

# Hematopoietic stem cell transplants may provide long-term benefit for people with multiple sclerosis

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A new study shows that intense immunosuppression followed by a hematopoietic stem cell transplant may prevent disability associated with multiple sclerosis (MS) from getting worse in 71% of people with relapsing-remitting MS for up to 10 years after the treatment. The research is published in the January 20, 2021, online issue of *Neurology*. The study also found that in some people their disability improved over 10 years after treatment. Additionally, more than half of the people with the secondary progressive form of MS experienced no worsening of their symptoms 10 years after a transplant.

While most people with MS are first diagnosed with relapsing-remitting MS, marked by symptom flare-ups followed by periods of remission, many people with relapsing-remitting MS eventually transition to secondary progressive MS, which does not have wide swings in symptoms but instead a slow, steady worsening of the disease.

The study involved autologous hematopoietic stem cell transplants, which use healthy blood stem cells from the participant's own body to replace diseased [cells](#).

"So far, conventional treatments have prevented people with MS from experiencing more attacks and worsening symptoms, but not in the long term," said study author Matilde Inglese, M.D., Ph.D., of the University of Genoa in Italy and a member of the American Academy of Neurology. "Previous research shows more than half of the people with MS who take medication for their disease still get worse over a 10-year period. Our results are exciting because they show hematopoietic stem cell transplants may prevent someone's MS [disabilities](#) from getting worse over the longer term."

The study looked at 210 people with MS who received stem cell transplants from 1997 to 2019. Their average age was 35. Of those people, 122 had relapsing-remitting MS and 86 had secondary progressive MS and two had primary progressive MS.

Researchers assessed participants at six months, five years and 10 years after their transplants.

Five years into the study, researchers found that 80% of the people experienced no worsening of their MS disability. At the 10-year mark, 66% still had not experienced a worsening of disability.

When looking at just the people with the most common form of MS, researchers found 86% of them experienced no worsening of their disability five years after their [transplant](#). Ten years later, 71% still experienced no worsening of their disability.

Also, people with progressive MS benefited from stem cell transplants. Researchers found that 71% of the people with this type of MS experienced no worsening of their disability five years after their transplants. Ten years later, 57% experienced no worsening of their disability.

"Our study demonstrates that intense immunosuppression followed by hematopoietic stem cell transplants should be considered as a treatment for people with MS, especially those who don't respond to conventional therapy," Inglese said.

Limitations of the study include that it was retrospective, did not include a [control group](#) and the clinicians who helped measure participants' disability were aware that they had received stem cell transplants, so that could have led to bias. Inglese said these limitations will be addressed in future research.

Provided by American Academy of Neurology

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