

Human papillomavirus

Frequently asked questions



What is human papillomavirus (HPV)?

HPV is a small virus and there are around 100 different types. Some of these types cause non-genital lesions, such as common warts; others cause genital lesions, including genital warts. The type that causes genital warts (type 6) is not linked with cervical cancer but around 20 types are – particularly types 16 and 18. It is these 'high-risk' types that we are testing for. The virus replicates within the epithelium or mucosa of the cervix and sheds in exfoliated cells, which can be detected in cytology samples.



Why test for HPV?

It is now very clear that when a woman has borderline and mild abnormalities, only the high-risk HPV positive lesions are likely to have cervical intraepithelial neoplasia (CIN). This means that high-risk HPV negative women do not need to be referred to colposcopy. It also means that high-risk HPV positive women should be referred to colposcopy without the need for repeat cytology follow-up, which simply delays the final diagnosis.

In addition, treated women who have normal, borderline or mild cytology six months after their treatment, and who also test negative for high-risk HPV, are at very low risk of cervical cancer and do not need to be screened again for three years.



How do we test for high-risk HPV?

The cervical sample that was used in cytology is re-used in HPV testing. When borderline or mild dyskaryosis is reported, or a normal, borderline or mild result is reported following treatment, the material left after the cytology slides have been prepared is used to test for high-risk HPV. The remaining cervical cells are processed to allow any viral DNA in the cells to be detected.



How is HPV acquired?

It is generally accepted that cervical HPV infection is acquired through sexual contact. The epidemiology of cervical cancer has for many years indicated increased risk in women with multiple partners and early onset of sexual activity. This suggests that a sexually transmitted agent is involved in cervical carcinogenesis.

It is common for women to state that their current partner has been their only sexual partner, and for their partner to say the same.

Theoretically, if two virgins form a faithful sexual relationship there should be no opportunity to acquire HPV. Yet we know that some women in relationships of this type do test HPV positive.

HPV infections can persist for many years and it is not possible to be sure when the infection occurred or what its true source is. Certainly the HPV types most often associated with cervical cancer are usually symptomless in both partners. This can be a difficult area, but a gentle explanation of the facts as we understand them usually helps. If a woman who has had only one sexual partner acquires cervical HPV, do not suggest this indicates infidelity.

How long does HPV infection last?

HPV infection of the cervix usually occurs earlier in the sexual lives of women. We know this because high-risk HPV positive rates are about 50% in women around the age of 20 years.

In most women, the infection clears, usually within a year, and protective antibodies may develop to prevent future infection by the same HPV type. However, this does not always happen and it is not uncommon to acquire new HPV infections of a different type. In some women (probably 20–30%) the infection persists and may do so for years. The longer the infection persists, the greater the risk of subsequent abnormality.

How can high-risk HPV cause cancer?

HPV contains several genes that can disturb the mechanisms regulating normal cell division, which then becomes uncontrolled. It is thought that HPV alone may not be sufficient to cause cancer and that other factors, such as smoking, may play a part.

Can HPV infection be treated?

At present, there is no effective treatment for HPV infection but, as stated, the immune system clears most infections.

Can HPV infection be prevented?

Research suggests the two vaccines developed by international pharmaceutical companies are very effective at preventing infection with the two virus types most commonly linked with cervical cancer. However, these types are only responsible for approximately 75% of cases.

A national HPV immunisation programme is currently under way to routinely vaccinate girls aged 12–13 years. As vaccines are ineffective in women who are already infected, screening will still be needed in the future.