

# Human Papilloma Virus

## What is HPV?

HPV stands for Human Papilloma Virus. It is a very common sexually transmitted virus. Around 75 percent of sexually active people will have been infected with HPV sometime in their lives. A small fraction of men and women with HPV will develop genital warts. Another small fraction of women with HPV will develop cervical changes. Most people will have no signs or symptoms.

There are over 100 strains of HPV. Some cause warts elsewhere on the body (which are not sexually transmitted). The strains that infect the genitals are divided into low risk and high risk strains. Low risk strains may cause genital warts, which are not associated with any serious medical outcome. High risk strains may be associated with precancerous and cancerous changes of the cervix (see Cervical HPV). High risk strains may be rarely associated with certain mouth and throat cancers, anal cancer and cancer of the penis.

## How is it transmitted?

HPV is transmitted sexually through intimate genital to genital contact, including vaginal or anal intercourse, and rarely through oral sex. Transmission can also occur during genital skin to genital skin contact without sexual intercourse.

## Does use of condoms reduce the risk of HPV transmission?

Yes, using condoms or latex barriers provide some protection, but may not cover all infected areas. Condoms greatly reduce the risk of HPV transmission, but don't entirely eliminate the risk.

## Is there a cure for HPV?

Since HPV is a virus, there is no cure. However, studies indicate that healthy people's immune systems often eradicate the virus. Approximately 70-90% of people with HPV may clear the virus within two years of infection. In others, HPV can persist indefinitely. Persistent HPV infection with a high risk strain can cause the serious problems previously noted. Because there are over 30 HPV strains that cause genital infections, it is possible to have repeated infections due to exposure to different strains.

## Genital Warts

Genital warts are visible bumps in the genital area of men and women. They are caused by the low risk strains of HPV and are not associated with cancer. Genital warts are not dangerous from a health perspective, but they can cause a lot of emotional distress nonetheless.

## How does a person develop genital warts?

Skin to skin contact with a person infected with HPV can result in genital warts. This includes vaginal and anal intercourse and rarely oral sex. Once exposed to genital warts, a person may never develop symptoms or may develop warts within weeks, months, or years of exposure. This makes it often impossible to determine when you were exposed or who you "got it from". Most people with HPV infections have no symptoms at all and don't know they are transmitting the virus to others, who they may develop symptoms.

## What is the difference between genital warts and the types of warts that appear on other parts of the body?

All warts are caused by a strain of HPV. Warts on the hands and feet are caused by different strains of HPV than genital warts and are not spread to the genital area.

### **What do genital warts look like?**

Genital warts are raised bumps, dry and painless, firm and rough in texture, and usually grayish or skin color. They can be small and difficult to detect, even during a medical examination. Small or flat warts on a man's penis or a woman's cervix are particularly likely to go unnoticed.

### **Where do genital warts usually develop in women?**

Genital warts most commonly appear near the opening or on the lips of the vagina and near the anus. Genital warts may also be found inside the vagina or on the cervix. Genital warts often develop in several areas at the same time. They may cause itching or irritation, but usually cause no symptoms at all.

### **Where do genital warts usually develop in men?**

Genital wart infection in men most commonly occurs on the penis, scrotum, and on the pubic area, but it may also involve the urethra. They can also develop on or near the anus, or within the rectum. They often occur in several places at the same time. Warts may be itchy or irritated, or may cause no symptoms at all.

### **How are genital warts diagnosed?**

A health professional can often diagnose genital warts by simple observation. But the fairly common small or flat warts can pass unnoticed by the provider or patient. To look for warts, a health care provider may put acetic acid (vinegar) on the genitals. This causes the wart to turn white and makes it easier to see, especially if viewed through a magnifying lens, such as a colposcope. However, the vinegar can sometimes cause other skin changes to be highlighted.

Clinicians may also recommend tests for other sexually transmitted infections because sexually active people often have more than one sexually transmitted infection at a time.

### **How are genital warts treated?**

Although there is no cure for HPV, there are several treatment methods for genital warts. The severity of infection, the location of the warts, and other factors will influence the decision about which treatment might be best.

Office treatments include freezing (cryotherapy), or applying chemicals to the warts. They can cause temporary irritation. Repeated treatments are usually required, sometimes over several months. Several self administered prescription treatments are available for home use. All treatment choices have similar results and unfortunately have high failure rates. Therefore, reexaminations are recommended, even after the warts seem to go away. Genital warts cannot be effectively treated with any over-the-counter preparations.

### **What is my health status once the warts are treated?**

Even after warts are gone, a person may still be infected with HPV. In some cases the warts can return. As stated previously, in 70-90% of people, HPV infection will resolve with time.

### **Cervical HPV**

Both low risk and high risk HPV strains can cause cervical infection in women. For many women, the first indication of HPV is an abnormal pap smear, which may then be followed by testing for high risk HPV. The definitive test to evaluate cervical changes is colposcopy and biopsy. This is a procedure in which a colposcope (a lighted magnifying tool) is used to identify the abnormal areas on the cervix, and small tissue samples (biopsies) are taken. If precancerous changes are found on cervical biopsies, there are treatments that can eradicate the abnormal cells and prevent progression to cervical cancer. There is, however, no treatment to specifically eliminate HPV.

Persistent cervical infection with high risk HPV strains can result in cervical cancer, although it is believed to take many years. During this time, precancerous change can be detected on pap smears which is why all women should

have pap smears, (even if they have had the HPV vaccine) . Smokers are at greater risk for developing cervical cancer.

### **How do men know if they have HPV?**

There is no screening test to detect HPV in men. However, if a man's sex partner is diagnosed with HPV, it is likely that he is also infected.

### **What should my partner do if I have been diagnosed with HPV?**

Women should have a gynecological exam and pap smear. Men should be checked if they see bumps in the genital area. If you are not using condoms with your current partner, starting to use them will not necessarily change things as it's likely both partners have already shared the virus. You don't have to worry about getting "re-infected" with the same strain. However, you can be infected with a different HPV strain, so it's very important to use condoms with a new sexual partner.

### **Prevention of HPV Infection**

- Avoiding all intimate genital contact is the only way to avoid infection.
- The HPV vaccine (Gardasil) is FDA approved for females age 9-26. It protects against the 2 most common high risk strains and the 2 most common low risk strains. If you are older than 26, and are interested in Gardasil, talk to your health care provider.
- Use of condoms reduces the risk of transmission.
- Limit the number of lifetime sex partners. A long term, mutually monogamous relationship is the safest.

### **Resources**

- **CDC National STD Hotline:** 800-227-8922 or 800-342-2437
- **National HPV and Cervical Cancer Hotline** offers free information about risk reduction, diagnosis and treatment of HPV and the prevention of cervical cancer. 919-361-4848
- To access the e-mail service and *HPV chat room* offered by the **National HPV and Cervical Cancer Prevention Resource Center**, go to the American Social Health Association web site, [www.ashastd.org](http://www.ashastd.org); click on "Programs and Resource Centers," then "HPV Resource Center." At the center web page, click on either "HPVnet Email Account" or "HPV Chat Room."