

Human Papilloma Virus (HPV) Vaccine – Gardasil

The Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention recommends HPV vaccine for girls and women 9-26 years of age to prevent cervical, vaginal and vulvar cancer as well as genital warts. In males, HPV has been associated with other types of cancers. Approved for males 9-26 years of age, the vaccine is also used to prevent genital warts. The majority of sexually active individuals have been infected with HPV at some point in their lives; most are not aware of the infection. In many cases, the immune system is able to clear the infection within 1-2 years. However, certain strains of HPV may linger on the cervix for many years; persistence of the virus is considered a risk factor for the development of cervical and other types of cancer.

In the United States, approximately 4,000 women die from cervical cancer each year; worldwide deaths from cervical cancer are approximately 270,000 (i.e., rates are higher in areas where Pap smear screening and early treatment are not readily available). Gardasil protects against HPV Types 16 and 18, which are associated with 70% of all cervical cancer and most vaginal and vulvar cancers. It also protects against HPV Types 6 and 11, which cause about 90% of genital warts. Vaccination is a promising step toward significantly reducing HPV related infection and disease.

Gardasil Overview:

Effectiveness:

- There are approximately 40 different HPV types associated with vulvar, vaginal or cervical infection and disease. Gardasil protects against 4 important HPV types.
- Gardasil does not protect against the HPV types responsible for 30% of cervical cancer.
- Girls/women who have not yet been exposed to HPV will benefit most from the vaccine.

Vaccine trials: In the unexposed group, the vaccine was 98.8% effective in preventing significant HPV related disease and 93.4% effective in preventing genital warts. In the general population, which included girls/women already exposed to one or more of viruses covered by Gardasil, the vaccine was approximately 40% effective in preventing significant cervical disease and 68.5% effective in reducing genital warts.

Girls/women who may have been infected with one or more of the viruses covered by Gardasil will develop immunity against the HPV types they have not yet acquired. It is rare that an individual will be infected with all four of the viruses covered by Gardasil.

Pap Smears

- Women who receive Gardasil should continue to have regular Pap smears as this remains a very important screening test for cervical cancer detection and early treatment. 30% of cancer-causing HPV strains are not covered by the vaccine. Women who do not receive all three doses of the vaccine will not receive the vaccine's full benefits.
- As with any vaccine, the vaccine may not result in protection in all vaccine recipients.

Immunity

- Gardasil is given in a series of 3 injections, over a 6 month period (0, 1-2 months and 6 months after dose 1). Maximum protection is obtained one month after the third dose.
- The length of vaccine protection (immunity) is unknown; so far, vaccinated persons are protected for five years. Research is ongoing to determine the length of immunity and if a booster dose will be needed.

HPV testing prior to immunization

- HPV testing prior to immunization is not necessary or recommended prior to receiving this vaccine.

Safety

- The vaccine is not recommended in pregnancy or in anyone allergic to any component of the vaccine including yeast.
- Gardasil has been safely used around the world. However any medicine could possibly cause a serious problem such as an allergic reaction. Several mild-moderate problems are known to occur including pain and/or redness at the injection site, fever, headache or fainting. Serious allergic reactions including rash, swelling of the hands, feet, face or lips and breathing difficulty require immediate medical care. Consult the vaccine information statement for more information.

Consistent condom use is an important component in the prevention of HPV and other sexually transmitted infections. A recent study demonstrated a 70% reduction in HPV infection among participants who used condoms consistently.

The vaccine will be available through the Tang Center at the Allergy, Travel and Immunization clinic. The Student Health Insurance Plan (SHIP) covers the cost of the vaccine at 100%.

Additional information on the HPV vaccine is available at: www.cdc.gov/nip/vaccine/hpv/hpv-faqs.htm.