

Multiple sclerosis activity changes with the seasons

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New research shows that multiple sclerosis (MS) activity can increase during spring and summer months. The research is published in the August 31, 2010, issue of *Neurology*, the medical journal of the American Academy of Neurology.

"Our results showed that the appearance of lesions on [brain scans](#) was two to three times higher in the months of March to August, compared to other months of the year," said study author Dominik Meier, PhD, of Brigham and Women's Hospital in Boston and a member of the American Academy of Neurology.

For the study, researchers compared MRI [brain](#) scans of 44 people taken from 1991 to 1993 to weather data from the same time period. Participants were between the ages of 25 and 52 with untreated MS. Each person had eight weekly scans, then eight scans every other week followed by six monthly check-ups, for an average of 22 scans per person.

[Weather information](#) included daily temperature, [solar radiation](#) and precipitation measurements for the Boston area.

After one year, 310 new lesions were found in 31 people. Thirteen people had no new lesions during the study. "Not only were more lesions found during the spring and summer seasons, our study also found that warmer temperatures and solar radiation were linked to disease activity," said Meier. There was no link found between precipitation and lesions.

"This is an important study because it analyzes records from the early 1990's, before medications for relapsing MS were approved, so medicines likely could not affect the outcome. A study like this probably won't be able to be repeated," said Anne Cross, MD, with the Washington University School of Medicine in St. Louis, who wrote an editorial about the study. Cross is also a member of the American Academy of Neurology. "Future studies should further explore how and why environmental factors play a role in MS."

One significant aspect of the research is that clinical trials often use MRI to assess the effectiveness of a drug and studies commonly last between 6 and 12 months. If the study ran from spring to winter, it might appear that [lesions](#) decreased due to drug effect but the cause might just be change of season. The opposite would occur if a study started in winter and lasted through the spring and summer.

Provided by American Academy of Neurology

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