

Human Papillomavirus Infection

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What is human papillomavirus (HPV)?

Human papillomavirus (HPV) is a virus that can be passed from person to person through skin-to-skin contact. More than 100 types of HPV have been found. About 30 of these types infect the genital areas of men and women and are spread from person to person through sexual contact.

How common is HPV?

HPV is a very common virus. Some research suggests that at least three out of four people who have sex will get a genital HPV infection at some time during their lives.

How is HPV infection spread?

HPV is primarily spread through vaginal, anal, or oral sex, but **sexual intercourse** is not required for infection to occur. HPV is spread by skin-to-skin contact. Sexual contact with an infected partner, regardless of the sex of the partner, is the most common way the virus is spread. Like many other **sexually transmitted diseases**, there often are no signs or symptoms of genital HPV infection.

What diseases does HPV infection cause?

Approximately 12 types of HPV cause genital warts. These growths may appear on the outside or inside of the vagina or on the penis and can spread to nearby skin. Genital warts also can grow around the anus, on the **vulva**, or on the **cervix**. Approximately 15 types of HPV are linked to cancer of the anus, cervix, vulva, vagina, and penis (see the FAQ [Cancer of the Cervix](#)). They also can cause cancer of the head and neck. These types are known as “high-risk types.”

How does HPV cause cancer of the cervix?

The cervix is covered by a thin layer of tissue made up of **cells**. If HPV is present, it may enter these cells. Infected cells may become abnormal or damaged and begin to grow differently. The changes in these cells may progress to what is known as precancer. Changes in the thin tissue covering the cervix are called **dysplasia** or **cervical intraepithelial neoplasia (CIN)**. In most women, the **immune system** destroys the virus before it causes cancer. But in some women, HPV is not destroyed by the immune system and does not go away. In these cases, HPV can lead to cancer or, more commonly, precancer.

Are there screening tests for cervical cancer?

It usually takes years for cervical cancer to develop. During this time, HPV infection can cause cells on or around the cervix to become abnormal. A **Pap test**, sometimes called cervical cytology screening, can detect early signs of abnormal cell changes of the cervix and allows early treatment so they do not become cancer (see the FAQ [The Pap Test](#)). An HPV test also is available. It is used along with the Pap test in women 30 years and older and as a follow-up test for women whose Pap tests show abnormal or uncertain results. The HPV test can identify at least 13 of the high-risk types of HPV.

Can HPV infection be prevented?

Young women can prevent certain types of HPV infection by being vaccinated (see the FAQ [Human Papillomavirus Vaccine](#)). The following methods also help decrease the chance of infection:

- Limit your number of sexual partners.
- Use condoms to reduce your risk of infection when you have vaginal, anal, or oral sex.

Condoms cannot fully protect you against HPV infection. HPV can be passed from person to person by touching infected areas not covered by a condom. These areas may include skin in the genital or anal areas. Female condoms cover more skin and may provide a little more protection than male condoms.

Glossary

Cells: The smallest units of a structure in the body; the building blocks for all parts of the body.

Cervical Intraepithelial Neoplasia (CIN): Another term for dysplasia; a noncancerous condition that occurs when normal cells on the surface of the cervix are replaced by a layer of abnormal cells. CIN is graded as 1 (mild dysplasia), 2 (moderate dysplasia), or 3 (severe dysplasia or carcinoma in situ).

Cervix: The opening of the uterus at the top of the vagina.

Dysplasia: A noncancerous condition that occurs when normal cells are replaced by a layer of abnormal cells.

Immune System: The body's natural defense system against foreign substances and invading organisms, such as bacteria that cause disease.

Pap Test: A test in which cells are taken from the cervix and vagina and examined under a microscope.

Sexual Intercourse: The act of the penis of the male entering the vagina of the female (also called "having sex" or "making love").

Sexually Transmitted Diseases: Diseases that are spread by sexual contact, including chlamydia, gonorrhea, human papillomavirus infection, herpes, syphilis, and infection with human immunodeficiency virus (HIV, the cause of acquired immunodeficiency syndrome [AIDS]).

Vulva: The external female genital area.

If you have further questions, contact your obstetrician–gynecologist.

Designed as an aid to patients, this document sets forth current information and opinions related to women’s health. The information does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to institution or type of practice, may be appropriate.