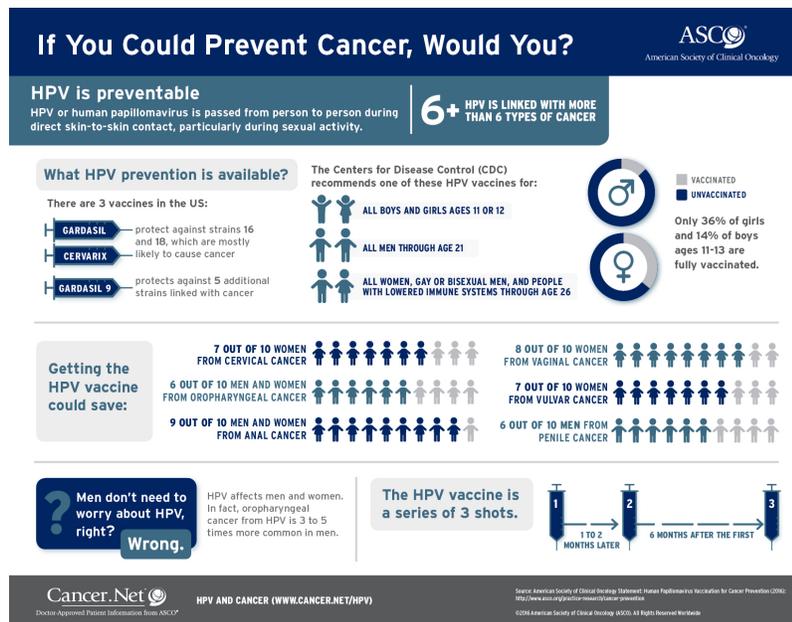


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[HPV and Cancer \[1\]](#)

This section has been reviewed and approved by the [Cancer.Net Editorial Board \[2\]](#), 03/2016



[3]

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Listen to the [Cancer.Net Podcast: HPV and Cancer \[4\]](#), adapted from this content.

Human papillomavirus (HPV) is usually passed from person to person during direct skin-to-skin contact. HPV is the most common sexually transmitted disease in the United States. There are more than 150 different types of HPV. Most men and women do not know they have it because

they do not have any symptoms or health problems. Sometimes, certain HPV types can cause warts in different parts of the body. Other HPV types can cause precancerous lesions or cancer.

Types of HPV and how HPV spreads

Most types of HPV can cause “common” warts. These warts grow on places such as the hands and feet. However, more than 40 of the viruses are called “genital type” HPVs. These viruses are spread from person to person when their genitals come into contact. This commonly occurs during vaginal, anal, and oral sex.

Genital HPV types can infect a woman’s genital area, including inside and outside the vagina. It can also affect a man’s genital area, including the penis. In both men and women, genital HPV can infect the anus and some areas of the head and neck. Sometimes “low-risk” types of genital HPVs can cause genital warts or lesions to form on or around these locations. These are most commonly HPV-6 or HPV-11. The growths vary in size, shape, and number, but they rarely lead to cancer.

HPV-related cancers

“High-risk” HPVs are types of genital HPV that are more likely to cause cancer. A person’s immune system is usually able to get rid of this type of infection. But some people develop a lasting infection. Slowly, often over many years, it changes normal cells to create precancerous lesions or cancer. The following cancers are associated with HPV:

- **Cervical cancer.** HPV infection causes nearly all cervical cancers. Of the cervical cancers related to HPV, about 70% are caused by two strains: HPV-16 or HPV-18. Also, smoking may increase the risk of cervical cancer for women who have HPV. Although HPV causes almost all cervical cancers, it is important to remember that most genital HPV infections will not cause cancer.
- **Oral cancer.** HPV can cause cancer of the mouth and tongue. It can also cause cancer of the oropharynx, which is the middle part of the throat, from the tonsils to the tip of the voice box. These HPV-related cancers are increasing in both men and women. Changes in sexual behavior, including an increase in oral sex, may be one reason for the rise.
- **Other cancers.** HPV is also associated with less common cancers, including anal cancer, vulvar and vaginal cancers in women and penile cancer in men.

Managing health problems from HPV

There is no cure for HPV. But doctors can often treat the health problems caused by the

infection. Warts and precancerous lesions can be removed in the following ways:

- Freezing
- A loop electrosurgical excision procedure, which uses electric current to remove abnormal tissue
- Surgery
- Medicated creams applied directly to your skin for genital warts

However, removing genital warts does not mean a person no longer has HPV. Warts may return later because the virus may remain in the cells. A person with HPV who does not have any visible warts can still infect a sexual partner with the virus. In addition, an inactive infection may become active when a person's immune system is weakened due to illness or other reasons.

Vaccines

Receiving an HPV vaccine reduces your risk of infection. The U.S. Food and Drug Administration (FDA) approved 2 vaccines that help prevent HPV infection: Gardasil and Cervarix. It is important to note that the vaccines cannot cure an existing HPV infection.

- **Purpose of the vaccines.** The vaccination's goal is to prevent a lasting HPV infection after a person is exposed to the virus. Gardasil helps prevent infection from the two HPVs known to cause most cervical cancers and precancerous lesions in the cervix. The vaccine also protects people from the two low-risk HPVs known to cause 90% of genital warts. Gardasil is approved for the prevention of cervical, vaginal, and vulvar cancers in girls and women ages 9 to 26. It is also approved to prevent anal cancer in women and men and genital warts in men and boys in the same age range. Cervarix is approved for the prevention of cervical cancer in girls and women ages 10 to 25.
- **Effectiveness and safety of the vaccines.** Data show the HPV vaccinations are safe and highly effective in preventing a lasting infection of the types they target. It takes many years before a precancerous lesion develops into an invasive cancer. So, it may take several years to find out if people who received the vaccine are developing fewer HPV-related cancers.
- **Immunization schedule.** It is not known how long a single series of HPV vaccinations will

last, if revaccination is required, and, if so, how often. The studies following vaccinated individuals have been going on for 6 years. So far, the level of protection after exposure to the virus has not decreased. More follow-up of people who received a vaccine in clinical trials will provide important information about whether they need the vaccine again.

Because a vaccine can only prevent infection, not cure an existing one, it is ideally given to people before they become sexually active. People who are already sexually active and who may already be infected with HPV should talk with their health care team. The vaccine may protect them from types of HPV that they do not have.

Other prevention strategies

A [Pap test](#) [5] is the most common test to help detect cervical cancer. Pap tests can find precancerous cells that can be removed before they turn into cancer. Researchers have found that combining a Pap test with a test designed to detect HPV in women provides the most accurate results. A woman should talk with her health care team about having a Pap test and possibly an HPV test. There is no recommended HPV test for men.

Limiting your number of sex partners is another way to reduce your risk. Having many partners increases the risk of HPV infection. And, using a condom cannot fully protect you from HPV during sex.

Questions to ask your health care team

Learn more about HPV by asking your health care team these questions:

- What is my risk of getting HPV?
- How can I reduce my risk of getting HPV?
- Can I get genital HPV without having sex?
- What are some of the signs and symptoms of HPV?
- How soon after sex do HPV symptoms appear?
- Should I be tested to see if I have HPV?

- Should I receive an HPV vaccine? Why or why not?
- Which vaccine should I receive?
- Are the HPV vaccines safe? What are the potential side effects?
- How is an HPV vaccine given? Is more than one shot needed?
- How long does an HPV vaccine last?
- Does my health insurance cover the cost of an HPV vaccine?
- I am pregnant and have HPV. Can it harm my baby?

More Information

[Guide to Cervical Cancer](#) [6]

[Head and Neck Cancer](#) [7]

[Anal Cancer](#) [8]

Additional Resources

Centers for Disease Control and Prevention: [Human Papillomavirus \(HPV\)](#) [9]

National Cancer Institute: [HPV and Cancer](#) [10]

FDA: [Human Papillomavirus Vaccine](#) [11]

Links

[1] <http://www.cancer.net/navigating-cancer-care/prevention-and-healthy-living/hpv-and-cancer>

[2] <http://www.cancer.net/about-us>

[3] http://www.cancer.net/sites/cancer.net/files/asco_hpv_infographic.pdf

[4] <http://www.cancer.net/node/22962>

[5] <http://www.cancer.net/node/24638>

[6] <http://www.cancer.net/node/31319>

[7] <http://www.cancer.net/node/31296>

[8] <http://www.cancer.net/node/31338>

[9] <http://www.cdc.gov/STD/HPV/>

[10] <http://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hpv-fact-sheet>

[11] <http://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm172678.htm>