

## **HPV (Human Papilloma Virus)**

Nearly 100% of cervical cancer is caused by infection with human papilloma virus or HPV. At least 50% of Americans get HPV infection, and 74% of infections occur by age 24. Most HPV infections resolve with time, but about 10,000 young women die each year from cervical cancer. There are more than 100 strains of HPV, but only a few cause cancer. Seven strains of HPV, 16,18,31,33,45,52 and 58 cause 90% of cervical cancer. These are called “high risk” strains.

HPV also causes abnormal Pap smears. The Pap smear is a test to detect cervical cancer, but often the test is abnormal because of infection with low-risk HPV. Abnormal Pap smears are followed up with additional testing and sometimes with surgical procedures, all designed to tell the difference between cancer and changes from low-risk HPV infection. Reducing HPV infection will reduce the number of necessary follow-up tests and procedures resulting from abnormal Pap smears.

HPV causes genital warts in both males and females. 90% of genital warts are caused by HPV strains 6 and 11.

HPV also causes several other cancers: vagina, vulva (lips of the vagina), penis, anus, mouth, larynx (voice box), and skin.

HPV is spread by skin-to-skin contact: genital-to-genital, oral-genital, and hand-to-genital contact. Penetration is not necessary to spread HPV.

HPV vaccine, “GARDASIL 9”, contains nine strains: the high-risk strains 16,18,31,33,45,52 and 58 which cause cancer and its precursors, and the low-risk strains 6 and 11 which cause abnormal Pap smears and genital warts.

HPV vaccine contains no live viruses – it is merely the shell of the virus, allowing the immune system to recognize the virus with no risk of infection from the vaccine.

The vaccine is given in three doses, with the second dose two months after the first and the third dose six months after the first. Side effects are minor: soreness where the shot is given or minor fever. Millions of doses of HPV vaccine have been distributed in the USA, and the safety record remains excellent.

All girls age 11 and up should receive Gardasil vaccine to prevent cervical, vaginal, vulvar and anal cancers and pre-cancers from HPV strains 16 and 18, and genital warts. Boys age 11 and up should receive HPV vaccine to prevent genital warts and anal cancer. Ideally, the vaccine should be given BEFORE sexual debut. However, there is benefit to receiving the vaccine even after sex has begun, since the vaccine contains nine strains of HPV and it is very rare for teens to be infected with all nine.

At HPA, we recommend HPV vaccination for all of our patients age 11 and up. Discuss HPV vaccination with us – we are happy to answer your questions!