

## Human Papillomavirus and Genital Warts

There are high-risk and low-risk types of HPV. High-risk HPV may cause abnormal Pap smear results, and could lead to cancers of the cervix, vulva, vagina, anus, or penis. Low-risk HPV also may cause abnormal Pap results or genital warts.<BR>

Health experts estimate there are more cases of genital HPV infection than any other STI in the United States. According to the American Social Health Association, approximately 5.5 million new cases of sexually transmitted HPV infections are reported every year. At least 20 million people in this country are already infected.<BR>

### WHAT ARE GENITAL WARTS?

Genital warts (sometimes called condylomata acuminata or venereal warts) are the most easily recognized sign of genital HPV infection. Many people, however, have a genital HPV infection without genital warts.<BR>

Genital warts are soft, moist, or flesh colored and appear in the genital area within weeks or months after infection. They sometimes appear in clusters that resemble cauliflower-like bumps, and are either raised or flat, small or large. Genital warts can show up in women on the vulva and cervix, and inside and surrounding the vagina and anus. In men, genital warts can appear on the scrotum or penis. There are cases where genital warts have been found on the thigh and groin. <BR>

### CAN HPV CAUSE OTHER KINDS OF WARTS?

Some types of HPV cause common skin warts, such as those found on the hands and soles of the feet. These types of HPV do not cause genital warts.<BR>

### HOW ARE GENITAL WARTS SPREAD?

Genital warts are very contagious and are spread during oral, vaginal, or anal sex with an infected partner. They are transmitted by skin-to-skin contact during vaginal, anal, or (rarely) oral sex with someone who is infected. About two-thirds of people who have sexual contact with a partner with genital warts will develop warts, usually within 3 months of contact.<BR>

In women, the warts occur on the outside and inside of the vagina, on the opening to the uterus (cervix), or around the anus.<BR>

In men, genital warts are less common. If present, they usually are seen on the tip of the penis. They also may be found on the shaft of the penis, on the scrotum, or around the anus.<BR>

Rarely, genital warts also can develop in your mouth or throat if you have oral sex with an infected person.<BR>

Like many STIs, genital HPV infections often do not have signs and symptoms that can be seen or felt. One study sponsored by the National Institute of Allergy and Infectious Diseases (NIAID) reported that almost half of women infected with HPV had no obvious symptoms. If you are infected but have no symptoms, you can still spread HPV to your sexual partner and/or develop complications from the virus.<BR>

### HOW ARE HPV AND GENITAL WARTS DIAGNOSED?

Your health care provider usually diagnoses genital warts by seeing them. If you are a woman with genital warts, you also should be examined for possible HPV infection of the cervix.<BR>

Your provider may be able to identify some otherwise invisible warts in your genital tissue by applying vinegar (acetic acid) to areas of your body that might be infected. This solution causes infected areas to whiten, which makes them more visible. In some cases, a health care provider will take a small piece of tissue from the cervix and examine it under the microscope.<BR>

If you have an abnormal Pap smear result, it may indicate the possible presence of cervical HPV infection. A laboratory worker will examine cells scraped from your cervix under a microscope to see if they are cancerous.<BR>

#### HOW ARE HPV AND GENITAL WARTS TREATED?

HPV has no known cure. There are treatments for genital warts, though they often disappear even without treatment. There is no way to predict whether the warts will grow or disappear. Therefore, if you suspect you have genital warts, you should be examined and treated, if necessary.<BR>

Depending on factors such as the size and location of your genital warts, your health care provider will offer you one of several ways to treat them.<BR>

- Imiquimod cream
- 20 percent podophyllin antimitotic solution
- 0.5 percent podofilox solution
- 5 percent 5-fluorouracil cream
- Trichloroacetic acid (TCA)

If you are pregnant, you should not use podophyllin or podofilox because they are absorbed by your skin and may cause birth defects in your baby. In addition, you should not use 5-fluorouracil cream if you are expecting.<BR>

If you have small warts, your health care provider can remove them by one of three methods.<BR>

- freezing (cryosurgery)
- burning (electrocautery)
- laser treatment

If you have large warts that have not responded to other treatment, you may have to have surgery to remove them.<BR>

Some health care providers use the antiviral drug alpha interferon, which they inject directly into the warts, to treat warts that have returned after removal by traditional means. The drug is expensive, however, and does not reduce the rate that the genital warts return.<BR>

Although treatments can get rid of the warts, none get rid of the virus. Because the virus is still present in your body, warts often come back after treatment.<BR>

#### <B>HOW CAN HPV INFECTION BE PREVENTED?

The only way you can prevent getting an HPV infection is to avoid direct contact with the virus, which is transmitted by skin-to-skin contact. If you or your sexual partner has warts that are visible in the genital area, you should avoid any sexual contact until the warts are treated.<BR>

Research studies have not confirmed that male latex condoms prevent transmission of HPV, but studies do suggest that using condoms may reduce your risk of developing diseases linked to HPV, such as genital warts and cervical cancer. Unfortunately, many people who don't have symptoms don't know that they can spread the virus to an uninfected partner.<BR>

#### POSSIBLE COMPLICATIONS OF HPV AND GENITAL WARTS

##### Cancer

Some types of HPV can cause cervical cancer. Other types are associated with vulvar cancer, anal cancer, and cancer of the penis (a rare cancer).<BR>

Most HPV infections do not progress to cervical cancer. If you are a woman with abnormal cervical cells, a Pap test will detect them. If you have abnormal cervical cells, it is particularly important for you to have regular pelvic exams and Pap tests so you can be treated early, if necessary.<BR>

##### Pregnancy and Childbirth

Genital warts may cause a number of problems during pregnancy. Sometimes they get larger during pregnancy, making it difficult to urinate. If the warts are in the vagina, they can make the vagina less elastic and cause obstruction during delivery.<BR>

Rarely, infants born to women with genital warts develop warts in their throats (laryngeal papillomatosis). Although uncommon, it is a potentially life-threatening condition for the child, requiring frequent laser surgery to prevent obstruction of the breathing passages. Research on the use of interferon therapy with laser surgery indicates that this drug may show promise in slowing the course of the disease.<BR>