

Human papillomavirus or HPV is the most common viral sexually transmitted disease (STD) in the United States. According to the Centers for Disease Control and Prevention (CDC), at least one out of every two sexually active people will have HPV at some point in their life.

Human Papillomavirus (HPV)

There are over 100 known types of HPV.

About 40 types can infect female and male genital areas. Genital HPV are grouped into two types:

- ◆ Low-risk types of HPV can cause genital warts or may be completely harmless.
- ◆ High-risk types of HPV increase the chances for some types of cancer, like cervical cancer.

How is it spread?

HPV is spread by skin-to-skin contact. Women get HPV from sexual contact with someone who has it. HPV can be spread by vaginal, anal, oral or hand-genital sexual contact. Someone who is infected but has no visible signs can still spread HPV to others. People can be infected with more than one type of HPV. Long-term sexual partners with HPV often have the same HPV types.

Most sexually active men and women get genital HPV at some time in their lives.

There is an increased risk of genital HPV infection if you:

- ◆ Become sexually active at an earlier age.
- ◆ Have multiple sexual partners.
- ◆ Smoke.
- ◆ Have an immune system that does not work well due to a medical condition (e.g., cancer, HIV/AIDS) or from a medicine that weakens the immune system.

What are signs of HPV in women?

Most HPV infections have no signs that can be seen or felt. You can have HPV even if years have passed since you had sexual contact with an infected person. You may never know which sexual partner gave you HPV. HPV infection may cause:

- ◆ Genital warts (infection with low-risk viruses).
 - See *Genital Warts* (page 17) for more information.
- ◆ Cancer (infection with high-risk viruses).
 - Cervical cancer (more common).
 - Cancers of the vagina, vulva, anus, throat, tongue or tonsils (less common).


How do you know if you have HPV?

Most women with HPV have no signs of infection. Since most HPV infections go away on their own within two years, many women never know they had an infection. Some HPV infections cause genital warts that can be seen or felt. The only way to know if you have HPV is to ask your health care provider to do an HPV test. Your health care provider may also examine you for other infections.

High-risk types of HPV infection can cause cervical cancer. To detect changes in the cervix caused by HPV, all women should get regular Pap tests. You should talk to your health care provider about when to start, how often, and when to stop having Pap tests.

Pap tests:

- ◆ Screen for cervical cancer and changes in the cervix that might turn into cancer.
- ◆ Are done by a health care provider who collects a cell sample from the cervix with a small brush.
- ◆ Can find abnormal cells on the cervix caused by HPV.
- ◆ Can be done with an HPV test if:
 - You are age 30 or older.
 - You have had an abnormal Pap test result. This will show if HPV caused the changes.
- ◆ Should be done within three years of first sexual contact or starting at age 21.
- ◆ Are important, as treating pre-cancer changes on the cervix can prevent cervical cancer.



All women, aged 21 and older, should have regular Pap tests.

How is it treated?

Although genital HPV infections are very common, most show no signs and go away without treatment within a few years. If HPV does not go away, treatments are different for low risk HPV and high-risk HPV:

- ◆ **Low-Risk HPV (Genital warts)** – Even when genital warts are treated, HPV infection may remain. Warts can also come back after treatment. Over-the-counter treatments for other types of warts should not be used. Treatments for genital warts include:
 - Watch and wait to see if the warts stay the same, get bigger, or go away.
 - Medicines put directly on the warts.
 - Burning off the warts.
 - Freezing off the warts.
 - Cutting the warts out.
 - Using special lights or lasers to destroy the warts.

- ◆ **High-Risk HPV** – Pap tests can find pre-cancer changes in the cervix and other abnormal cells. Removing the abnormal cells is the best way to prevent cervical cancer.
 - Abnormal cells can be surgically removed without removing the uterus or damaging the cervix. After, women can still have normal pregnancies.

What can happen if you have HPV for a long time?

Certain types of low-risk HPV can cause genital warts. Without treatment genital warts may:

- ◆ Go away.
- ◆ Remain unchanged.
- ◆ Increase in size or number.

See *Genital Warts*, page 17 for more information.

High-risk HPV can cause abnormal cells in the cervix and cancer if not treated. Almost all cervical cancers are thought to be caused by HPV infections. While there are often no signs of early cervical cancer, some signs may include:

- ◆ Increased vaginal discharge, which may be pale, watery, pink, brown, bloody, or foul-smelling.
- ◆ Abnormal vaginal bleeding between menstrual periods, after sex, douching or a pelvic exam.
- ◆ Longer or heavier menstrual periods.
- ◆ Bleeding after menopause.
- ◆ Pelvic pain.
- ◆ Pain during sex.

Almost all cervical cancers are caused by high-risk HPV infection.

If you have high-risk HPV the risk of cervical cancer is further increased if you:

- ◆ Smoke.
- ◆ Have had more than three children.
- ◆ Have used a birth control pill for more than five years.
- ◆ Have a family history of cervical cancer.
- ◆ Have limited access to medical testing and care.
- ◆ Have a suppressed immune system.



Model of human papillomavirus (HPV) particles.

If you have HPV:

- ◆ Get regular Pap tests.
- ◆ Discuss treatment and follow-up care with your health care provider.
- ◆ Know that partners that have been together for a while often share the same HPV types, even if both have no symptoms.

How can you avoid HPV?

- ◆ Get vaccinated against HPV.
 - HPV vaccines can protect against 70% of cervical cancers.
 - One type of HPV vaccine can protect against the low-risk HPV that causes 90% of genital warts.
 - HPV vaccine is recommended for all females 9 to 26 years old.
 - The Centers for Disease Control and Prevention (CDC) recommends all 11-12 year old girls and boys get the HPV vaccine.
- ◆ Avoid sexual contact.
- ◆ Have safer sex:
 - Reduce the number of sexual partners.



Condoms may not fully protect against HPV since HPV can infect areas not covered by a condom.



- Condoms, when used correctly, can reduce the risk of getting HPV. But, condoms may not cover all infected areas. Each time you have sex use a condom (male or female type):
 - Before vaginal sex.
 - Before anal sex.
 - Before oral sex.
- Have sex with only one partner who does not have sex with others and does not have HPV.
- ◆ Know that other forms of birth control do not protect against HPV.



What about pregnancy?

Genital warts rarely cause problems during pregnancy and birth. Most women who no longer have visible genital warts do not have problems with pregnancy or birth. If you are pregnant, you should discuss treatment options with your health care provider as the warts may:

- ◆ Grow larger and bleed.
- ◆ Make it difficult to urinate if growing in the urinary tract (rare).

- ◆ Make the vagina less elastic during birth if the warts are in the vagina (rare).
- ◆ Cause a need for a cesarean section (C-section) birth if the warts block the birth canal (rare).
- ◆ Be passed on to the baby during birth (rare).

If you are pregnant and have a HPV infection and an abnormal Pap test, you should discuss your pregnancy with your health care provider.

For more on HPV see:

Department of Veterans Affairs (VA):

Cervical Cancer: The Power of Early Detection

www.va.gov/health/NewsFeatures/20110113a.asp

Centers for Disease Control and Prevention (CDC):

Human Papillomavirus (HPV)

www.cdc.gov/hpv/index.html

Genital HPV Infection – Fact Sheet

www.cdc.gov/std/HPV/STDFact-HPV.htm

HPV Vaccination

www.cdc.gov/vaccines/vpd-vac/hpv/default.htm

National Cancer Institute (NCI/NIH):

Understanding Cervical Changes: A Health Guide for Women

www.cancer.gov/cancertopics/understandingcervicalchanges/allpages

National Institute of Allergy and Infectious Diseases (NIAID/NIH):

Human Papillomavirus (HPV) and Genital Warts

www.niaid.nih.gov/topics/genitalWarts/Pages/default.aspx

U.S. Department of Health and Human Services (HHS), Office on Women's Health:

Human papillomavirus (HPV) and genital warts fact sheet

www.womenshealth.gov/publications/our-publications/fact-sheet/human-papillomavirus.cfm