

Gene variant linked to multiple sclerosis severity

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People with multiple sclerosis who inherited the genetic variant from both parents needed a walking aid almost four times faster, the study said.

Scientists have discovered a genetic variant linked with multiple sclerosis becoming more debilitating over time, in research hailed as a first step

towards a new drug.

Multiple sclerosis (MS) is a lifelong condition in which a person's body is attacked by its own [immune system](#), causing a range of symptoms including problems with vision, movement and balance.

For some people, the symptoms can come and go in phases called relapses, while in others they become progressively worse.

There are treatments that can help control the symptoms, but there is no cure or way to slow down the disease from getting worse.

In a study published in the journal *Nature* Wednesday, researchers from more than 70 institutes around the world said they had found the first-ever genetic variant linked to MS severity.

First, the researchers combined the [genetic data](#) of 12,000 people with MS to study what variants they shared and how quickly their disease advanced.

Out of seven million variants, they found a single one associated with the disease progressing faster.

The variant sits between two [genes](#) called DYSF and ZNF638, which had never before been linked to MS, according to the study.

The first gene works to repair damaged cells, while the other helps control viral infections.

The genes are much more active in the brain and [spinal cord](#) than the immune system, where [drug research](#) has previously focused, the study said.

To confirm what they found, the researchers then looked at the genetics of nearly 10,000 more patients, finding similar results.

"Inheriting this genetic variant from both parents accelerates the time to needing a walking aid by almost four years," US researcher and study co-author Sergio Baranzini said in a statement.

Ruth Dobson, a neurologist at the Queen Mary University of London who was not involved in the [research](#), told AFP there was "a lot of excitement about this study" in MS circles.

"It's the first step towards treatments that work in a different way," she said, emphasizing that any such drug was a long way from being available.

That the research points to the [nervous system](#), rather than the immune system, "opens up a new potential pathway for treatments, which is really exciting", she added.

More than 2.8 million people worldwide live with multiple sclerosis.

More information: Sergio Baranzini, Locus for severity implicates CNS resilience in progression of multiple sclerosis, *Nature* (2023). [DOI: 10.1038/s41586-023-06250-x](https://doi.org/10.1038/s41586-023-06250-x).

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