



HUMAN PAPILLOMAVIRUS (HPV)

NOTE: In the US, counseling and referrals are available on a national human papillomavirus (HPV) hotline. Call toll-free at 877-HPV-5868 (877-478-5868).

WHAT IS HPV?

There are over 100 viruses known as human papilloma virus (HPV). They are common. One study found HPV in 77% of HIV-positive women. HPV is transmitted easily during sexual activity. It is estimated that 50% of all sexually active people get at least one type of HPV infection.

Some types of HPV cause common warts of the hands or feet. Infections of the hands and feet are usually not transmitted through sexual activity. Several types of HPV cause genital warts on the penis, vagina, and rectum. Those with HIV can get worse sores in the rectum and cervical area. HPV can also cause problems in the mouth or on the tongue or lips. Other types of HPV can cause abnormal cell growth known as dysplasia. Dysplasia can develop into anal cancer in men and women, or cervical cancer, or cancer of the penis.

Dysplasia around the anus is called anal intraepithelial neoplasia (AIN). Anal intraepithelial neoplasia is the development of new abnormal cells in the lining of the anus. Dysplasia in the cervical region is called cervical intraepithelial neoplasia (CIN). AIN or CIN appear to be more common in people with HIV infection than those who are HIV negative.

HOW IS HPV DETECTED?

Many people have HPV infections but don't know it. HPV can go away without causing any problems. To detect HPV, health care providers look for dysplasia or genital warts.

A Pap test (or smear) is used to check a woman's cervix. It can also be used to check the anus of men and women. They are smeared on a glass slide or mixed into liquid and examined under a microscope. The cells are examined for abnormalities that may indicate abnormal cell changes, such as [dysplasia](#) or [cervical cancer](#).

In 2009 the FDA approved two tests that use the sample collected by a Pap test. These tests look for types of HPV that are linked to health problems.

Dysplasia can be detected by Pap smears.

Some researchers believe that anal and cervical smears should be checked each year for people with elevated risk:

- People who have had receptive anal intercourse
- Women who have had cervical intraepithelial neoplasia (CIN)
- Anyone with under 500 CD4 cells.

However, other researchers think that careful physical examination can detect as many cases of anal cancer as anal Pap testing.

Genital warts can appear anywhere from a few weeks to a few months after you are exposed to HPV. The warts might look like small bumps. Sometimes they are fleshy and look like small cauliflowers. They can get bigger over time.

Your health care provider can usually tell if you have genital warts by looking at them. Sometimes a tool called an anoscope is used to look at the anal area. If necessary, a sample of the suspected wart will be cut off and examined under a microscope. This is called a biopsy.

Genital warts are not caused by the same HPV that causes cancer. However, if you have warts, you may have also been exposed to other types of HPV that could cause cancer.

CAN HPV INFECTION BE PREVENTED?

There is no easy way to tell if someone is infected with an HPV. People who don't have any signs or symptoms of HPV infection can transmit the infection.

Condoms do not totally prevent transmission of HPV. HPV can be transmitted by direct contact with infected areas that aren't covered by a condom.

Men and women with HIV who are sexually active may want to have a regular Pap smear, anal and/or vaginal, to check for abnormal cells or early signs of warts. A positive result can be followed up to see if treatment is needed.

A vaccine called Gardasil was approved in 2006. In 2009, Cervarix, another vaccine was approved. These vaccines should be used in people who have not yet been sexually active. They have not been tested in or approved for people already infected with HPV. For more information on vaccination against HPV, see <http://www.immunize.org/vis/hpv.pdf>

HOW ARE HPV INFECTIONS TREATED?

There is no direct treatment for HPV infection. Some people "clear" an HPV infection (are "cured"). They can later be infected with HPV again. Dysplasias and warts can be removed. There are several ways to do this:

- Burning them with an electric needle (electrocautery) or a laser
- Freezing them with liquid nitrogen
- Cutting them out
- Treating them with chemicals. Trichloroacetic acid (TCA) is effective for some people.

Other, less common treatments for warts include the drugs 5-FU (5-fluorouracil) and Interferon-alpha. A new drug, imiquimod (Aldara), has been approved for treatment of genital warts. Cidofovir (Vistide), originally developed to fight cytomegalovirus (CMV), might also help fight HPV.

HPV infection can last for a long time, especially in people who are HIV-positive. Dysplasia and warts can return. They should be treated as soon as they are found to reduce the chances of the problem spreading or returning.

THE BOTTOM LINE

Human papilloma viruses (HPV) are fairly common. Different types of HPV cause warts or abnormal cell growth (dysplasia) in or near the anus or cervix. This abnormal cell growth can result in cervical or anal cancer. Genital HPV infections are transmitted through sexual activity.

HPV infection can last a long time, especially in people with HIV.

A Pap smear can detect abnormal cell growth in the cervix. It can also be used to check the anus of men and women. Although Pap smears may be the best way to detect early cervical cancer, careful physical examination may be the best way to detect anal cancers.

The signs of HPV infection – warts or dysplasia – should be treated as soon as they show up. Otherwise, the problem could spread and be more likely to return after treatment.

For more information, see the web site <http://www.thehpvtest.com/>

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