

What is genital HPV infection?

Genital human papillomavirus (HPV) is the most common sexually transmitted infection (STI). The virus infects the skin and mucous membranes. There are more than 40 HPV types that can infect the genital areas of men and women, including the skin of the penis, vulva (area outside the vagina), and anus, and the linings of the vagina, cervix, and rectum. You cannot see HPV. Most people who become infected with HPV do not even know they have it.

What are the symptoms and potential health consequences of HPV?

Most people with HPV do not develop symptoms or health problems. But sometimes, certain types of HPV can cause genital warts in men and women. Other HPV types can cause cervical cancer and other less common cancers, such as cancers of the vulva, vagina, anus, and penis. The types of HPV that can cause genital warts are not the same as the types that can cause cancer.

HPV types are often referred to as “low-risk” (wart-causing) or “high-risk” (cancer-causing), based on whether they put a person at risk for cancer. In 90% of cases, the body’s immune system clears the HPV infection naturally within two years. This is true of both high-risk and low-risk types.

Genital warts usually appear as small bumps or groups of bumps, usually in the genital area. They can be raised or flat, single or multiple, small or large, and sometimes cauliflower shaped. They can appear on the vulva, in or around the vagina or anus, on the cervix, and on the penis, scrotum, groin, or thigh. Warts may appear within weeks or months after sexual contact with an infected person. Or, they may not appear at all. If left untreated, genital warts may go away, remain unchanged, or increase in size or number. They will not turn into cancer.

Cervical cancer does not have symptoms until it is quite advanced. For this reason, it is important for women to get screened regularly for cervical cancer.

Other less common HPV-related cancers, such as cancers of the vulva, vagina, anus and penis, also may not have signs or symptoms until they are advanced.

How do people get genital HPV infections?

Genital HPV is passed on through genital contact, most often during vaginal and anal sex. A person can have HPV even if years have passed since he or she had sex. Most infected persons do not realize they are infected or that they are passing the virus to a sex partner.

Very rarely, a pregnant woman with genital HPV can pass HPV to her baby during vaginal delivery. In these cases, the child may develop warts in the throat or voice box – a condition called recurrent respiratory papillomatosis (RRP).

How does HPV cause genital warts and cancer?

HPV can cause normal cells on infected skin or mucous membranes to turn abnormal. Most of the time, you cannot see or feel these cell changes. In most cases, the body fights off HPV naturally and the infected cells then go back to normal.

- Sometimes, low-risk types of HPV can cause visible changes that take the form of genital warts.
- If a high-risk HPV infection is *not* cleared by the immune system, it can linger for many years and turn abnormal cells into cancer over time. About 10% of women with high-risk HPV on their cervix will develop long-lasting HPV infections that put them at risk for cervical cancer. Similarly, when high-risk HPV lingers and infects the cells of the penis, anus, vulva, or vagina, it can cause cancer in those areas. But these cancers are much less common than cervical cancer.

How common are HPV and related diseases?

HPV infection. Approximately 20 million Americans are currently infected with HPV, and another 6.2 million people become newly infected each year. At least 50% of sexually active men and women acquire genital HPV infection at some point in their lives.

Genital warts. About 1% of sexually active adults in the U.S. have genital warts at any one time.

Cervical cancer. The American Cancer Society estimates that in 2008, 11,070 women will be diagnosed with cervical cancer in the U.S.

Other HPV-related cancers are much less common than cervical cancer. The American Cancer Society estimates that in 2008, there will be:

- 3,460 women diagnosed with vulvar cancer;
- 2,210 women diagnosed with vaginal and other female genital cancers;
- 1,250 men diagnosed with penile and other male genital cancers; and
- 3,050 women and 2,020 men diagnosed with anal cancer.

Certain populations may be at higher risk for HPV-related cancers, such as gay and bisexual men, and individuals with weak immune systems (including those who have HIV/AIDS).

RRP is very rare. It is estimated that less than 2,000 children get RRP every year.

How can people prevent HPV?

A vaccine can now protect females from the four types of HPV that cause most cervical cancers and genital warts. The vaccine is recommended for 11 and 12 year-old girls. It is also recommended for girls and women age 13 through 26 who have not yet been vaccinated or completed the vaccine series.

For those who choose to be sexually active, condoms may lower the risk of HPV, if used all the time and the right way. Condoms may also lower the risk of developing HPV-related diseases, such as genital warts and cervical cancer. But HPV can infect areas that are not covered by a condom—so condoms may not *fully* protect against HPV. So the only sure way to prevent HPV is to avoid all sexual activity.

Individuals can also lower their chances of getting HPV by being in a mutually faithful relationship with someone who has had no or few sex partners. However, even people with only one lifetime sex partner can get HPV, if their partner was infected with HPV. For those who are not in long-term mutually monogamous relationships, limiting the number of sex partners and choosing a partner less likely to be infected may lower the risk of HPV. Partners less likely to be infected include those who have had no or few prior sex partners. But it may not be possible to determine if a partner who has been sexually active in the past is currently infected.

How can people prevent HPV-related diseases?

There are important steps girls and women can take to prevent **cervical cancer**. The HPV vaccine can protect against most cervical cancers (see above).

Cervical cancer can also be prevented with routine [cervical cancer screening](#) and follow-up of abnormal results. The Pap test can identify abnormal or pre-cancerous changes in the cervix so that they can be removed before cancer develops. An HPV DNA test, which can find high-risk HPV on a woman's cervix, may also be used with a Pap test in certain cases. The HPV test can help healthcare professionals decide if more tests or treatment are needed. Even women who got the vaccine when they were younger need regular cervical cancer screening because the vaccine does not protect against all cervical cancers.

There is currently no vaccine licensed to prevent HPV-related diseases in men. Studies are now being done to find out if the vaccine is also safe in men, and if it can protect them against HPV and related conditions. The FDA will consider licensing the vaccine for boys and men if there is proof that it is safe and effective for them. There is also no approved screening test to find early signs of **penile or anal cancer**. Some experts recommend yearly anal Pap tests for gay and bisexual men and for HIV-positive persons because anal cancer is more common in these populations. Scientists are still studying how best to screen for penile and anal cancers in those who may be at highest risk for those diseases.

Generally, cesarean delivery is not recommended for women with genital warts to prevent **RRP** in their babies. This is because it is unclear whether cesarean delivery actually prevents RRP in infants and children.

Is there a test for HPV?

The HPV test on the market is only used as part of cervical cancer screening. There is no general test for men or women to check one's overall "HPV status." HPV usually goes away on its own, without causing health problems. So an HPV infection that is found today will most likely not be there a year or two from now. For this reason, there is no need to be tested just to find out if you have HPV *now*. However, you should get tested for signs of disease that HPV can cause, such as cervical cancer.

- **Genital warts** are diagnosed by visual inspection. Some health care providers may use acetic acid, a vinegar solution, to help identify flat warts. But this is not a sensitive test so it may wrongly identify normal skin as a wart.
- **Cervical cell changes** (early signs of cervical cancer) can be identified by routine Pap tests. The HPV test can identify high-risk HPV types on a woman's cervix, which can cause cervical cell changes and cancer.
- As noted above, there is currently no approved test to find HPV or related cancers in men. But HPV is very common and [HPV-related cancers are very rare in men](#).

Is there a treatment for HPV?

There is no treatment for the virus itself, but a healthy immune system can usually fight off HPV naturally. There *are* treatments for the diseases that HPV can cause:

Visible genital warts can be removed by patient-applied medications, or by treatments performed by a health care provider. Some individuals choose to forego treatment to see if the warts will disappear on their own. No one treatment is better than another.

Cervical cancer is most treatable when it is diagnosed and treated early. There are new forms of surgery, radiation therapy, and chemotherapy available for patients [see www.cancer.org]. But women who get routine Pap testing and follow up as needed can identify problems *before* cancer develops. Prevention is always better than treatment.

Other HPV-related cancers are also more treatable when diagnosed and treated early. There are new forms of surgery, radiation therapy, and chemotherapy available for patients. [see www.cancer.org]

Where can I get more information?

[Sexually Transmitted Diseases](#)
[Human Papillomavirus \(HPV\) Infection](#)
[HPV Vaccination](#)
[Cervical Cancer](#)

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Email: cdcinfo@cdc.gov

CDC National Prevention Information Network (NPIN)
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1-888-282-7681 Fax
1-800-243-7012 TTY
E-mail: info@cdcnpin.org
www.cdcnpin.org

[ASHA - National HPV and Cervical Cancer Prevention Resource Center](#) 

[American Cancer Society \(ACS\)](#) 

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