

## Human Papilloma Virus (HPV) Vaccine – Gardasil

The Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention recommends HPV vaccine for males and females 9-26 years\* of age to prevent cervical, vaginal, vulvar, and other HPV-related cancer as well as genital warts. The majority of sexually active individuals will be 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 4,400 women die from cervical cancer each year. Gardasil protects against 9 types of HPV virus, including types that are associated with approximately 80% of all cervical cancer, 90% of anal cancer and the majority of other HPV-attributable cancers in the US. It also protects against the two HPV Types which cause about 90% of genital warts. Vaccination is a promising step toward significantly reducing HPV related infection and disease (including cervical, anal, head/neck, and penile cancers).

### **Gardasil Overview:**

#### ***Effectiveness:***

- There are approximately 40 different HPV types associated with vulvar, vaginal or cervical infection and other ano-genital disease. Gardasil protects against 9 important HPV types.
- Gardasil does not protect against all of the HPV types responsible for cervical cancer.
- Girls/women and boys/men who have not yet been exposed to HPV will benefit most from the vaccine.

HPV vaccines work extremely well. HPV vaccine was first recommended in 2006 in the United States, and by 2010, vaccine type HPV infections in teen girls decreased by 56%, and decreases in prevalence were also observed in women in their early 20s. Research has also shown that fewer U.S. teens are getting genital warts since HPV vaccines have been in use.

Also, decreases in vaccine-type prevalence, genital warts, and cervical dysplasia have been observed in other countries with HPV vaccination programs.

There is no data to suggest HPV vaccines will treat existing diseases or conditions caused by HPV. However, people who already have HPV-associated diseases or conditions can still get protection from other HPV types covered by the vaccines.

#### ***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. Approximately 20% of cancer-causing HPV strains are not covered by the vaccine. Women who do not receive all recommended 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***

- In women and men, 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.

\* the specific immunization recommendation for boys/men is ages 13 through 21 in general, and through age 26 for gay, bisexual and other men who have sex with men, transgender people and for immunocompromised persons (including those with HIV infection) not adequately vaccinated previously

### **HPV testing**

- 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 provided at time of vaccination 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 <https://www.cdc.gov/hpv/>

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