

Human Papillomavirus (HPV) Infection

Infection with the human papillomavirus (HPV) is very common in both women and men. More than 100 types of this virus have been identified. Some types of this virus are spread from person to person through sexual contact. A few types have been linked to cancer. This pamphlet explains:

- How HPV infection spreads
- The link between HPV and cancer
- How your risk can be reduced

What Is HPV?

Human papillomavirus is a very common infection that can be passed from person to person. Some types of HPV are spread through sexual contact. Studies suggest that at least three out of every four people who have sex will get a genital HPV infection at some time during their lives. Sexually transmitted HPV can spread through vaginal, anal, or oral sex.

About 40 types of HPV can infect the genital areas of a woman or a man. Like many other *sexually transmitted diseases (STDs)*, there often are no signs of genital HPV. However, a few types of HPV cause warts. Warts that grow in the genital area are called condyloma acuminata. These growths may appear on the outside or inside of the vagina or on the penis and can spread to nearby skin. Genital warts also can grow around the anus, on the *vulva*, or on the *cervix*. Warts can be treated with medication applied to the area or surgery to remove them. The type of treatment depends on where the warts are located.

Some types of HPV infection spread from person to person through sexual contact. To lower your risk of infection, limit your number of sexual partners and use condoms.

HPV and Cancer Risk

Some types of HPV cause cancer of the cervix. HPV also may be linked to cancer of the anus, vulva, vagina, and penis. Genital warts usually are not linked with cancer.



Cervical cancer develops over a long time. HPV causes cells on or around the cervix to become abnormal. In some cases, these cells may progress to precancer (changes in the cells that rarely can become cancer). Most of the time, however, abnormal cells go away without treatment. A Pap test, sometimes called cervical cytology screening, is the best way to detect cell changes that may be an early sign of precancer of the cervix.

Although certain types of HPV can cause cancer of the cervix, very few women with HPV develop this type of cancer. Talk with your doctor if you think you are at risk (see box).

Tests

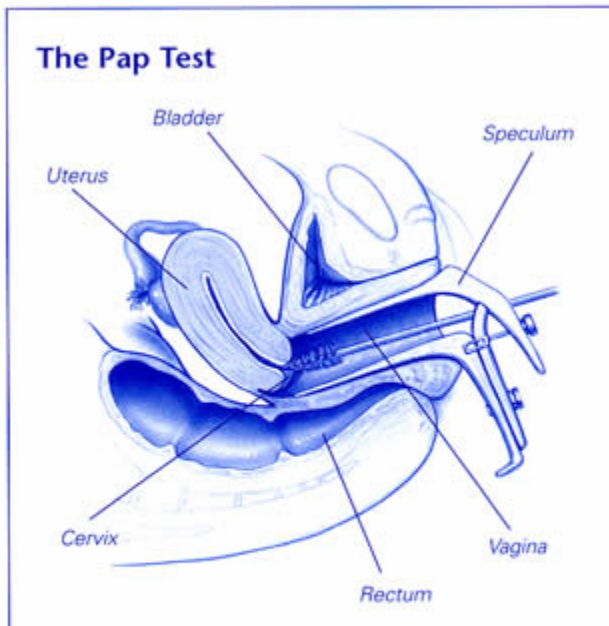
A Pap test can detect changes in the cells of the cervix that could signal precancer. For this test, a sample of cells is taken from the cervix and sent to a lab.

Women who have a cervix should have their first Pap test within 3 years after they become sexually active or by age 21 years. They need to be tested every year until they are 30 years of age. Women who are 30 years or older and have three or more normal test results in a row can be tested once every 2–3 years. Women older than 30 years may have an HPV test at the same time as a Pap test. If the results of both tests are normal, these women should not have another Pap test or HPV test for at least 3 years.

If your Pap test shows that abnormal cells are present, your doctor will suggest follow-up. This may include repeat Pap testing, HPV testing, *colposcopy*, or *biopsy*.

Risk Factors for Cancer of the Cervix

- HPV infection
- Previously treated for cancer or precancer
- Human immunodeficiency virus (HIV) infection
- Weakened immune system (for instance, because you have had a kidney transplant)
- Exposure to the drug diethylstilbestrol (DES) before birth



For the Pap test, a speculum is placed into the vagina. A small sample of cells is removed with a small brush, swab, or scraper. The sample then is sent to a lab to look for abnormal cells, including cells that may lead to cancer.

Prevention

There is no cure for HPV—it is best to take steps to prevent it. Young women can prevent certain types of HPV infection by being vaccinated (see [box](#)). You can decrease your risk of infection by avoiding contact with the virus. To lower your chance of infection:

- Limit your number of sexual partners. The more partners you have the greater your risk of infection.
- Use condoms to reduce your risk of infection when you have vaginal, anal, or oral sex. Condoms also help protect against other STDs.

HPV Vaccine

A vaccine is available that protects against the two types of HPV that cause the most cases of cervical cancer and the two types that cause the most cases of genital warts. The vaccine triggers a woman's immune system to fight off these viruses if she is exposed to them.

The HPV vaccine is given in three doses over a 6-month period and is recommended as a routine vaccination for all girls aged 11–12 years. However, it can be given to girls as young as 9 years. Girls and young women aged 13–26 years who have either not yet received the vaccine or have not completed all doses also should be vaccinated. It is best to get the vaccine before you start having sex. However, young women can have the vaccine even if they have already had sex and been infected with HPV. This is because the vaccine can protect women with one type of HPV from getting other types of HPV. The vaccine is not recommended for pregnant women, but is safe for women who are breastfeeding.



You do not need to be tested for HPV before you get vaccinated. Because this vaccine does not protect against all types of HPV, women who are vaccinated should still have regular Pap tests. The vaccine is not a treatment for current HPV infection and will not prevent all cases of cervical cancer or genital warts.

Condoms cannot fully protect you against HPV infection. HPV can be passed from person to person by touching infected areas not covered by a condom. These areas may include skin in the genital or anal areas.

Finally...

Some types of HPV infection spread from person to person through sexual contact. To lower your risk of infection, limit your number of sexual partners and use condoms. If you are younger than age 26 years, you should have the HPV vaccine to help protect you from infection. Regular Pap tests and any follow-up that your doctor recommends are the best ways to prevent precancer and cancer.

Glossary

Biopsy: A minor surgical procedure to remove a small piece of tissue that is then examined with a microscope in a laboratory.

Cervix: The lower, narrow end of the womb. The cervix is at the top of the vagina.

Colposcopy: Viewing of the cervix, vulva, or vagina with magnification by using an instrument called a colposcope.

Sexually Transmitted Disease (STD): A disease that is most commonly spread by sexual contact.

Vulva: The lips of the female genital area.