people with secondary progressive MS (SPMS). A range of cognitive assessments were carried out in this substudy, including the National Adult Reading Test, the Visual Object and Space Perception battery (cube analysis) and the

Frontal Assessment Battery. The Frontal Assessment Battery is a bedside assessment often used to assess some forms of frontal dementia. It encompasses features such as concepts and [mental flexibility](#) which reflect the way we interact with the world and modulate our decision-making.

Cognitive, neuropsychiatric, and health-related quality of life was assessed by neuropsychologists as well as self-reporting by the participants at 12 and 24 months.

At 24 months, the Frontal Assessment Battery score was 1.2 points higher in the simvastatin-treated group than in the placebo group. The simvastatin group also had a 2.5 points better mean physical component score of self-reports.

Dr Chataway said: "The study is clinically important because patients with MS, in particular those with progressive MS, have a significant but under-reported, cognitive burden, such as memory, processing and mental flexibility. We have shown in this early work that simvastatin can help that part of it."

There are approximately 100,000 people in the UK with MS. At about 10-15 years into the disease, at least half will become secondary progressive, characterised by greater disability, and gradual worsening of the condition. There are very few treatments that stop this worsening.

Dr Chataway said: "This study is an important small step in reinforcing the need to study cognition in MS and to continue to advance its treatment. Following on from this study we would recommended focusing the study on those aspects of cognition which are most frequently affected."

Professor Alan Thompson, Dean of the UCL Faculty of Brain Sciences, said: "It is encouraging to see the broader positive impact of simvastatin, particularly on cognitive function and quality of life –

two key areas in MS – and particularly challenging in those with progressive disease. These results further underline the importance of the imminent phase III trial."

Dr Chataway was recently awarded a £6m grant to establish definitively whether [simvastatin](#) is able to slow the rate of disability progression over a three year period in MS.

Dr David Schley, from the MS Society, said:
"Cognitive issues – like problems with memory and thinking – are a common and distressing symptom for people with MS, so this is encouraging news. Earlier findings from this trial also found statins could potentially slow the progression of MS and the MS Society is now co-funding the final stage of this research."

More information: Dennis Chan et al. Effect of high-dose simvastatin on cognitive, neuropsychiatric, and health-related quality-of-life measures in secondary progressive multiple sclerosis: secondary analyses from the MS-STAT randomised, placebo-controlled trial, *The Lancet Neurology* (2017). [DOI: 10.1016/S1474-4422\(17\)30113-8](#)

Provided by University College London

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