

Human Papilloma Virus (HPV)

What is Human Papilloma Virus?

Human Papilloma Virus (HPV) represents a group of very common viruses that can cause the growth of non-cancerous abnormal cells that in some cases may develop into cancer.

About 100 types of HPV exist. Different types have different symptoms. Some types cause common warts that develop on the hands and feet. Other types can cause sexually transmitted genital warts. Of the 100 types of HPV, more than 30 are transmitted through sexual contact, making HPV one of the most common sexually transmitted diseases (STDs).

Up to 75% of the people who have ever had sex will be infected with HPV at some time in their lives, according to the American Cancer Society. Most people will never know if they have HPV because no significant symptoms develop and the immune system clears the virus before it is detected. A small percentage of people with HPV will have the virus for a longer time and will develop cell changes over many years that may lead to cancer.

What's the connection between HPV and cancer?

HPV increases the risk for the following types of cancer:

- Cervical
- Vulvar
- Vaginal
- Oral
- Anal
- Penile

Almost all cancers of the cervix (the part of the womb, or uterus, which opens to the vagina) are caused by certain “high-risk” types of HPV. When these types cannot be controlled by the body’s immune system, they may stimulate the growth of precancerous cells in the cervix. If abnormal cells are not found and treated, they may become cancerous.

Certain high-risk types of HPV are present in more than 99% of cervical cancer cases.

Can HPV be prevented?

Two vaccines have been approved to prevent certain high-risk types of HPV. Both vaccines have been shown to prevent infection with the two most common cancer causing types of HPV, types 16 and 18. These account for about 70% of all cervical cancers and a smaller percentage of vaginal and vulvar cancers.

The HPV vaccine prevents girls and women from getting these types of HPV, especially if given before the start of sexual activity. It does not treat these diseases if they are already present. For more information, please refer to the patient education document “HPV Vaccine.”

Is screening for HPV recommended and what is involved?

M. D. Anderson recommends HPV testing for certain women as part of its cervical cancer screenings, along with Pap tests.

HPV test samples are collected in the same way as Pap tests using the same sample. (A health professional wipes a brush on the cervix or vagina to obtain a sample.)

M. D. Anderson HPV testing recommendations depend on a woman’s age:

- **Women younger than 30** – An HPV test is not recommended as part of the regular Pap test for women younger than 30 years old. At this age, the immune system is more likely to clear the virus without treatment and regular HPV testing may result in unnecessary interventions and follow-up care. Also, cell changes caused by high risk types of HPV may take several years to become cancerous.

However, if the Pap test results are unclear, an HPV test will be performed to determine if a type of the HPV virus is present that may lead to cervical cancer.

- **Women 30 and older** – It is recommended that women who are 30 years old and older be screened for HPV during their regular Pap test. HPV testing is more effective at this age because cell changes caused by high risk types of HPV are more likely to be persistent, leading to an increased risk of cervical cancer.

For more information on the Pap test and screening guidelines, see the patient information sheet “Cervical Cancer Screening: Pap and HPV Testing.”

How is HPV treated?

Currently, there is no treatment for HPV infection. The cell changes caused by HPV are treated. If a woman tests positive for HPV or if she has an abnormal Pap test, health care providers may perform a colposcopy (examination of the cervix with a lighted magnifying device) and, if needed, a biopsy (removal of cervical cells for examination under a microscope).

If indicated, treatment may include cryosurgery (freezing abnormal cells), Loop Electro-surgical Excision Procedure (LEEP) [removal of abnormal cells using a small heated wire] or surgical removal of part of the cervix.

For more information, please see “Colposcopy”, “Cryosurgery”, and/or “LEEP Treatment of the Cervix and Vagina.”

How can the risk of HPV be reduced?

HPV is spread through skin contact, mainly during sexual activity. The risk of HPV infection increases with:

- Every sexual encounter with a new partner
- Having sex at an early age when the cervix is more susceptible to the virus
- Having sex with a partner who has had many partners

The most effective way to reduce the risk of HPV infection is to be abstinent or remain in a monogamous relationship with an uninfected partner. Condom use reduces, but does not eliminate the risk of HPV.

Whether a woman develops cervical cancer from an HPV infection depends on multiple factors. These factors, along with a persistent HPV infection, may increase the risk of developing cervical cancer:

- Cigarette smoking
- Poor nutrition
- Weakened immune system

Does an HPV diagnosis mean that a partner has cheated?

It is impossible to determine how long a particular infection has been present or to trace it back to a particular partner unless one of the partners was a virgin at the beginning of the relationship. It is also impossible to say whether either or both partners introduced HPV into the relationship.

Resources

Centers for Disease Control and Prevention

<http://www.cdc.gov>

National Cancer Institute

<http://www.cancer.gov>

American Cancer Society

<http://www.cancer.org>

National HPV and Cervical Cancer Public Education Campaign

<http://www.cervicalcancercampaign.org>

National Women's Health Resource Center

<http://www.healthywomen.org>