

# Multiple sclerosis study finds COVID-19 vaccine not tied to relapse

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People with multiple sclerosis (MS) have an increased risk of severe coronavirus infection, but there has been concern regarding potential relapse after vaccination. A new study finds that people with MS may

not have a higher risk of relapse after COVID-19 vaccination. The study is published in the August 14, 2024, online issue of *Neurology*.

"People with MS have an increased risk of severe COVID infection due to their level of motor disability or exposure to treatments that suppress their immune systems," said study author Xavier Moisset, MD, Ph.D., of Clermont Auvergne University in Clermont-Ferrand, France.

"Some previous studies have found relapses following vaccination, leading some people to not seek the recommended [booster](#) doses. The good news is that our study found that there was no increased risk of [relapse](#) after COVID-19 vaccination for nearly all participants."

Researchers found a small increase in relapse risk after a booster dose for patients with high MS activity, who have had at least two relapses in the previous two years, especially those who were not taking any MS medications.

The study involved 124,545 people with MS in France. They had been living with MS for an average of 14 years and were followed for 45 days after vaccination, as potential [vaccine](#)-induced relapses generally occur within 28 days after vaccination.

During the study, 102,524 people, or 82%, received at least one dose of a COVID-19 vaccine. A total of 95% received a second dose and 59% received an additional booster dose.

Participants received one or more of the following vaccines: Pfizer BioNTech, Moderna, AstraZeneca or Janssen.

In the 45 days following vaccination, researchers looked at relapses requiring treatment with high-dose corticosteroids.

After adjusting for other factors that could affect the likelihood of a relapse, such as time of year and the effect of disease-modifying therapy, researchers found that COVID-19 vaccination did not increase the risk of severe relapse. These results remained consistent after each dose.

To confirm the findings, researchers compared people who had relapses to those without. Again, they found no increased risk of vaccine exposure. They identified a small decrease in relapse risk after vaccination.

"Our findings are reassuring that these vaccines can be used without any worry about the risk of relapse," Moisset said. "The absence of such a risk is encouraging for people with MS that they may receive booster shots when needed, especially if booster shots are to be repeated in the future."

Moisset said, "Particular caution is needed for patients with the highest inflammatory activity, who should first receive disease-modifying treatment before their booster vaccination. People who were untreated and those with a highly active disease showed a small increased risk after the third vaccine dose. The risk was highest if both factors were combined."

A limitation of the study is that researchers looked only at relapses requiring corticosteroids, so benign relapses that were not reviewed by neurologists or not needing the use of corticosteroid therapy were not considered.

**More information:** *Neurology* (2024).

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