

NHS Cervical Screening Programme

HPV triage of borderline and mild dyskaryosis and HPV test of cure

Information for sample takers

This factsheet is designed to inform sample takers and help them to counsel women who are having an HPV test as part of the NHS Cervical Screening Programme. **It is important to note that 95% of screened women will not require an HPV test.**

What is Human Papilloma Virus (HPV)?

There are around 100 subtypes of HPV. Most do not cause significant disease in humans. However, some subtypes (most notably subtypes 16 and 18) have been confirmed as agents causing cervical cancer. Unlike subtypes 6 and 11 (which cause genital warts) these 'high-risk' types do not produce visible symptoms.

Almost all cervical cancers contain HPV DNA. Looking at cases of CIN, we find that the higher the grade of CIN the more often high-risk HPV infection is found. This suggests that women showing no signs of infection with high-risk HPV are extremely unlikely to develop cervical cancer in the short to medium term. Even if a woman does have abnormal cytology, it is unlikely to reflect CIN2 or 3; in most cases it will be a result of low-grade abnormalities that regress without treatment.

Infection with high-risk HPV is common, especially in women under 35. In most cases the infection is transient. However, for reasons that are not yet known around 20–30% of women do not clear the infection. This group is at most risk of CIN that may eventually develop into cervical cancer.

How do women get the virus?

As far as we know most cases of high-risk HPV infection are sexually transmitted. HPV is easily transmitted during sex between men and women and with same-sex partners.

However, there are two important factors to bear in mind

- the infection is asymptomatic, so it may have been present and undetected for many years and have nothing to do with a woman's current relationship
- a partner may have acquired an asymptomatic infection with no visible lesions many years earlier and passed it on unknowingly.

Women can therefore be reassured that a positive test result for high-risk HPV types need not imply infidelity or promiscuity by either partner.

Why are we using HPV testing?

HPV testing is designed to speed up referral to colposcopy, avoid referral for those who do not need it, and allow treated women to proceed to a three year recall period after just six months.

It is well known that the cytology tests of some women with CIN3 show only low-grade abnormalities. Referral to colposcopy is usually made following persistent borderline or mild abnormalities. HPV testing aims to identify which of these women may have significant disease; they can then be referred immediately to colposcopy.

Before the introduction of HPV triage, a single abnormal cytology test result could delay a woman's return to routine screening for up to two years. However, women known to be high-risk HPV negative are very unlikely to have significant disease. They can thus be reassured and returned immediately to routine recall without the anxiety of repeat screening tests and possible referral to colposcopy.

The follow up of treated women may involve annual cytology screening for 10 years before they return to routine recall. The HPV test of cure can avoid the need for this by helping to assess the risk of residual disease in women with normal, borderline or mild cytology. Women are tested for high-risk HPV six months after their treatment, allowing high-risk HPV negative women with normal, borderline or mild cytology to return to a three year recall period.

How is the test done?

HPV testing is performed on the sample taken for the cytology test, so there is no need for the woman to be called for a second test.

Samples will be processed at the laboratory and all results will be issued as part of a single cytology report. A cytology report will include a result and a management recommendation, as happens now. If the result shows high-risk HPV this will be included in the report and reflected in the management recommendation.

How will HPV testing affect women?

Triage

Women whose cytology test shows moderate dyskaryosis or worse will not have an HPV test. They will simply be referred to colposcopy, as happens now.

Women whose cytology test result is negative will not have an HPV test. Depending on their previous history, they will be advised either to return to routine recall or to have an early repeat test, as at present.

Women whose cytology test shows borderline change or mild dyskaryosis will have a high-risk HPV test. If it is positive they will be referred to colposcopy. If it is negative they will return to routine three or five year recall, depending on their age.

Test of cure

All women who have been treated for CIN will have a cytology test six months after their treatment. If cytology is normal, borderline or mild a high-risk HPV test will be performed. Women who are high-risk HPV negative will return to routine three year recall. Women who are high-risk HPV positive or have moderate or worse cytology will be referred back to colposcopy.

Does the HPV test affect colposcopy?

The HPV test focuses on which women will go to colposcopy, which can go back to routine screening, and which can proceed to a three year recall period following treatment. At colposcopy, women's clinical management will depend (as now) on the opinion of the colposcopist who examines the cervix.

NHS Cervical Screening Programme

HPV testing

Information for women

What is the NHS Cervical Screening Programme?

The Cervical Screening Programme aims to reduce the number of women who develop invasive cervical cancer and the number of women who die from it. It does this by regularly screening women between the ages of 25 and 64, so that conditions that might otherwise develop into invasive cancer can be identified and treated. The introduction of HPV testing will help it to do this even more effectively.

What is HPV?

HPV stands for Human Papilloma Virus. It is a very common infection and most women get it at some time in their life. In most cases it clears up by itself without the need for treatment.

There are many types of HPV. Most are harmless but some can cause abnormalities in the cervix and are known as 'high-risk' HPV types. These abnormalities often clear up without treatment when the virus clears. But in some women the virus persists, placing them at greater risk of developing cervical abnormalities (CIN) which may need treatment.

How do people get HPV?

HPV is a very common infection among people who have been sexually active at some time in their life. It is easily transmitted during sex between men and women and between partners of the same sex. The virus shows no symptoms, so it is possible that

- someone may have had the infection for many years without knowing about it
- a partner may have been infected years earlier and, unaware of it,

Why might I be tested for HPV?

HPV testing in women with borderline or mild dyskaryosis

If a woman's screening result shows mild abnormalities (called borderline or mild

dyskaryosis) an HPV test will be carried out on her sample. Women with borderline or mild dyskaryosis have only a 15–20% chance of having an abnormality significant enough to need treatment.

The HPV test is important because the presence or absence of HPV indicates which women might need treatment. If HPV is found in her sample the woman will be invited to go for colposcopy. Colposcopy involves looking closely at the cervix to see whether any treatment is needed. If it is, she will normally be seen in an Outpatients Clinic, which means that there is no need to stay in hospital overnight.

HPV testing in women who have received treatment for CIN

If colposcopy reveals CIN and the woman is treated for it, she will be screened once again around six months after her treatment. If the result is normal, borderline or mild the sample will be tested for HPV. If HPV is not found she will not need to be screened for another three years.

If HPV is found, or if the screening result shows moderate or worse dyskaryosis, the woman will be invited for colposcopy again. She will then be treated or (if treatment is not needed) monitored in line with the national guidelines covering women who have had colposcopy.

How is the HPV test done?

The test is done using the sample of cells taken during the screening test, so there is no need to be screened again.

Where can I find more information?

If you would like more information about HPV testing, or about anything else mentioned in this factsheet, talk to your practice nurse or visit the NHS Cancer Screening Programmes website at www.cancerscreening.nhs.uk.

NHS Cervical Screening Programme

Frequently asked questions

Human Papilloma Virus

What is Human Papilloma Virus (HPV)?

It's a small virus comprising around 100 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 or so 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 CIN. This means that high-risk HPV negative women need not 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 need not 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. This means that 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 suffices. If a woman who has had only one sexual partner acquires cervical HPV do not be tempted to suggest that 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. 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 that 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. But these types are responsible for only around 75% of cases. A national HPV immunisation programme is currently under way to routinely vaccinate girls aged 12–13 years, together with a two year catch up programme for girls up to 18 years. As vaccines are ineffective in women who are already infected, screening will still be needed in the future.

