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- [IUHC Home Page](#)
- [Hours & Information](#)
- [Health Topics](#)
- [Fees & Benefits](#)
- [Pharmacy](#)
- [Medical Clinic](#)
- [Ask Health a](#)
- [Question](#)
- [Wellness Programs](#)
- [Counseling "CAPS"](#)
- [Sexual Assault](#)
- [Physical Therapy](#)
- [Travel Clinic](#)
- [Health Links](#)
- [Laboratory](#)
- [SEARCH](#)

# HPV - Human Papilloma Virus

## What is HPV?

HPV stands for Human Papilloma Virus. This is a very common sexually transmitted virus. An estimated 75 percent of the reproductive-age population has been infected with sexually transmitted HPV. 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 changes.

## How is it transmitted?

HPV is transmitted sexually through intimate genital to genital contact, including vaginal or anal intercourse or only 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?

Using condoms or latex barriers may provide some protection but may not cover all infected areas.

## Is there a cure for HPV?

Since HPV is a virus, there is no cure. However, new studies indicate that approximately 70-90% of people with HPV may clear the virus from the body within two years of infection. Re-infection is possible.

## Genital Warts

### What are genital warts?

These are warts that can appear anywhere on the genitals of men and women. A person can have genital warts after being exposed to HPV, Human Papilloma Virus. Research indicates that approximately one percent of sexually active adults in the United States have genital warts. (CDC-2000)

### How does a person develop genital warts?

The strains of HPV, which cause warts, are considered to be low risk HPV and are generally spread through sexual intimacy. Transmission can occur through all forms of sexual contact including vaginal or anal intercourse though only rarely through oral sex. Transmission can also occur with genital skin to genital skin

contact without intercourse.

**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. Some types of HPV cause genital warts whereas other types cause common skin warts. Genital warts can develop on the cervix, penis, or in the vaginal or rectal area. They look similar to warts that might appear on the hands, feet, or other parts of the body. (Warts on the hands and feet are not transmitted to the genitals.)

**What do genital warts look like?**  
Genital warts, like warts on other parts of the body, are dry and painless, firm and rough in texture, and usually grayish or skin color. Warts 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. They may itch slightly or give an irritated feeling.

**Where do genital warts usually develop in women?**  
Genital wart infection most commonly develops 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. Research has found that the cervix is involved in about half of the cases of genital warts in women.

**Where do genital warts usually develop in men?**  
Genital wart infection in men most commonly occurs on the penis and on the pubic area, but it may also involve the urethra or bladder. Infection of the urethra may cause bleeding, a discharge, and the need to urinate frequently. Genital warts can also develop on or near the anus, or within the rectum. Infection often occurs in more than one genital area at a time.

**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. Genital warts often do not have symptoms of pain or irritation. 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. One reason for several tests is that 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 for a patient.

Several treatments, some of which are provider-administered or self-administered, are available. Genital warts can be chemically burned or frozen with liquid nitrogen (cryotherapy). Although these techniques for freezing the warts are effective, they can cause a temporary irritation of tissue. Some cases of genital wart infection are treated by applying caustic chemicals to the infected area. More than one application is usually needed. Most of these treatments must be repeated several times, sometimes over several months. All methods of treatment have high failure rates. Therefore, reexaminations sometimes 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 removed?

Even after warts are treated and removed, a person may still be infected with HPV. In some cases the warts can grow back. As stated previously, in 70-90% of people, HPV is a transient infection. Transient means that the body will clear the infection on its own, within approximately two years, based on current research.

## Cervical Changes

### How will I know if I have HPV-related cervical cell changes?

Most women who have HPV will not develop any symptoms. However a small number of HPV strains will cause cervical changes. For many women, the first indication of HPV may be an abnormal Pap smear. A Pap smear, which is an examination of cells from a woman's cervix, may determine her exposure to HPV. Depending on the degree of abnormality of the Pap smear, a health care provider will recommend a repeat Pap smear or another type of testing. DNA testing can determine whether the woman has contracted a high risk or low risk strain of HPV (see next section for an explanation of high risk strains of HPV). If changes on the Pap smear indicate further testing, then accurate diagnosis might require a Colposcopy examination. This is a procedure in which a colposcope (a lighted magnifying device) is used to clearly identify the area(s) of infection. Currently, there is no diagnostic test for males. If a male's sex partner is diagnosed with HPV, it is likely that he's also infected.

### What are the effects of high risk HPV cervical infections?

High risk strains of the virus are linked to cervical changes in

women and could possibly lead to cervical cancer. If a woman has regular pap smears, any cervical changes that develop can be monitored and treated, if necessary, making cervical cancer extremely rare. High risk HPV strains are those that are least likely to cause genital warts. Two of these same high risk strains are those that can cause penile cancer in men or anal cancer in those individuals who engage in anal intercourse. These cancers are extremely rare. Transmission rate from mother to baby is unknown but thought to be low.

**What should sexually active people understand about this virus?**

- HPV is very common; most sexually active people are infected at some point in their lives.
- It should be considered a chronic condition for which there is no cure but which may clear up on its own.
- Re-infection is possible.
- All women should have regular pap smears.
- Women who smoke do not clear HPV as quickly as non-smokers. Smoking itself is a risk factor for cervical cancer as well as many other cancers.

**Will there be a vaccine against HPV infection?**

There have been ongoing vaccine studies for many years. It is anticipated that a possible vaccine will be available for the general public in the future.

**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.ashtastd.org](http://www.ashtastd.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."