

**DR. JOHN OAKLEY**  
MB, ChB, DCH, MRCP, MRCPCH

Independent Medical Practitioner

52 Bishops Way, Four Oaks, Sutton Coldfield, West Midlands. B74 4XS

Tel: 0121 308 8876 /9550

Fax: 0121 308 9551

## **Vaccines that Prevent Cervical Cancer**

Cervical cancer is the second most common cancer (after breast cancer) in women under 35 in the UK. There are approximately 2500 new cases each year, resulting in over 1000 deaths. Cervical cancers are caused by infection with the Human Papilloma Virus (HPV).

HPV is the most common sexually transmitted infection in the Western World. 80% of sexually active women become infected with HPV during their lifetime.

Infection with HPV most commonly occurs during late teens and early twenties, amongst women who have had multiple sexual partners, particularly if those partners have **also** had multiple sexual partners.

HPV infections rarely cause obvious symptoms; as a result they are usually passed on unknowingly to sexual partners. Barrier contraception does NOT offer 100% protection from HPV infection.

Two vaccines are currently available, both of which prevent infection with HPV types 16 and 18 which are responsible for 75% of cervical cancers. The remaining 25% are caused by strains of HPV for which a vaccine is not yet available.

Vaccination against HPV is most effective when given before women become sexually active. In women not infected with HPV, the vaccines are 100% effective in preventing the cell changes causing cervical cancer. In the short term, cervical screening (smear tests) needs to continue as 80% of women are already unknowingly infected with HPV.

The vaccines are well tolerated; common side effects include a mild rise in temperature and/or a red, tender swelling at the site of the injection.

Three separate doses of the vaccine are needed within a period of six months to provide full protection. They should NOT be given during pregnancy, but can be given while breastfeeding. HPV vaccines are fully protective for at least seven years following administration. As with all vaccines, research is ongoing to determine how long protection lasts, and whether or not a booster is needed.

Since September 2008 HPV vaccines have been routinely available via the NHS for girls aged 12-13 years. There is an ongoing NHS 'catch up' campaign for girls aged 17-18 years age. Girls now aged 14, 15 and 16 will not receive the benefit of HPV vaccines until after September 2009. This is of concern as multiple studies have shown that over 25% of girls in the UK are sexually active at 16 years of age or younger. In addition, it is known that the cervix is more vulnerable to HPV infection during puberty.

## Further information / use in older women.

The vaccines are licensed for NHS use in females aged 9 – 26. Research shows no reason why women older than 26 should not also receive the vaccines.

There are at least 106 different strains (types) of HPV virus. It is possible to test whether a woman is HPV positive, but there is no commercially available test to show which strain of HPV has caused the infection.

Women aged 26 and older would benefit from HPV vaccination. A recent study of 10,000 women over the age of 26, with fewer than five male sexual partners and no prior positive cervical smear, produced the remarkable result that **none** developed HPV cell changes in the cervix during the two year follow up period after the HPV vaccination.

Each year, cervical screening in the UK detects approximately 25,000 women with early (treatable) pre cancerous cell changes (CIN 3). This number has been increasing since the 1980's, particularly in women under 30. It is estimated that without screening there would be 5000 deaths from cervical cancer each year. Most women who develop invasive cervical cancer have **either** never had a cervical smear, or more than 10 years has passed since their previous smear. Cervical cancer spreads much more quickly in women age 25-39 than in older women.

The two vaccines which are available to prevent HPV infections are Gardasil and Cervarix. The Department of Health has controversially decided that Cervarix will be used by the NHS.

Both vaccines are equally protective against HPV types 16 and 18. Cervarix protects only against these two strains, whereas Gardasil in addition protects against strains 6 and 11, which are responsible for causing 99% of genital warts. Genital warts are extremely distressing, both physically and emotionally, and affect over 150,000 people each year in the UK.

This Practice will routinely provide the Gardasil vaccine, unless Cervarix is specifically requested by the patient.

For further information please see 'The Prevention of Cervical Cancer': Lopes.T. and Singer.A., Royal Society of Medicine Press.

(Source: Proceedings of Conference at RSM London 26<sup>th</sup> September 2006 – ISBN 978-1-85315-669-4.)

The information and opinions in these information sheets have been checked by me, Dr John Oakley, and I believe them to be correct. They are designed only as a supplement to a full consultation with me and should not be used as a single definitive source of information. My opinion may differ from that of some other Doctors.

**If in doubt, please consult another suitably qualified medical professional.**

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