

Male circumcision may decrease risk of HPV infection and cervical cancer

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Two new studies suggest that male circumcision may assist in the prevention of human papillomavirus (HPV) infection, particularly infection with the high-risk subtypes associated with cervical, penile, and other cancers. Both studies are published in the January 1 issue of *The Journal of Infectious Diseases*, now available online.

High-risk subtypes of HPV have been estimated to be present in 99.7 percent of cervical cancers worldwide. Evidence has shown that women with circumcised partners have a reduced risk for genital cancer. Two new studies sought to discover if HPV infection is more likely to occur in uncircumcised compared with circumcised men.

Bertran Auvert MD, PhD, and his team of researchers in France and colleagues from South Africa studied data from a trial conducted in Orange Farm, South Africa. Uncircumcised men aged 18-24 years were randomized into either an intervention group, to be circumcised, or a control group, to remain uncircumcised. During this study, urethral swab samples were collected and analyzed for presence of HPV among men followed up for 21 months. Information about sexual behavior was also collected.

Dr. Auvert and colleagues found that the percentage of high-risk HPV genotypes was lower in the circumcised group than in the control group. The most important implication, according to researchers, was that "reducing the frequency of HPV infection among men will reduce the risk of exposure in their female sexual partners."

A second study by Carrie Nielson PhD, at the Oregon Health & Science University and colleagues at the University of Arizona, H. Lee Moffitt Cancer Center and Research Institute, and the Centers for Disease Control and Prevention tested more than four hundred men aged 18-40 years in two U.S. cities during 2002-2005. Sixteen percent of participants were uncircumcised. Researchers tested for HPV in skin swabs of the anogenital area and semen samples in participants with no HPV symptoms (such as warts or lesions).

Investigators found that circumcised men were about half as likely to have HPV as uncircumcised men, after adjustment for other differences in the two groups. These results demonstrated that lack of circumcision is associated with cervical cancer because of the increased risk of HPV infection. Nielson suggested that it may be useful to consider circumcising newborn boys in order to decrease the risk of HPV infection for them and their future partners. "Parents are not currently advised of this risk," she said. "These studies contribute to the evidence that might help to inform that decision."

In an accompanying editorial, Ronald H. Gray, MD, of Johns Hopkins University, said that the evidence was persuasive but not entirely consistent and that it may be premature to promote circumcision as a way to prevent HPV infection in men and to protect female sex partners from infection. He advised that policy decisions should await results from two ongoing trials of male circumcision. Alternatively, Gray noted that consistent evidence has suggested that male circumcision reduces the frequency of HIV infection in men. He also pointed out that because of the lack of conclusive data relating circumcision and prevention of HPV, Medicaid does not cover circumcision costs, which may account for a decline in neonatal circumcisions in the United States.

According to Dr. Nielson, the findings they reported present compelling arguments to promote male circumcision in developing countries where

circumcision is not widely used and the HIV epidemic is severe. Additionally, she said, it is "the first clear demonstration of the indirect but substantial beneficial effect of male circumcision for women." The authors of both studies and the editorialist agreed that more studies will be needed to confirm the efficacy of male circumcision in HPV prevention.

Fast Facts:

1. The high-risk subtypes of HPV have been estimated to be present in 99.7 percent of cervical cancers worldwide.
2. One of the current studies showed that circumcised participants were half as likely to be infected with HPV as those who were uncircumcised.
3. Reducing the incidence of HPV infection among men will reduce the risk of HPV exposure in their female sexual partners.

Source: Infectious Diseases Society of America

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