

# The Human Papilloma virus vaccine

## *The Do's and Don'ts*

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*The news that a new vaccine, which can prevent a carcinoma, is now available in the market spread throughout the medical field like fire. Of course, the Human Papilloma Virus (HPV) or rather some strains of HPV are implicated in the aetiology of cervical carcinoma.*

There are currently two vaccines against HPV in the market – bivalent and a tetravalent vaccine. However, due to cross-immunity these vaccines protect against a proportion of those strains which may lead to cervical carcinoma. Hence, one has to be clear and understand that these vaccines may not fully protect everyone and certainly do not prevent all types of cervical cancer. These strains of the virus are transmitted sexually, so the use of these vaccines should not give a false sense of security and it is very important that regular cervical screening should not be stopped.

The HPV is constituted by a group of over 100 strains of viruses and about 30 of these strains are transmitted sexually and infect the genital area. Most people infected with these viruses are asymptomatic while others may complain of wart like lesions. Of the strains transmitted sexually there are a few which are considered as high risk because they are associated with pre-cancerous changes in the cervix, vulva, anus and penis. Amongst these high risk strains there are HPV types 16 and 18 which cause 70% of cervical cancer and HPV types 6 and 11 which cause 90% of genital warts.

The vaccine should not be given to those who are allergic to ingredients of the vaccine and is not recommended in pregnancy. Otherwise, these vaccines appear to be very safe and may be administered in 3 doses over a period of 6 months. Local inflammation at the site of injection has been observed as well as possible fever, nausea and dizziness.

One has to remember that these vaccines provide immunity to specific strains of HPV but should not be used in the treatment of cervical carcinoma.

The vaccine itself consists of specific protein blocks taken

from the virus' outer coat but contains no infectious particles. There is also no thiomersal or mercury in the vaccine. The duration of protection by the vaccine is not yet known but a 5-year protection has been confirmed. Whether a booster dose may be needed later is not yet known.

Since the vaccine protects against the majority of HPV strains transmitted sexually, the vaccine is targeted towards females aged 9 to 26 years as these are sexually active. Studies on women over 26 years are currently being done.

Studies are also being done to discover the degree of protection achieved in males, and the vaccine may be licensed for use in males in the future.

Hence, the HPV vaccine has proved to be a milestone in the advances in medicine as one has achieved protection against carcinoma by vaccination. Although so effective, and free from serious side effects, it is essential to understand that a small proportion of HPV strains are not covered by the vaccine and of course the routine cervical smears for cytological examination as well as the recommendation given to sexually active persons regarding safe sex and/or abstinence is very sound advice.

No teenager must go away with the idea that now that she has been inoculated with the 3 doses of the HPV vaccine, she is safe to practice unprotected sex and runs no risk of HPV infection or cervical carcinoma, not to mention the risk of other sexually transmitted infection like HIV, syphilis, gonorrhoea, hepatitis B or herpes infections.

One dream has now come true, and certainly this vaccine will certainly afford protection against one of the common carcinomas in women. The future for vaccination looks very bright. ☐