

Poor bone health may start early in people with multiple sclerosis

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Osteoporosis and low bone density are common in people in the early stages of multiple sclerosis (MS), according to a new study published in the July 12, 2011, print issue of *Neurology*.

"We've known that people who have had MS for a long time are at a greater risk of low bone density and [broken bones](#), but we didn't know whether this was happening soon after the onset of MS and if it was caused by factors such as their lack of exercise due to lack of mobility, or their medications or reduced [vitamin D](#) from lack of [sun exposure](#)," said study author Stine Marit Moen, MD, of Oslo University Hospital Ullevål in Norway.

Low vitamin D levels are associated with an increased risk of MS. Low vitamin D levels can lead to reduced [calcium absorption](#) and [bone mineralization](#), or the process the body uses to turn minerals into [bone structure](#).

"Our hypothesis was that if vitamin D exerts a major effect on the risk of MS, then the effects of low vitamin D levels on bone density would be apparent soon after the onset of MS," Moen said.

The study involved 99 people with an average age of 37 who were recently diagnosed with MS or clinically isolated syndrome, which means they had a first episode of symptoms like those in MS but have not yet been diagnosed with the disease. All had no or minor [physical disability](#) from the disease.

The participants had bone density tests an average of 1.6 years after the first time they had any symptoms suggestive of MS. Their tests were compared to bone tests of 159 people of similar age, gender and ethnicity who did not have the disease.

A total of 51 percent of those with MS had either osteoporosis or osteopenia, compared to 37 percent of those who did not have the disease.

Osteoporosis is a disease where low bone density causes the bones to become thin and brittle, making them more likely to break. Osteopenia is [low bone density](#) that is less severe than osteoporosis but puts a person at risk for osteoporosis.

The results remained the same after researchers adjusted for other factors that can affect bone density, such as smoking, alcohol use and hormone treatment.

"These results suggest that people in the early stages of MS and their doctors need to consider steps to prevent osteoporosis and maintain good bone health," Moen said. "This could include changing their diet to ensure adequate vitamin D and calcium levels, starting or increasing weight-bearing activities and taking medications."

Provided by American Academy of Neurology

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