



American College of Pediatricians

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Patient Information Handout Series

HUMAN PAPILLOMAVIRUS VACCINE

What is HPV? Human Papilloma Virus (HPV) infection is the most common sexually transmitted infection in the United States. More than half of sexually active people will be infected with HPV at some time in their lives. Half of all newly acquired HPV infections occur in young adults between 15 and 24 years of age. HPV is spread by contact during vaginal, anal or oral sex with an infected person. Because HPV may not cause any visible symptoms, many people do not even realize that they are infected. Some strains of HPV cause warts in the genital area (vagina, penis), anus and rectum and, for those who practice oral sex, may cause warts in the mouth and throat. Both men and women may be infected from opposite and/or same-sex partners.

How harmful is HPV? The most severe consequence of HPV infection is cancer. About 12,000 American women develop cancer of the cervix due to HPV infection every year. Approximately 4,000 of them die annually, mostly due to late or no treatment. Of those who survive, some require a radical hysterectomy. HPV infection also causes rectal and penile cancers, as well as cancers of the mouth and throat. Rarely, HPV is passed onto infants as they travel through the birth canal. These babies may develop life-threatening warts in the larynx (voice box).

How can one decrease the chances of getting an HPV infection? There are only two ways to avoid HPV infection with complete certainty: a person must remain sexually abstinent their whole life, or limit sexual activity to an uninfected spouse in a mutually faithful marriage. Condoms do not offer significant protection from HPV. The two HPV vaccines, *Gardasil* and *Gardasil-9*, offer considerable – though not 100% – protection. These vaccines are given as a 3-dose series over 6 months, with 2 months between the first doses, and at least 4 months between the second and third dose.

How protective and long lasting is the vaccination? There are nearly 40 types of HPV that are spread sexually, 14 of which are known to cause cancer. All three vaccines protect against the 2 types that cause about 70% of cervical cancer. *Gardasil* covers 2 other types that cause genital warts and *Gardasil-9* covers 5 more high-risk cancer causing types. At present, protection appears to last at least 5-7 years. As with other vaccines in the past, it is possible that booster doses will be recommended in the future.

Who should get the HPV vaccine? It is recommended for girls and women between 9 and 26 years of age and for boys between 9 and 15 years. The vaccine is most effective if given prior to HPV exposure. Once a girl or boy has become sexually active, they may already be infected with HPV and the vaccine will offer very limited protection for the type or types they have contracted.

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Who should NOT get the vaccine? Anyone with a life-threatening allergic reaction to yeast or any other component of HPV vaccine, or to a previous dose of HPV vaccine, should NOT get the vaccine. Anyone who is pregnant should NOT get the vaccine.

What are the risks from the HPV vaccine? There have not been any serious side effects reported in over 12 years of studies. It is not a live vaccine, so a person cannot develop HPV from the vaccine. Common complaints after immunization include pain, itching, redness or swelling at the injection site. These symptoms generally last 24 – 72 hours and go away on their own. Fainting after an HPV vaccine has been more common than after other vaccines, so a 15 minute sitting or lying period of observation after each dose is advised.

Is it reasonable to delay or to opt out of receiving the HPV vaccine? Yes. Long term risks and the duration of protection offered by the vaccination are uncertain. Also, because cervical cancer caused by HPV infection is transmitted only by penetrating vaginal intercourse, it is very reasonable for those committed to abstinence until marriage to defer vaccination until closer to the wedding or to decline vaccination altogether.

Why should I/my child get the vaccine if I/she/he will abstain until marriage? First, the vaccine should be considered because a future mate may not be a virgin prior to marriage and may be infected. Second, as much as we do not like to consider it, there is no perfect way to prevent exposure to HPV through rape, adultery or divorce and re-marriage. Also intentions of abstinence don't always hold up with time and varying situations, and adolescents or young adults are frequently not forthright with their parents.

Isn't giving the vaccine like telling my children it is okay to have sex? No. Parents of adolescents must always make it clear to their children that there is no vaccine that makes sexual activity physically "safe." Parents should caution their children about the harmful medical and psychological consequences of pre-marital sex and promote abstinence. While the vaccine is protective against some types of HPV, it does not protect against all HPV-induced cancer and is not protective against other types of sexually transmitted infections or unwanted pregnancy. Complete protection is only ensured if one abstains from all sexual activity until one has established a lifelong monogamous relationship with an uninfected spouse.

Do vaccinated sexually active women still need routine screening for cervical cancer? Yes. All women who are, or ever have been, sexually active should continue to have routine Pap smears since vaccination is not 100% effective in preventing cervical cancer.

For more details on these vaccines, see the College's updated statement, "Human Papillomavirus Vaccination," at www.BestforChildren.org.