

# No evidence for potential competition between human papillomavirus types in men

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The Centers for Disease Control and Prevention Advisory Committee on Immunization Practices recently recommended that teenage boys be vaccinated against the human papillomavirus.

Human papillomavirus vaccines target the two most common types of the [virus](#) that cause [cervical cancer](#): HPV 16 and 18. However, as more and more people are vaccinated, might this result in an increase of other types of HPV that cause cancer?

One of the first-ever, UNC-led epidemiological studies to examine HPV-type competition in men found little evidence for potential type competition. Previous studies in women report similar findings. [Their findings](#) are published in the November 4, 2011 online edition of the *Journal of Infectious Diseases*.

Carcinogenic types of [human papillomavirus](#) infection are the main cause of cervical cancer in women and are responsible for other genital cancers, including anal and penile cancer in men. It is also increasingly linked to head and neck cancers.

Viral type competition occurs when different types of a particular virus compete for dominance. The dominant HPV types in cervical cancer are the targets of the vaccines currently available. Study scientists did not find any other non-vaccine HPV types to be candidates for type-competition in men.

Jennifer S. Smith, PhD, MPH, is the study senior author. She explained, “In our study, we wanted to know if any specific HPV type was less likely to be found with another HPV type, which could indicate possible competition of one type over another. Our data, among men prior to any [vaccine](#) introduction, do not suggest that one HPV type will dominate another.”

Anne F. Rositch, PhD, MSPH, the study first author, added, “We do not yet know if type competition occurs. Although these data are reassuring, we will need pre- and post-vaccination surveillance data to determine if there is a change in the types of HPV causing cancer.”

Smith is an associate professor of epidemiology in the UNC Gillings School of Global Public Health and a member of UNC Lineberger Comprehensive Cancer Center. Rositch is a postdoctoral fellow at Johns Hopkins Bloomberg School of Public Health.

The study was conducted among 2702 HIV-seronegative men in Kisumu, Kenya who were tested for HPV types, and 57 percent of those tested positive for HPV infection. The scientists identified positivity to over 40 [HPV](#) types and studied them for potential type competition, but found none.

Provided by University of North Carolina at Chapel Hill School of Medicine

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