Understanding Cervical HPV

What is cervical cancer?

Cervical cancer is a condition in which the cells in the lining of the cervix — the narrow, outer end of the uterus — change and grow very fast, producing a mass of cells called a tumor. This condition usually develops over time. It can affect women of any age, but it is most common in women in their mid-40s. A type of virus, called HPV, is the cause of most cases of cervical cancer.

What is HPV?

HPV stands for human papilloma virus. It is a very common virus. There are about 100 types of HPV that affect different parts of the body. About 30 types of HPV can affect the genitals — including the vulva, vagina, cervix, penis, and scrotum — as well as the rectum and anus. Of those, about 13 types are considered "high risk," for leading to cervical cancer.

How common is HPV?

HPV that affects the genitals is very common. As many as 20 million people are thought to have an active HPV infection at any given time, and as many as 5.5 million new cases of genital HPV infection occur in the United States each year. Most men and women — about 80 percent of sexually active people — are infected with HPV at some point in their lives, but most people never know they have the virus.

How do you get HPV?

Genital HPV is spread through direct skin-to-skin contact with someone who has an HPV infection. Contact includes vaginal, anal, and oral sex. Some types of HPV cause genital warts, which are hard, rough lumps that develop on the skin. Anyone who is sexually active can get HPV and genital warts.

In women, genital warts most often appear:

- On the vulva (the outer female genital area)
- In or around the vagina
- In or around the anus
- On the groin (where the genital area meets the inner thigh)
- On the cervix

What are the symptoms of HPV?

In many cases, HPV produces no symptoms. When they do occur, the most common symptom is the presence of warts in the genital area. Signs of infection can appear weeks, months, or even years after infection with the virus.
How is HPV diagnosed?

There are no blood tests for HPV, but some tests can help your health care provider diagnose the infection.

- **Pap test** — During this test, the health care provider removes a sample of cells from the cervix. The cells are then examined under a microscope to look for any changes in the cells, even in the absence of genital warts.
- **Colposcopy** — For this test, a health care provider uses an instrument — called a colposcope — that shines a light and magnifies the view of the cervix. A vinegar solution is placed on the cervix. The solution turns abnormal cells that are infected with HPV white, so they can be more easily seen.
- **HPV DNA test** — This test looks directly for the genetic material (DNA) of the HPV within a sample of cells. The test can detect the type of HPV connected to cervical cancer. The sample used for this test is generally removed at the same time as a Pap test.

How is HPV treated?

There is no cure for the virus itself, but many HPV infections go away on their own. In fact, about 70 percent to 90 percent of cases of HPV infection are cleared from the body by the immune system.

The treatment goal — when treatment is needed — is to relieve symptoms by removing any visible warts and abnormal cells in the cervix. Treatments that might be used include:

- **Cryosurgery** — freezing off the warts with liquid nitrogen
- **Loop electrosurgical excision procedure (LEEP)** — using a special wire loop to remove the abnormal cells
- **Electrocautery** — burning off the warts with an electrical current
- **Laser therapy** — using an intense light to destroy the warts and any abnormal cells
- **Prescription cream** — applying medicated cream directly to the warts (Do not use over-the-counter wart treatments on the genital area.)

In some cases, no treatment is needed. However, your doctor will closely monitor any cell changes during your regular screening appointments.

Only a small number of women infected with HPV will develop cellular changes that need to be treated.

Is HPV preventable?

Using condoms every time you have sex can help reduce the risk of HPV. Be aware, however, that condoms do not cover all of the genital skin, so they are not 100 percent effective in protecting against the spread of HPV. A person with genital warts should not have sex until the warts are removed. This might help reduce the risk of spreading HPV.

Women should have regular pelvic exams and Pap tests to look for abnormal changes in the cervix that might be pre-cancer. Men and women should stop having sexual contact as soon as they know or think they have genital warts, and they should seek treatment immediately.

Get vaccinated with the new HPV vaccine. The first approved HPV vaccine, called Gardasil®, is approved for girls and women ages 9 to 26, and protects against the development of cervical cancer and genital warts. It is also approved for boys and men ages 9-26 to protect against genital warts. The second approved vaccine, called Cervarix®, is approved for women between the ages of 9-25, to protect against cervical cancer.

It is best to get the vaccine before the start of sexual activity. The vaccine consists of a series of three
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shots, with shot two coming 2 months after the first, and shot three coming 6 months after the first. If you already have HPV, the vaccine does not treat or cure, but can still help protect against other types of HPV infections (other than those that cause cervical cancer; for example, the vaccine can help protect against the HPV that causes genital warts).

How is HPV related to cervical cancer?

Certain strains of HPV can cause changes in the cells of the cervix, a condition called cervical dysplasia. If untreated, dysplasia can progress to cervical cancer. HPV is almost always the cause of cervical cancer. However, just because a woman has HPV or cervical dysplasia does not necessarily mean she will get cervical cancer.

Regular Pap tests are the best protection against cervical cancer. The test detects pre-cancerous changes and cervical cancer. Cervical cancer is almost always preventable or cured if pre-cancerous changes are detected and treated early, before cancer develops. Before age 30, HPV infection is usually transient (resolves on its own). By age 30, detection of HPV during Pap smear screening can be used to help determine the appropriate interval for screening. The absence of high-risk HPV types indicates that a woman is at low risk for developing cervical changes related to the risk of cervical cancer. In this case, the interval of Pap test screening might be every 3-5 years. Most women will still need a yearly exam by their doctors to complete the remaining screening tests needed.

If a woman tests positive for high-risk HPV types, her health care provider will perform yearly Pap tests to check for any cell changes that might be pre-cancerous or that need to be treated.

Can men get HPV?

Yes. In men, genital warts most often appear on the penis, on the scrotum, in or around the anus, or on the groin. For men, HPV infection — including those that can cause cellular changes — produce no symptoms, so diagnosing HPV in men is difficult. The diagnosis of HPV in men is made from the presence of external genital warts.

Since there is no treatment for HPV that does not produce symptoms, most men with the infection are not treated. Sometimes, a health care provider can see small warts that might have otherwise gone unnoticed. In general, HPV infection does not place a man at a significantly higher risk for health problems. However, HPV prevention is still important for men, as the virus has been linked to uncommon cancers such as penile, anal, and head and neck.

Glossary of terms

Cervical dysplasia — A pre-cancerous condition that occurs when the HPV virus leads to changes in the cells of the cervix
Cervix — The tip of the uterus, where the vagina meets the uterus
Genital warts — Hard, rough lumps that develop on the skin
Groin — Where the genital area meets the inner thigh
Vulva — The outer female genital area

References

- Human Papillomavirus(HPV) and Genital Warts Fact Sheet. U.S. Department of Health and Human
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