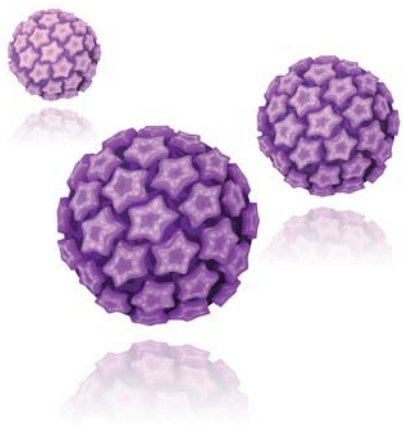
Your Health

What Women Need to Know about HPV

by Dr. Robert Bowes

HPV (Human Papilloma Virus) infections are extremely common. In fact, by age fifty about 80 percent of women will have had at least one infection and, since there are over 150 strains of HPV, some women will have had multiple infections. There are about 6 million new HPV infections in American women each year and around 20 million American women are currently infected with HPV making it the most common sexually transmitted infection in the US.

Some forms of HPV can cause genital warts while others are associated with abnormal cells on a woman's cervix. This is called cervical dysplasia and it's a very common condition (HPV is also associated with skin, oral, mucous membrane, penile and anal cancers but that discussion is beyond this article). We screen for cervical dysplasia with a pap test and it is recommended that women over age 21 get routine testing. HPV infections do not always cause genital warts or abnormal pap tests and some patients can carry the HPV virus for many years without showing any signs. If HPV does cause dysplasia many times the cells will become normal again.



However sometimes they do not become normal and the abnormal cells can persist and may become cancerous after many years if not treated. Prior to pap testing starting in the 1940's, cervical cancer was the most common cause of cancer death in American women. Since pap tests became routine, deaths from cervical cancer have plummeted, and many of the women who do get cervical cancer in the US have never had a pap test in their entire life.

HPV is generally transmitted through sexual contact and it is very easy for a woman to become infected. Unfortunately, condoms do not do a good job protecting against HPV infections because all that is needed for an infection is close personal contact. Most of their male partners who are also infected with HPV will show no signs. This is why it is recommended that all women over age 21 have regular pap tests. Since pap tests look for abnormal cervical cells and HPV infections are a cause of those cells, the pap test can be considered an indirect type of HPV test as well. Women with abnormal cells on their pap tests usually undergo a brief office examination of the cervix called a colposcopy where their provider might do a tiny biopsy of their cervix to determine the severity of the abnormality. If the abnormality is mild, it is thought that the women's immune system usually gets rid of the HPV infection and the cells become normal again. Her provider may do frequent pap tests to follow this. Many HPV infections are cleared within 6-24 months, but some can persist. If the infection persists, it can result in severely abnormal cells and her provider may recommend removing the cells with an outpatient or office procedure to prevent them from becoming cancerous in the future.

There are a couple of commercially available HPV tests as well. One is called Hybrid Capture 2 and the other is called Cervista HPV HR. These are laboratory panels that look for the 13 or 14 "high risk strains" or types of HPV infection that are more likely to persist and lead to cancer after many years. These tests are usually what a provider is referring to when they say that a patient is "HPV positive". Since the tests are panels for a number of different HPV strains, a woman cannot know with which of the 13 or 14 high risks types she is infected and some women can be infected with a strain not included in the panels. This can result in a woman being told that she is HPV negative even though she does have an infection with a strain that has a low likelihood of leading to cancer. Even newer, are the tests for "HPV genotyping". These are advanced tests that can tell a woman if she carries a very concerning strain of HPV, such as HPV 16 or HPV 18. These 2 strains alone are responsible for about 70 percent of cervical cancer in the United States. With genotyping we can know exactly which HPV infection a woman has and this can be useful in certain clinical situations. HPV testing and genotyping is a rapidly evolving area of gynecology and it may in the future even replace pap testing as the primary way to avoid cervical cancer.

Finally, there are now vaccines available to protect against HPV infections. Currently there are two that have been approved in the US. The first is called Gardasil and it provides protection against HPV 6 and 11 (the cause of 90 percent of benign genital warts) as well as HPV 16 and 18 (the cause of about 70 percent of cervical cancer in the US). The second is called Cervarix and it protects against HPV 16 and 18. Both Cervarix and Gardasil are given in a series of 3 injections over 6 months. The recommendation is that girls age 11 or 12 should receive the vaccine because it is most effective if the patient has not yet become sexually active and thereby not exposed to HPV. Gardasil is FDA approved for both females and males ages 9-26. HPV vaccines do not treat an active HPV infection, but can prevent the development of cancer due to HPV. We have about 8 years of data following these vaccinations and the protection seems to be holding so far without a booster vaccination.

In summary, HPV is the most common sexually transmitted infection in the world and most women will have at least one infection. Many times the immune system clears the virus but in a small number of women it can persist and may lead to cancerous cells many years in the future. The abnormal cells caused by HPV are called dysplasia and are found with a pap test. There are lab panels that can check for high risk strains of HPV that could potentially lead to cancer. There are newer tests called HPV genotyping and these tests tell us exactly which strain of HPV infection a woman has. The most concerning strains for cancer are HPV 16 and 18 and these are the forms targeted by the HPV vaccines. Women over age 21 should be routinely screened for abnormal cervical cells with a pap test and the combination of pap testing, with the possibility of colposcopy, HPV panels or genotyping have made cervical cancer rare in women who keep up with their routine gynecologic care.

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