Human Papillomavirus (HPV)

WHAT IS HUMAN PAPILLOMAVIRUS?

Human papillomavirus (HPV) is the most common sexually transmitted infection (STI). There are over 120 HPV types. One study found HPV in 77% of people assigned female at birth (AFAB) with HIV. HPV is transmitted easily during sexual activity. HPV is so common that nearly all sexually-active people get it at some point in their lives.

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. People 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 various cancers.

Dysplasia around the anus is called anal intraepithelial neoplasia (AIN). AIN 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 and CIN appear to be more common in people with HIV.

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, healthcare providers look for dysplasia or genital warts.

A Pap test (or smear) is used to check the cervix for CIN. It can also be used to check the anus for AIN. A swab of the region is 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.

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
- People who have had cervical intraepithelial neoplasia (CIN)
- Anyone with a CD4 cell count below 500 cells/mm^3

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 healthcare 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 has HPV. People who don’t have any signs or symptoms of HPV 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.

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

Two vaccines have been approved for use by children and adults ages 9-26. The vaccine is given as a series of 3 injections over 6 months. They work best in people who have not yet been sexually active. They have not been tested in, or approved for, people already infected with HPV. Read more about HPV vaccination.

UPDATED HPV VCCINATION RECOMMENDATIONS

The U.S. Centers for Disease Control and Prevention (CDC) recommends routine HPV vaccination HPV vaccine is routinely recommended for adolescents at 11 or 12 years of age to ensure they are protected before they are exposed to the virus. HPV vaccine may be given beginning at age 9 years and vaccination is recommended for everyone through 26 years of age. HPV

vaccine may be given to adults 27 through 45 years of age, based on discussions between the patient and health care provider.

UPDATED ANAL CANCER SCREENING RECOMMENDATIONS

The Centers for Disease Control and Prevention (CDC) advises that all people living with HIV undergo routine evaluation for anal cancer risk. screening begins with an annual assessment for anal symptoms such as pain, bleeding, itching, discharge, or the presence of masses. Regardless of age, all people with HIV should also receive a digital anorectal examination (DARE) every year. In addition to the physical exam, specific laboratory-based screening is recommended for individuals in defined high-risk groups. For MSM and transgender women living with HIV, anal cancer screening using anal cytology—commonly referred to as an anal Pap smear—should begin at age 35. For other individuals with HIV, including cisgender men who do not have sex with men and cisgender women, anal cytology screening should start at age 45. The anal Pap smear can detect abnormal cells in the anal canal, and if abnormalities are found, follow-up with high-resolution anoscopy (HRA) is indicated. HRA is a procedure similar to colposcopy that allows for magnified visualization and biopsy of lesions in the anal epithelium.

HOW ARE HPV INFECTIONS TREATED?

There is no direct treatment for HPV infection. Some people clear HPV infection on their own. However, they can 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 such as trichloroacetic acid (TCA)

Other, less common treatments for warts include the drugs 5-FU (5-fluorouracil) and Interferon-alpha. Imiquimod (Aldara) is approved for treatment of genital warts. Cidofovir (Vistide), originally developed to treat cytomegalovirus (CMV), might also help treat HPV.

HPV infection can last for a long time, especially in people with HIV. A 2012 study found that a high proportion of cases of anal cancer are found among people assigned male at birth with HIV. 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

HPV is very common. Some types of HPV cause warts or abnormal cell growth (dysplasia) in the genital area 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. Two vaccines have been approved for use by children and adults ages 9-26. A Pap smear can detect abnormal cell growth in the cervix. It can also be used to check the anus. 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.

MORE INFORMATION

CDC: Human Papillomavirus (HPV)

HIV.gov: Human Papillomavirus Disease

POZ: Human papilloma virus (HPV)

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