

HPV vaccination helps prevent cervical cancer

What is HPV?

The genital human papillomavirus (HPV) is a highly contagious, common and usually symptom free infection.

Many people acquire HPV within a few years of becoming sexually active. In most cases the HPV infection will clear up within 12-24 months. In a small number of cases though, the virus persists and may lead to cervical cancer.

There are many different strains of HPV. 15 HPV types are high risk types, of which two (HPV 16 and HPV 18) are the most common.

High risk types can establish persistent cervical infection in about 3-10% of infected women. This can result in cervical abnormalities that in some cases will progress to cervical cancer.

About 70%-80% of cervical cancers are attributed to HPV types 16 and 18.

High risk types have also been associated with the development of some anal cancers, vaginal and vulval cancers, penile cancers and head and neck cancers.

In Australia, there are about 750 cases, 1800 hospitalisations and 250 deaths each year from cervical cancer. Cervical cancer in Australia now occurs mainly in unscreened or under-screened women.

In addition, low risk genital HPV types 6 and 11 are important causes of genital warts, causing about 90% of all genital warts.

How can I protect my daughter?

Vaccination can provide protection against some types of HPV. Currently, Gardasil is the only HPV vaccine available. It is approved for females aged 9 to 26 years.

Gardasil provides 90-100% protection against HPV types 16, 18, 6 and 11. A three dose schedule is recommended over six months.

- Dose 1
- Dose 2 – two months after first dose
- Dose 3 – four months after second dose

Another HPV vaccine, Cervarix, which will provide protection against HPV types 16 and 18, is expected to be

available in 2007.

Vaccination can be considered for any female aged 9 to 26 before the start of sexual activity. It is not routinely recommended for women who are already sexually active. However, some women may benefit from vaccination, after assessing the likelihood of their past and future exposure to HPV, as the vaccine can still give protection from those HPV types that the woman may have not acquired.

HPV vaccines will not treat existing HPV infection or disease. They are preventive treatment only.

Gardasil is also approved for use in males aged 9 to 15 years. This approval is based on the demonstration of safety and HPV antibody responses in males. However, there is currently no data demonstrating that HPV vaccination of males is effective in preventing HPV infection, genital warts or other genital lesions. This data is expected by 2008 and when more information is available, the vaccine may be recommended for boys as well.

It is not yet known how much protection is given from receiving only one or two doses of the vaccine. For this reason it is very important to have all three doses. The duration of immunity from the vaccination is not yet known. It is at least five years, but booster doses may be required.

What about Pap smears?

Pap smears are an important preventive strategy against cervical cancer. Since no vaccine is 100% effective and Gardasil does not provide protection against all HPV types, or against existing HPV infections, routine Pap screening for sexually active women remains critically important to detect precancerous changes in the cervix. This allows treatment before cervical cancer develops.

What's in the vaccine?

The vaccine is a 'recombinant vaccine' made by genetic engineering, whereby the genetic material of an organism is manipulated.

In this case, the genes that code for a specific protein from each of the four HPV virus types are expressed in yeast to create large quantities of the protein. The protein that is produced is



purified and then used to make the vaccine.

Because the vaccine only contains a protein and not the entire virus, the vaccine cannot cause HPV infection. It is the body's immune response to the recombinant protein/s that protects against infection by the naturally occurring virus.

How much does it cost?

A three dose regime costs about \$390-\$450 (\$130-\$150 per dose) depending on the supplier. The vaccine may be available at your medical practice. Otherwise, your GP can give you a prescription to take to the pharmacy. Some health care funds may cover part or all of the vaccine's cost.

For more information about HPV vaccination, speak to your GP or visit www.vaccination.org.au.