

# HPV vaccination not associated with increased risk of multiple sclerosis, study shows

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Gardasil vaccine and box. Image: Wikipedia

Although some reports have suggested a link between human papillomavirus (HPV) vaccination and development of multiple sclerosis or other demyelinating diseases (a group of central nervous system disorders), a follow-up of girls and women in Denmark and Sweden who received this vaccination found no increased risk for these disorders, according to a study in the January 6 issue of *JAMA*.

Since the licensure of the quadrivalent [human papillomavirus](#) (qHPV)

[vaccine](#) in 2006 and the later licensure of the bivalent HPV (bHPV) vaccine, more than 175 million doses have been distributed worldwide. The introduction of large-scale vaccination in a new target group—girls and young women—has been accompanied by a number of safety concerns, with the potential to undermine public confidence in the new vaccines. One concern is the development of multiple sclerosis, which has been fuelled by social and news media reports of cases occurring after HPV vaccination, and an increasing number of case reports published in the medical literature describing vaccine recipients who developed multiple sclerosis as well as other [demyelinating diseases](#). It is not known if the occurrence of these conditions after HPV vaccination merely reflects the background rates in girls and young women or represents a true increased risk, according to background information in the article.

Nikolai Madrid Scheller, M.B., of the Statens Serum Institut, Copenhagen, Denmark, and colleagues conducted a study that included Danish and Swedish girls and women ages 10 years to 44 years, followed up from 2006 to 2013. The researchers used nationwide registers to identify the study group, information on qHPV vaccination, and data on incident diagnoses of multiple sclerosis and other demyelinating diseases.

A total of 3,983,824 girls and women were eligible for inclusion in the study group. Of these, a total of 789,082 were vaccinated during the study period, with a total of 1,927,581 qHPV vaccine doses. During follow-up, 4,322 multiple sclerosis cases and 3,300 cases of other demyelinating diseases were identified, of which 73 and 90, respectively, occurred within the risk period (two years following vaccination). After analysis of the data, the researchers found no increased risk of multiple sclerosis or other demyelinating diseases associated with qHPV vaccination.

"Our study adds to the body of data that support a favorable overall safety profile of the qHPV vaccine and expands on this knowledge by providing comprehensive analyses of [multiple sclerosis](#) and other demyelinating diseases. The size of the study and the use of nationwide registry data of unselected populations from Denmark and Sweden allowed adequately powered analyses that are likely generalizable," the authors write.

"These findings do not support concerns about a causal relationship between qHPV vaccination and demyelinating diseases."

**More information:** *JAMA*, [DOI: 10.1001/jama.2014.16946](https://doi.org/10.1001/jama.2014.16946)

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