

What is HPV?

- ▶ Human papillomavirus, or HPV, is passed on through genital contact, most often during vaginal and anal sex. HPV may also be passed on during oral sex. While the vast majority of HPV infections will not cause serious harm, some infections will persist and can lead to cervical cancer, cancers of the vagina, vulva, rectum, urethra, penis, anus and some cancers of the oropharynx. Most infected persons do not realize they are infected, or that they are passing HPV on to a sex partner.

Sexually transmitted HPVs fall into two categories:

- ▶ Low-risk HPVs -- HPV 6 and 11 -- are the most common low-risk types, which together cause about 90% of cases of genital warts (condylomata acuminata) and do not lead to cancer. Rarely, infections can be transmitted from mother to baby during delivery and cause respiratory tract warts in children.
- ▶ High-risk or oncogenic HPVs, which can cause cancer. Two of these, HPV types 16 and 18, are responsible for the majority of HPV-caused cervical cancers. High-risk types also have been linked to other less common genital cancers such as those mentioned above, such as penile, vaginal, anal, and oropharynx.

How common is HPV infection?

HPV is the most common sexually transmitted infection, representing nearly three-quarters of all newly acquired sexually transmitted infections. In fact, more than half of sexually active people are infected with one or more HPV types at some point in their lives.

What is the association between HPV infection and cancer?

Most high-risk HPV infections occur without any symptoms, go away within one to two years, and do not cause cancer. Some HPV infections, however, can persist for many years. Persistent infections with high-risk HPV types can lead to more serious cytologic abnormalities or lesions that, if untreated, may progress to cancer. Cancer often takes years—even decades—to develop after a person gets HPV.

How can HPV infection be prevented?

The primary prevention strategies are:

- avoiding genital contact with another individual;
- being in a long-term, mutually faithful relationship with an uninfected partner – it is difficult, however, to determine whether a partner who has been sexually active in the past is currently infected;
- correctly and consistently using condoms -- areas not covered by a condom can be infected with the virus, though, so condoms are unlikely to provide complete protection against virus spread;
- vaccination with the HPV vaccine, AND;
- females getting periodical cervical cancer screening if they are 21-65 years of age (and following up on any abnormal results).

NOTE: *Vaccination with the HPV vaccine is not a substitution for cervical cancer screening.*

HPV Vaccination

- ▶ HPV vaccines are recommended for 11- or 12-year-old boys and girls. The vaccine series is given in three shots over six months; it is important to get all three doses to get the best protection. There is no maximum interval between doses. If the HPV vaccine schedule is interrupted, the vaccine series does not need to be restarted.
- ▶ These vaccines have no therapeutic effect on HPV-related disease, so they will not treat existing diseases or conditions caused by HPV. The vaccines are made from non-infectious HPV virus-like particles and do not contain thimerosal or mercury as a preservative.
- ▶ HPV vaccines should be incorporated into the routine vaccine schedule as other adolescent vaccines.
 - **Females:** Two vaccines (Cervarix and Gardasil) are available to protect females against the types of HPV that cause most cervical cancers. One of these vaccines (Gardasil) also protects against most genital warts, and has been shown to protect against anal, vaginal, and vulvar cancers. Either vaccine is recommended for 11- and 12-year-old girls, and for females 13-26 years of age who did not get any or all of the shots when they were younger. These vaccines can also be given to girls beginning at nine years of age.
 - **Males:** One vaccine (Gardasil) is available to protect males against most genital warts and anal cancers. Gardasil is recommended for 11- and 12-year-old boys, and for males 13-21 years of age who did not get any or all of the shots when they were younger. Gay, bisexual, and other men who have sex with men should receive the vaccine through age 26 years. Males 22-26 years of age may also get the vaccine. In addition, vaccination is recommended for men 22-26 years of age who 1) have sex with men or 2) are immunocompromised as a result of infection (including HIV), disease, or medication.
- ▶ HPV vaccines are not recommended for pregnant women, but may be given to lactating women.
- ▶ Current studies (with up to about six years of follow-up data) indicate that the vaccines are effective, with no evidence of waning protection. No boosters are currently recommended.

HPV Vaccine Side Effects

- ▶ Common, mild adverse events include pain where the shot was given, fever, dizziness, and nausea.
- ▶ Recent data suggest that syncope after any vaccination is more common in adolescents. Adolescents and adults should be seated or lying down during vaccination. Providers should consider observing patients in seated or lying positions for 15 minutes after vaccination.

What are the treatment options for HPV-infected individuals?

There is currently no medical treatment for HPV infections. However, the genital warts and precancerous lesions resulting from HPV infections can be treated.

For more information on HPV treatment,

visit http://www.ashasexualhealth.org/uploads/pdfs/HPV_CME.pdf or <http://www.cdc.gov/std/treatment/2010/default.htm>.

References: Centers for Disease Control and Prevention | National Cancer Institute

