Early Study: Stem Cells May Reverse MS Disability

Small initial trial showed improvement for people with relapsing-remitting MS

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TUESDAY, Jan. 20, 2015 (HealthDay News) -- A therapy that uses patients' own primitive blood cells may be able to reverse some of the effects of multiple sclerosis, a preliminary study suggests.

The findings, published Tuesday in the *Journal of the American Medical Association,* had experts cautiously optimistic.

But they also stressed that the study was small -- with around 150 patients -- and the benefits were limited to people who were in the earlier courses of multiple sclerosis (MS).

"This is certainly a positive development," said Bruce Bebo, the executive vice

president of research for the National Multiple Sclerosis Society.

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There are numerous so-called "disease-modifying" drugs available to treat MS -- a disease in which the immune system mistakenly attacks the protective sheath (called myelin) around fibers in the brain and spine, according to the society. Depending on where the damage is, symptoms include muscle weakness, numbness, vision problems and difficulty with balance and coordination.

But while those drugs can slow the progression of MS, they can't reverse disability, said Dr. Richard Burt, the lead researcher on the new study and chief of immunotherapy and autoimmune diseases at Northwestern University's Feinberg School of Medicine in Chicago.

His team tested a new approach: essentially, "rebooting" the immune system with patients' own blood-forming stem cells -- primitive cells that mature into immune-system fighters.

The researchers removed and stored stem cells from MS patients' blood, then used relatively low-dose chemotherapy drugs to -- as Burt described it -- "turn down" the patients' immune-system activity.

From there, the stem cells were infused back into patients' blood.

Just over 80 people were followed for two years after they had the procedure, according to the study. Half saw their score on a standard MS disability scale fall by one point or more, according to Burt's team. Of 36 patients who were followed for four years, nearly two-thirds saw that much of an improvement.

Bebo said a one-point change on that scale -- called the Expanded Disability Status Scale -- is meaningful. "It would definitely improve patients' quality of life," he noted.