

HPV vaccine may benefit HIV-infected women, study finds

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(Medical Xpress)—Women with HIV may benefit from a vaccine for human papillomavirus (HPV), despite having already been exposed to HPV, a study finds. Although many may have been exposed to less serious forms of HPV, more than 45 percent of sexually active young women who have acquired HIV appear never to have been exposed to the most common high-risk forms of HPV, according to the study from a National Institutes of Health research network.

[HPV](#) is the most [common](#) sexually transmitted infection in the world. The virus can infect the anal and genital areas, mouth and throat of males and females. High-risk forms of the virus can cause [cancer](#), including cancer of the cervix.

The researchers noted that earlier studies had found many women with HIV were more likely than were women who did not have HIV to have conditions associated with HPV, such as precancerous conditions of the cervix, as well as for cervical cancer.

"[Health care providers](#) may hesitate to recommend HPV vaccines after a girl starts having sex," said study first author Jessica Kahn, M.D., M.P.H. of Cincinnati Children's Hospital Medical Center and the University of Cincinnati College of Medicine. "However, our results show that for a significant number of young women, HPV vaccine can still offer benefits. This is especially important in light of their [HIV status](#), which can make them even more vulnerable to HPV's effects."

The [Centers for Disease Control and Prevention](#) recommends [HPV vaccination](#) for girls ages 11-26. If an individual has not been exposed to the virus, approved HPV vaccines can protect against four types of the virus. Two HPV types, HPV-16 and HPV-18, cause 70 percent of cervical cancers. Two others, HPV-6 and HPV-11, cause 90 percent of [genital warts](#).

At the time the women in the study received their first HPV vaccination, the researchers found that 12 percent had an existing HPV-16 infection and 5 percent had an HPV-18 infection. Because of their HIV status, these women may be more likely to develop cervical cancer or to develop a cancer that is hard to treat, the researchers said.

"Cervical cancer screening for sexually active [young women](#) is an important clinical priority, but our findings suggest it is especially so for women at risk of HIV," said study co-author Bill G. Kapogiannis, M.D., of the Pediatric, Adolescent and Maternal AIDS Branch of the Eunice Kennedy Shriver [National Institute](#) of Child Health and Human Development (NICHD), one of six NIH institutes supporting the study.

Drs. Kahn and Kapogiannis conducted the research in collaboration with colleagues at the NICHD and Albert Einstein College of Medicine, New York City; Jefferson Medical College of Thomas Jefferson University, Philadelphia; New York University School of Medicine; Westat, Inc., Rockville, Md.; and the University of Alabama at Birmingham.

The research was conducted at a network of hospitals affiliated with the NICHD-funded [Adolescent Medicine Trials Network for HIV/AIDS Interventions](#). Also supporting the study were the National Institute on Drug Abuse, National Institute of Mental Health, National Institute of Allergy and Infectious Diseases, National Cancer Institute and National Center for Research Resources.

The findings appear in the *Journal of Acquired Immune Deficiency Syndromes*.

The researchers analyzed blood and tissue samples from 99 HIV-positive women between 16 and 23 years old who were given an initial vaccination for HPV. The researchers examined the samples for evidence of an existing HPV infection as well as previous exposure to the virus.

The researchers tested for the presence of 41 of more than 100 existing types of HPV virus, including 13 high-risk types. They found that 75 percent of the women had an existing HPV infection with at least one type, with 54 percent testing positive for a high-risk type. However, when examining the two types that cause 70 percent of cervical cancers (HPV-16 and HPV-18), the researchers found that nearly half of the women had no existing infection with either type and showed no evidence of exposure to them.

When the researchers tested for each type of HPV individually, they found that nearly 75 percent of the women had no current HPV-18 infection and no evidence of previous exposure. For HPV-16, 56 percent did not have a current infection or previous exposure.

"Even among [women](#) who test positive for one type of HPV, the vaccine may effectively prevent [infection](#) with others—especially high-risk forms that cause cancer," Dr. Kahn said. "It's important that doctors don't withhold the vaccine in these cases, thinking that it's too late for a vaccine to be effective."

Provided by National Institutes of Health

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