

HPV vaccines

What is HPV?

HPV is the human papillomavirus. There are more than 100 types of HPV. About 30 types can infect the lower genital tract, and 15 of those types can cause cervical cancer. But even though HPV infections are very common, they are usually cleared by the body on its own without causing any disease or harm.

If HPV is not cleared, what can happen to the parts of the body that are infected?

In women, the cervix is the body part most frequently affected by HPV. Infection with “low risk” or non-cancer-causing types of HPV produces harmless changes in the surface cells of the cervix. However, persistent infection that lasts several years with “high-risk” or cancer-causing types of HPV can cause precancerous changes or even cancer of the cervix. Other organs that may be affected in the same ways include the vagina and vulva in females as well as the anal skin in both sexes. “Low-risk” HPV infection of the vulva often causes small growths called genital warts. HPV-infected males also often develop genital warts on the penis as a result of infection with “low risk” types of HPV. But males only rarely develop cancer of the penis if infected with “high-risk” HPV types. Some other cancers such as head and neck cancers have also been associated with certain types of HPV.

Can HPV infections be treated?

There are no antibiotics or other drugs that can cure an HPV infection. For those women who develop signs of HPV-related disease, such as genital warts or precancerous changes, medical or surgical methods to remove or destroy the affected tissue can be used. Most women who are infected with genital HPV show no signs or symptoms of infection and most infections (more than 90%) go away on their own in a short period of time. The majority of HPV-infected women clear their infections within about 24 months.

Can HPV infections be prevented?

These viruses are very common. They can be contracted by contact with infected skin even without having intercourse. So prevention of infection is very difficult in men and women who are sexually active. Condoms are only partially protective against transmission of HPV, but they should be used to reduce the risk of all sexually transmitted infections. The most effective way to help prevent

HPV infections is to obtain the newly developed HPV vaccine. It is extremely efficient in preventing infections by the HPV types that each vaccine targets.

How does the HPV vaccine work?

It helps vaccinated women develop a strong antibody response. If a vaccinated woman is later exposed to the HPV types covered by the vaccine, these antibodies help her immune system fight the HPV infection. The vaccine also prevents the consequences of HPV infection such as genital warts and precancerous changes in the cervix.

Does the vaccine protect against all HPV types?

No. The currently available vaccine protects against two of the most frequent types that cause cancer (“high-risk” types 16 and 18) and also protects against two that cause milder cell changes or warts (“low-risk” types 6 and 11). The vaccine does not protect against other HPV types not covered by the vaccine. Another vaccine that is being developed also protects against types 16 and 18.

What proof is there that these vaccines work?

Several studies conducted around the world have demonstrated almost 100% effectiveness in preventing cervical precancers, vaginal and vulvar precancers, and genital warts caused by the HPV types covered by the vaccines. Protection has been shown to last 5 years, but it is not yet known how much longer than that this protection will last. These studies have only been conducted in females between 15 and 26 years of age who have had four or fewer sexual partners. Studies in younger girls also show a strong antibody response. At this time it is unknown what the protective effect of the vaccine is in males or older females.

Is the HPV vaccine safe?

The vaccines result in the kind of common side effects that are seen with most vaccines. The most frequent reaction is pain at the site of injection. Some women also have redness and mild fever after receiving the vaccine.

Who should be vaccinated?

In the U.S., the Centers for Disease Control and the Advisory Committee on Immunization Practices (ACIP) have recommended routine vaccination of females 11 and 12 years of age. The vaccine is also recommended for females 13 to 18 years of age who have not received the three dose series. The vaccine can be given to females as young as age 9 at the discretion for the health care provider. It may also be appropriate for women who are 19 to 26 years old after discussion with a health care provider. Vaccination in females older than 26 or males is being studied, but is not recommended at this time.

How many doses are needed?

The vaccines are given in three doses over 6 months. Talk with your health care provider to determine your injection schedule.

Where is the vaccine available?

Pediatricians, family doctors and Ob/Gyn's are the physicians who most frequently provide the vaccine in their offices. Nurse practitioners, nurse midwives, and physician assistants are also able to educate patients about the vaccine and, often, to provide it. The vaccine is also available in some community health clinics. Ask your local health care provider or community clinic for details about availability and cost.

Should I get the vaccine even if I have had already an abnormal Pap test?

The HPV vaccine has no beneficial effect against any type of HPV that you may already have been infected with. The vaccine will not cure any pre-cancerous changes already present in the cervix or other tissues. However, the vaccine will protect you against those HPV types in the vaccine that you do not already have. Women up to age 26 with a history of an abnormal Pap test can potentially benefit from receiving the vaccine and should ask their health care provider about it.

Do I need to get Pap tests after I receive the vaccine?

Yes. The HPV vaccine prevents infection with only a few of the most common HPV types. You are still vulnerable to many other types. You need to follow standard recommendations for Pap tests whether you get the HPV vaccine or not.

Who should avoid the vaccine?

Pregnant women or those who develop a severe allergic reaction to the vaccine should not receive it. The response to the vaccine in women who have a weakened immune system has not been studied and therefore the HPV vaccine is not recommended for them. In the research trials, women who became pregnant while receiving the vaccine had pregnancy outcomes similar to those of women in the same age group in the general population. For those women exposed to Gardasil (the currently FDA approved HPV vaccine) during pregnancy, Merck and Co. maintains a Pregnancy Registry to monitor fetal outcomes. Patients and healthcare providers are encouraged to report any exposure to Gardasil during pregnancy at 1-800-986-8999.

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