



**Human Papillomavirus Vaccination Program
Questions and Answers**

Prepared by

Military Vaccine (MILVAX) Agency,
Office of The Army Surgeon General, U.S. Army

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www.vaccines.mil

877-GET-VACC

vaccines@amedd.army.mil

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Adapted from the Immunization Action Coalition (with permission) and the Centers for Disease Control and Prevention (CDC).

The Disease

Overview

1) What is Human Papillomavirus?

Human papillomavirus (HPV) is the name of a group of common viruses that includes more than 100 different strains or types. More than 30 of these viruses are transmitted through genital contact most often during vaginal and anal sex. HPV infects the genital area of men and women including the skin of the penis, vulva (area outside the vagina), or anus, and the linings of the vagina, cervix, or rectum.

2) How do you know if you have Human Papillomavirus?

The virus lives in the skin or mucous membranes and usually causes no symptoms. Since a majority of HPV infections have no signs or symptoms, most people that are infected are completely unaware and can continue to transmit the virus to sex partner(s).

Depending on the type of HPV, some women have infections that cause abnormal cell growth (dysplasia) on the female cervix. A woman may only find out she has HPV when her annual Pap smear results indicate abnormal cervical cell changes.

Other types of HPV cause visible genital warts. In women, these growths may develop inside the vagina, where they are hard to detect. They can also develop on the lips of the vagina or around the anus. In men, they usually appear on the penis, but they are also found on the scrotum or around the anus.

The growths are typically soft, moist, pink or red swellings and are usually painless but may itch. If allowed to grow, they can block the openings of the vagina, urethra, or anus and become very uncomfortable. They can be single or multiple growths or bumps, raised or flat, small or large and sometimes form a cauliflower-like shape. Depending on their location, genital warts can cause sores and bleeding.

3) How serious is Human Papillomavirus, especially to the Armed Forces?

Most HPV infections have no signs or symptoms; therefore, most infected persons are unaware they are infected, yet they can transmit the virus to a sex partner. HPV infections are the leading cause of cervical cancer in women and it has been linked to other less common genital cancers to include cancer of the anus, vagina and vulva. HPV also causes genital warts in men and women.

4) Is there a treatment for Human Papillomavirus?

HPV has no known cure although the body often will clear the infection on its own. You can receive treatment for the health problems that HPV causes, such as genital warts, cervical dysplasia, and cancers of the cervix, vulva, vagina and anus.

Rate and Spread

1) How common is Human Papillomavirus in the United States?

It is estimated that 50% of all sexually active people will be infected with HPV at some point in their lifetime. According to the American Social Health Association, approximately 5.5 million new cases of sexually transmitted HPV infections are reported every year. At least 20 million people in this country are already infected. The American Cancer Society estimates that in 2006, 9,700 women will be

diagnosed with cervical cancer and 3,700 will die from this disease in the U.S. alone.

2) How is Human Papillomavirus spread from one person to another?

HPV is transmitted by skin-to-skin contact during vaginal, anal, or (rarely) oral sex with someone who is infected.

3) How long does it take to show signs of Human Papillomavirus after being exposed?

The average time from exposure to lesion expression is approximately three months but varies greatly from a few weeks to years or decades.

4) How long does an outbreak of Human Papillomavirus last?

Genital warts may go away on their own or with treatment, or they may last for years. It is common for genital warts to return after they are removed.

5) How long is a person with Human Papillomavirus contagious?

The types of HPV that infect the genital area are spread primarily through sexual contact. Genital warts are very contagious and are spread during oral, genital, or anal sex with an infected partner. Even though the warts can be removed, the skin surrounding the area from which the wart came usually remains infected with HPV and may be contagious.

6) Can you get Human Papillomavirus more than once?

Yes. An individual can clear an HPV infection and then have a recurrence. Depending upon the treatment used, different recurrence rates have been noted. It is also possible to be reinfected with the same or different strain of HPV from contact with an infected partner.

The Vaccine

Immunization

1) What types of vaccines are available?

Merck & Company's vaccine, Gardasil, is a quadrivalent vaccine that is protective against HPV strains 6, 11, 16 and 18, which can lead to genital warts and cervical cancer. Gardasil was approved by the Food and Drug Administration (FDA) in June of 2006.

GlaxoSmithKline's vaccine, Cervarix, is a bivalent non-infectious recombinant, AS04-adjuvanted vaccine that is protective against strains 16 and 18 HPV viruses, which can lead to cervical cancer. Cervarix was approved by the FDA in October of 2009.

2) Who is eligible to receive this vaccine?

In October 2009 Gardasil's vaccine target group was increased to include males and females 9-26 years of age. Cervarix is approved for women 10-25 years of age.

3) What side effects have been reported with this vaccine?

The most common side effects noted are soreness, swelling and itching at the injection site. Possible systemic reactions include low grade fever and headache. Fainting has been occasionally reported after receipt of vaccine so all vaccine recipients should wait at least 15 minutes after vaccination.

4) Can the vaccines protect you if you've already been exposed to Human Papillomavirus?

There was no clear evidence of protection from disease caused by HPV strains for which subjects were already exposed. Individuals can benefit from immunization protection against strains of HPV not

previously exposed to.

5) How long does the vaccine protection last? Will a booster shot be needed?

The length of vaccine protection is usually not known when a vaccine is first introduced. More research is being done to find out how long protection will last, and if a booster dose will be needed in the future.

6) Can the vaccine cause Human Papillomavirus?

Gardasil and Cervarix are not live-virus vaccines and can not cause a HPV infection.

7) Will girls/women who have been vaccinated still need cervical cancer screenings?

Yes. Because the vaccine does not protect against all types of HPV, it will not prevent all cases of cervical cancer. About 30% of all cervical cancers will not be prevented by the vaccine. Since this is a multi dose vaccine, it is possible that women will not get all three required doses or may not get them on the correct time schedule resulting in a weakened response. This could possibly leave them susceptible to developing cervical cancer.

Administration

1) How is this vaccine administered?

Gardasil is administered intramuscularly as 3 separate 0.5-mL doses according to the following schedule: first dose at elected date; second dose: 2 months after the first dose; third dose: 6 months after the first dose.

Cervarix is administered intramuscularly as 3 separate 0.5-mL doses according to the following schedule; first dose at elected date; second dose: 1 month after the first; third dose: 6 months after the first dose.

Each vaccine series should be completed using the same product; you can not use HPV vaccines interchangeably within the 3 dose series.

2) If I think a service member has been exposed to Human Papillomavirus, what should I do?

A pap smear and vaccination series (if within the DoD policy age parameters and not previously immunized) should be suggested. Reinforcement of the need for yearly pap smears for women should also occur. Both men and women should be counseled on monogamous relationships, reducing sexual partners and the proper use of barrier protection to prevent future STD infections.

Contraindications

1) Who should NOT receive the Human Papillomavirus vaccine?

Those who have demonstrated hypersensitivity to the any of the vaccine components or a previous dose of vaccine should be referred to their healthcare provider for possible exemptions. Gardasil should not be administered to people with a history of a severe allergic reaction to yeast (a vaccine component). Cervarix pre-filled syringes should not be administered to people with a hypersensitivity to latex. The HPV vaccines are not recommended for use in pregnant women.

2) What about pregnant or breastfeeding women?

HPV vaccine is not recommended for use in pregnant women. Because many drugs are excreted in human milk, caution should be exercised when vaccines is administered to a nursing woman.