

Human papillomavirus (HPV) is a virus that can lead to genital warts and various forms of cancer, including those of the cervix and other reproductive organs. Although most people don't know it, the virus can also cause cancers of the head and neck. HPV is the most common sexually transmitted infection in the United States and around the world; in fact, each year, 300,000 women die from cervical cancer caused by HPV.

Q. What is human papillomavirus?

A. Human papillomavirus (HPV) is a family of viruses that commonly infect the genital area and lining of the cervix. Some types of HPV infect the genital areas of men and women, causing warts. Genital warts may be unsightly, but they are generally not harmful. Other types of HPV cause cervical cancer, as well as other cancers of the reproductive organs. On occasion, HPV infections can lead to cancers of the head and neck.

Q. How common is HPV?



A. HPV is the most common sexually transmitted infection in the United States and around the world. More than half of sexually active people will be infected with HPV at some time in their lives. Twenty million Americans are currently infected with HPV and another 6 million become infected every year. Half of those newly

infected with HPV are between 15 and 24 years of age.

Q. Is HPV dangerous?

A. Yes. Most of the time, HPV goes away on its own and doesn't cause any health problems. But sometimes HPV can linger and lead to cancer. Every year in the United States, approximately 25,000 men and women develop cancers caused by HPV. Cervical cancer is one of the most common cancers in women, killing about 300,000 every year worldwide.

Q. How do you get HPV? How can you avoid it?

A. HPV in the genital area is passed from one person to another through genital contact, most often, but not always, during sex. The best way to avoid HPV infection is to abstain from any sexual activity. You can also lower your chance of getting HPV by having sex with only one person who isn't infected with HPV. But most people who have HPV don't know they have it, so it can be hard to avoid. Although condoms are recommended as a way of decreasing sexually transmitted infections, they don't offer complete protection against HPV.

Q. Can't I avoid cervical cancer by getting routine Pap tests?

A. Not always. Once, cervical cancer was the most common cause of U.S. cancer deaths. The Pap test changed that. HPV infection causes changes in the cervix that can result in cancer. The Pap test is performed by scraping cells from the cervix and examining them to see whether they show changes consistent with the early development of cancer (called precancerous changes). If these changes are detected, the doctor can perform surgery on the affected areas before cancer develops. Typically, the length of time from infection with HPV to development of cervical cancer is decades. So, although most HPV infections occur in teenagers and young adults, cervical cancer is more common in women during their 40s and 50s.

The Pap test is one of the most effective cancer screening tests and has dramatically reduced the incidence of cervical cancer in the United States. But the test isn't entirely predictive of cancer, and not all women get tested as often as they should. Further, the Pap test will not detect cancer caused by HPV in areas other than the cervix.

more ▶

Human Papillomavirus: What you should know

Q. Is there a vaccine to prevent HPV?

A. Yes. There are two vaccines to prevent HPV. Studies in thousands of girls and young women found the vaccines to be safe and effective in preventing persistent infections caused by HPV. Studies in boys and young men found that the HPV vaccine was safe and prevented anal and genital warts.

Both vaccines protect against the types of HPV that cause 70 percent of cervical cancers; however, one, called Gardasil®, also protects against the types of HPV that cause about 90 percent of anal and genital warts.

Both vaccines are given as a series of three shots. The second shot is given one or two months after the first, and the third shot is given six months after the first.

Q. Who should get the HPV vaccine?

A. The HPV vaccine is recommended between 11 and 12 years of age. The vaccine can be given to those as young as 9 years of age. It is also recommended for all teenagers and adults between 13 and 26 years of age if they did not get the vaccine when they were younger.



Since girls were originally the only ones recommended to get the vaccine, some people wonder why boys are now recommended to get the vaccine also. First, because boys can get genital warts as well as cancer caused by HPV, they will benefit from receiving the HPV vaccine; in fact, about one-third of the cancers caused by HPV occur

in males. Second, by immunizing boys, they will be less likely to transmit the virus to their sexual partners. Finally, studies in boys lagged behind those in girls, but the vaccine has now been shown to be safe and effective in boys as well.

Q. How is the HPV vaccine made?

A. The HPV vaccine is made using a protein from the surface of the virus. One vaccine, Gardasil, protects against four different types of HPV, and the second, Cervarix®, protects against two types. Both protect against the types of HPV that most commonly cause cervical cancer, but only Gardasil protects against the most common causes of genital warts. For this reason, only Gardasil is approved for use in boys.

Q. Is the HPV vaccine safe?

A. Yes. Because the HPV vaccine is made using only a single protein from each type of the virus, it can't cause HPV and, therefore, can't cause cervical cancer. The most common side effect of the vaccine is redness and tenderness at the injection site. The vaccine may also cause a slight fever.

Because people of the age group recommended to get the HPV vaccine might faint, it is recommended they remain at the doctor's office for about 15 minutes after receiving this or other vaccines.

Although adverse events such as blood clots, neurological damage, and death have been reported following the HPV vaccine, scientific studies have not found these events to be caused by the vaccine.

Q. Do young women who get the HPV vaccine still need to get Pap tests?

A. Yes. Because the HPV vaccine will protect only against HPV types that cause 70 percent of cervical cancers, women should continue to be screened with routine Pap tests.

Q. Do women who have received the HPV vaccine still need to worry about sexually transmitted infections?

A. Yes. The HPV vaccine does not prevent other sexually transmitted infections such as syphilis, gonorrhea, chlamydia or herpes. Also, the vaccine doesn't protect against all HPV types.

This information is provided by the Vaccine Education Center at The Children's Hospital of Philadelphia. The Center is an educational resource for parents and healthcare professionals and is composed of scientists, physicians, mothers and fathers who are devoted to the study and prevention of infectious diseases. The Vaccine Education Center is funded by endowed chairs from The Children's Hospital of Philadelphia. The Center does not receive support from pharmaceutical companies.

 The Children's Hospital
of Philadelphia®

 VACCINE EDUCATION CENTER

vaccine.chop.edu

The Children's Hospital of Philadelphia, the nation's first pediatric hospital, is a world leader in patient care, pioneering research, education and advocacy.

©2012 The Children's Hospital of Philadelphia, All Rights Reserved. • 5600/NP/01-12