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## HPV and Cancer

### What is HPV?

HPV is short for **human papillomavirus**. HPVs are a large group of related viruses. Each virus in the group is given a number, which is called an **HPV type**.

Most HPV types cause warts on the skin, such as on the arms, chest, hands, or feet. Other types are found mainly on the body's mucous membranes. Mucous membranes are the moist surface layers that line organs and parts of the body that open to the outside, such as the vagina, anus, mouth, and throat. The HPV types found on mucous membranes are sometimes called **genital HPV**. They generally do not live on the skin.

Genital HPV is **not** the same as HIV or herpes. HPV is divided into 2 main groups:

### Low-risk HPV types

Some types of HPV can cause warts (papillomas) on or around the genitals and anus of both men and women. Women may also have warts on the cervix and in the vagina. Because these HPV types rarely cause cancer, they are called "low-risk" viruses.

### High-risk HPV types

Other types of HPV are called "high-risk" because they can cause cancer. Doctors worry more about the cell changes and pre-cancers linked to these types, because they're more likely to grow into cancers over time. Common high-risk HPV types include HPV 16 and 18.

Infection with HPV is very common. In most people, the body is able to clear the infection on its own. But sometimes, the infection doesn't go away. Chronic, or long-

lasting infection, especially when it's caused by certain high-risk HPV types, can cause cancer over time.

## **How do people get HPV?**

HPV can be passed from one person to another by skin-to-skin contact, such as occurs with sexual activity. The main way HPV is spread is through sexual activity, including vaginal, anal, and oral sex. HPV can be spread even when an infected person has no visible signs or symptoms.

The virus can also be spread by genital contact without sex, although this is not common.

HPV infection is very common. Most men and women who have ever had sex get at least one type of genital HPV at some time in their lives. Anyone who has had sex can get HPV, even if it was only with only one person, but infections are more likely in people who have had many sex partners. Even if a person delays sexual activity until marriage, or only has one partner, they are still at risk of HPV infection if their partner has been exposed.

### **You cannot get HPV from:**

- Toilet seats
- Hugging or holding hands
- Swimming pools or hot tubs
- Sharing food or utensils
- Being unclean

### **You can have HPV:**

- Even if it has been years since you were sexually active
- Even if you do not have any signs or symptoms

## **Cancers linked to HPV infection**

To learn more about any of the cancers listed here, visit our website at [www.cancer.org](http://www.cancer.org) or call our toll-free number, 1-800-227-2345.

## Cervical cancer

[Cervical cancer](#)<sup>1</sup> is the most common cancer linked to HPV in people with a cervix. Nearly all cervical cancers are caused by HPV.

Cervical cancer can be found early and even prevented with routine screening tests. The Pap test looks for changes in cervical cells caused by HPV infection. The HPV test looks for the infection itself.

**Cervical cancer is preventable with vaccines and regular screening tests. More than half of the people in the United States who get cervical cancer have never had or rarely had screening tests.**

## Vulvar cancer

HPV can also cause [cancer of the vulva](#)<sup>2</sup>, which is the outer part of the female genital organs. This cancer is much less common than cervical cancer.

There's no standard screening test for this cancer other than routine physical exams.

## Vaginal cancer

Most [vaginal cancers](#)<sup>3</sup> contain HPV.

Many vaginal pre-cancers also contain HPV, and these changes may be present for years before turning into cancer. These pre-cancers can sometimes be found with the same [Pap test](#)<sup>4</sup> that's used to test for cervical cancer and pre-cancer. If a pre-cancer is found, it can be treated, stopping cancer before it really starts.

## Penile cancer

In men, HPV can cause [cancer of the penis](#)<sup>5</sup>. It's more common in men with HIV and those who have sex with other men.

There's no standard screening test to find early signs of penile cancer. Because almost all penile cancers start under the foreskin of the penis, they may be noticed early in the course of the disease.

## Anal cancer

HPV can cause [cancer of the anus](#)<sup>6</sup> in both men and women. It's more common in

people with HIV and in men who have sex with other men.

Screening tests for anal cancer are not routinely recommended for all people. Still, some experts recommend anal cytology testing (also called an *anal Pap test* because it's much like the Pap test used for cervical cancer) for people at higher risk of anal cancer. This includes men who have sex with men, individuals who have had cervical cancer or vulvar cancer, anyone who is HIV-positive, and anyone who has had an organ transplant.

### **Mouth and throat cancer**

HPV is found in some [mouth and throat cancers](#)<sup>7</sup>. Most cancers found in the back of the throat, including the base of the tongue and tonsils, are HPV-related. These are the most common HPV-related cancers in men.

There's no standard screening test to find these cancers early. Still, many can be found early during routine exams by a dentist, doctor, dental hygienist, or by self-exam.

### **Can HPV infection be prevented?**

There's no sure way to prevent infection with all the different types of HPV. But there are things you can do to lower your chances of being infected. There are also vaccines that can be used to protect young people from the HPV types most closely linked to cancer and genital warts.

HPV is passed from one person to another during contact with an infected part of the body. Although HPV can be spread during sexual contact – including vaginal, anal, and oral sex – sex isn't the only way for the infection to spread. All that's needed is skin-to-skin contact with an area of the body infected with HPV. There may be other ways to become infected with HPV that aren't yet clear.

HPV can be present for years without causing any symptoms. It doesn't always cause warts or any other symptoms. Someone can have the virus and pass it on without knowing it.

### **Condom use**

Condoms ("rubbers") provide some protection against HPV, but they do not completely prevent infection.

Condoms must be used correctly every time sex occurs. Even then, condoms can't

protect completely because they don't cover every possible HPV-infected area of the body, such as the skin on the genital or anal area. Still, condoms do provide some protection against HPV, and they also help protect against some other sexually transmitted infections.

**A new condom should be used with each sex act. The condom should be put on BEFORE any genital, oral, or anal contact and kept on until sex is finished.**

### **Limiting sex partners**

If you are sexually active, limiting the number of sex partners and avoiding sex with people who have had many other sex partners can help lower your risk of exposure to genital HPV. But again, HPV is very common, so having sex with even one other person can put you at risk.

### **HPV vaccines**

HPV vaccines can prevent infection with certain types of HPV, including types that are linked to HPV-related cancers, as well as types linked to anal and genital warts.

Vaccines are approved for use in males and females. They can only be used to prevent HPV infection – they don't help treat an existing infection.

- To work best, the HPV vaccines should be given between the ages of 9 and 12.
- Teens and young adults ages 13 through 26 years who have not been vaccinated or who have not received all of their shots should get the vaccine as soon as possible. Vaccination of young adults will not prevent as many cancers as vaccination of children and teens.
- The ACS does not recommend HPV vaccination for persons older than 26 years.

Contact your American Cancer Society for more on the [HPV vaccines](#)<sup>8</sup>.

### **Testing for HPV**

The HPV tests on the market are only approved to find HPV infection in individuals with a cervix. They can be used alone or as part of a co-test (when an HPV test and a Pap test are done at the same time) to determine your risk of developing cervical cancer.

- There's no approved HPV test to find HPV on the penis or vulva, or in the anus,

mouth, or throat.

- There's no test for men or women to check one's overall "HPV status."
- For cervical cancer screening, the [American Cancer Society recommends](#)<sup>9</sup> that people ages 25 to 65 get a primary HPV test\* every 5 years. Because a primary HPV test may not be an option everywhere, a co-test every 5 years or a Pap test every 3 years are still good options.

(\*A primary HPV test is an HPV test that is done by itself for screening. The US Food and Drug Administration has approved certain tests to be primary HPV tests.)

## Treatment for HPV or HPV-related diseases

There's no treatment for the virus itself, but there are treatments for the cell changes that HPV can cause.

Cancer is easiest to treat when it's found early – while it's small and before it has spread. Some cancer screening tests can find early cell changes caused by HPV, and these changes can be treated before they even become cancer.

Visible genital warts can be removed with prescribed medicines. They can also be treated by a health care provider.

## Things to remember about HPV

- HPV is a very common virus. Most men and women who have ever had sexual contact will get HPV at some time in their lives.
- There is no treatment for HPV, but in most cases it goes away without treatment.
- Having HPV does **not** mean you will get cancer. Most of the time HPV goes away by itself.
- Certain people are at higher risk for HPV-related health problems. This includes gay and bisexual men and people with weak immune systems (including those who have HIV/AIDS).
- Most HPV infections that lead to cancer can be prevented with vaccines.
- Most cervical cancers can be prevented by regular screening.

## Hyperlinks

1. [www.cancer.org/cancer/cervical-cancer.html](http://www.cancer.org/cancer/cervical-cancer.html)

2. [www.cancer.org/cancer/vulvar-cancer.html](http://www.cancer.org/cancer/vulvar-cancer.html)
3. [www.cancer.org/cancer/vaginal-cancer.html](http://www.cancer.org/cancer/vaginal-cancer.html)
4. [www.cancer.org/cancer/cervical-cancer/detection-diagnosis-staging/screening-tests/pap-test.html](http://www.cancer.org/cancer/cervical-cancer/detection-diagnosis-staging/screening-tests/pap-test.html)
5. [www.cancer.org/cancer/penile-cancer.html](http://www.cancer.org/cancer/penile-cancer.html)
6. [www.cancer.org/cancer/anal-cancer.html](http://www.cancer.org/cancer/anal-cancer.html)
7. [www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer.html](http://www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer.html)
8. [www.cancer.org/cancer/cancer-causes/infectious-agents/hpv/hpv-vaccines.html](http://www.cancer.org/cancer/cancer-causes/infectious-agents/hpv/hpv-vaccines.html)
9. [www.cancer.org/cancer/cervical-cancer/detection-diagnosis-staging/cervical-cancer-screening-guidelines.html](http://www.cancer.org/cancer/cervical-cancer/detection-diagnosis-staging/cervical-cancer-screening-guidelines.html)

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