

# New clues to why disability strikes people with multiple sclerosis

August 20 2021

---



(HealthDay)—A new study may help explain why people with multiple

sclerosis (MS) experience worsening disability while those with two related diseases do not.

MS causes permanent brain and [spinal cord](#) scarring, and researchers investigated whether the same damage accompanies two rarer, similar diseases in which the [immune system](#) also attacks the central nervous system.

The diseases are known as aquaporin-4 antibody positive neuromyelitis optica spectrum disorder (AQP4-NMOSD) and myelin oligodendrocyte glycoprotein antibody-associated disorder (MOGAD).

All three illnesses involve inflammation that damages myelin, the insulation around nerves. The body tries to repair the myelin, but the fix may be incomplete and result in scarring.

"The differences in scarring that we found will help physicians distinguish these three diseases more easily to aid in diagnosis," said senior study author Eoin Flanagan, a neurologist at the Mayo Clinic in Rochester, Minn. "More importantly, our findings improve our understanding of the mechanisms of nerve damage in these three diseases and may suggest an important role of such scars in the development of long-term disability in MS."

The new study included 67 patients with MS; 51 with AQP4-NMOSD; and 38 with MOGAD.

In MS, attacks cause areas of inflammation that shrink only slightly and leave moderately sized scars.

During AQP4-NMOSD attacks, large areas of inflammation occur that commonly leave scars. But those scars tend to be smaller and in less important neurological locations than with MS.

MOGAD patients also have large areas of inflammation during an attack, but scarring is rarer. This suggests an enhanced ability to repair the damaged myelin, according to [findings recently published](#) in the journal *Neurology*.

"Our study highlights the importance of the currently available MS medications that very effectively can prevent attacks, new lesions and subsequent [scar](#) formation," first author Dr. Elia Sechi, a former Mayo Clinic fellow who is now at the University of Sassari in Sardinia, Italy, said in a Mayo news release.

Flanagan said researchers hope that the improved understanding of how MOGAD repairs its lesions may lead to novel ways to prevent scar formation in MS.

**More information:** The U.S. National Institute of Neurological Disorders and Stroke has more on [multiple sclerosis](#).

Copyright © 2021 [HealthDay](#). All rights reserved.

Citation: New clues to why disability strikes people with multiple sclerosis (2021, August 20) retrieved 19 April 2024 from

<https://medicalxpress.com/news/2021-08-clues-disability-people-multiple-sclerosis.html>

|  |
|--|
| <p>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.</p> |
|--|