

Does smoking compound other MS risk factors?

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A new study shows that smoking may increase the risk of multiple sclerosis (MS) in people who also have specific established risk factors for MS. The research is found in the April 7, 2010, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

The research involved 442 people with MS and 865 people without the disease from three studies: the Nurses' Health Study I/Nurses' Health Study II, the Tasmanian MS Study and the Swedish MS Study.

Researchers first determined whether participants had known [risk factors](#) for MS, including having a high level of antibody in the blood to the Epstein-Barr virus (a common [herpes virus](#) that infects most people but is associated with MS in a small fraction of those infected), or having an immune-system-related gene called the HLA-DR15 gene (which is present in 20% of the population at large but 60% of patients with MS).

The study found that among those with high levels of the antibody to the Epstein-Barr virus, smokers were twice as likely to have MS as those who had never smoked. The same association was not seen in those with low antibody levels. The risk of MS associated with smoking was not different in people with and without the HLA-DR15 gene.

"The consistency of an association between MS, [smoking](#) and the body's [immune response](#) to the Epstein-Barr virus based on these three distinct, geographically diverse studies suggests this finding is not due to chance," said study author Claire Simon, ScD, with Harvard School of Public

Health in Boston. "This relationship may provide clues as to why certain individuals develop MS while others do not."

In the United States, the average lifetime risk of developing MS is approximately one in 200 for women and one in 600 for men. Among those with high antibody levels to the Epstein-barr virus, [smokers](#) may have up to a twofold increase in MS risk compared to non-smokers.

MS is the most common non-traumatic disabling neurologic disease in the US among young adults

Provided by American Academy of Neurology

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