Cervical Screening Test

Women are routinely invited to have cervical screening tests (previously called smear tests). The tests are done to prevent cervical cancer, not to diagnose cancer. During each test some cells are removed from the cervix, with a plastic brush. The cells are examined under a microscope to look for early changes that, if ignored and not treated, could develop into cancer of the cervix. You are very unlikely to develop cervical cancer if you have regular cervical screening tests at the times advised by your doctor, AND ... you have treatment when advised if abnormal cells are detected.

What is a cervical screening test and how is it done?

The cervix is the lowest part of the womb (uterus). It is often called the neck of the womb.

You will be asked to remove your clothing from the waist down. If you wear a loose skirt, you may only need to remove your knickers. You will be asked to lie on your back on the examination couch. You should bend your knees, put your ankles together, and let your knees fall open. A doctor or nurse will put an instrument called a speculum into your vagina. This gently opens the vagina and allows the cervix to be seen (at the top of the vagina). The doctor or nurse then uses a thin plastic stick with a small brush at the end to gently scrape some cells from the surface of the cervix. The cells that are obtained on the brush are sent away to be examined in the laboratory.

Cervical screening tests are not painful, although some women find the speculum uncomfortable. It generally helps if you can relax - this makes the experience better for you and easier for the person taking the sample. The newer disposable plastic specula are also a lot less cold than the older metal ones!

Doctors and nurses will still often refer to cervical screening tests as smear tests when talking to patients. This is because of the way the test used to be performed. The traditional smear test involved removing cells from the cervix with a small wooden spatula (and not with a brush as done now). The cells were then smeared on to a glass slide (hence the name cervical smear). From a patient's point of view it really makes no practical difference how the cells are collected from the cervix; the main part of the examination, using the speculum, is the same.

Why are cervical screening tests advised?

Cervical cancer is a disease that can often be prevented. Early changes can be detected in the cervix, which indicate that cancer may develop. A cervical screening test samples some cells from your cervix. These are examined under the microscope in a laboratory.

The cervical screening test is not a cancer test. The test is used to detect early abnormalities of the cervix which, if untreated, could lead to cervical cancer in the future.

In most women the cells that are taken are found to be normal. Abnormal cells are found in some women. An abnormal result does not mean cancer in the vast majority of cases. Abnormal cells indicate that cancer may develop sometime in the future. About 1 woman in 20 will have an abnormal result that requires further testing or treatment. Most of these changes will not lead to cervical cancer. Treatment can be given to prevent cancer from developing in women with abnormal cells.

The NHS Cervical Screening Programme
The NHS Cervical Screening Programme invites all women for regular tests automatically. You need to be registered with a GP, as this is how the programme gets your name. It is therefore important that your GP has correct address details for you.

A computer system is used. Your record on the computer is updated when you have a test so it knows when your next one is due. Computerised recall systems are good - but not foolproof. Contact your GP if you think you should have had a cervical screening test but have not yet received an invitation to have one.

Cervical screening is a free service on the NHS. Depending on which country you live in, you may be called at different ages for cervical screening:

- First invitation for screening in England and Northern Ireland is at age 25. It is age 20 in Scotland and Wales.
- Routine recall (repeat screening test):
  - Age 25 years: first invitation to cervical screening in England and Northern Ireland.
  - Age 25-49 years: cervical screening tests are every three years.
  - Age 50-64 years: cervical screening tests are every five years.
  - Age 65 years: routine cervical screening ceases.
- Women over 65 years of age should be screened if:
  - They have not had a cervical screening test since the age of 50.
  - A recent cervical screening test has been abnormal.
- Cervical screening does not stop simply due to age until a woman with a previously abnormal cervical screening test has had three negative results.

Why is the cervical screening test important?
Cervical cancer is not uncommon. In recent years the number of cases has fallen due to cervical screening tests. However, there are still over 2,000 new cases of cervical cancer diagnosed each year in the UK. Most of these occur in women who have never had a screening test, or who have not had one for many years. Cervical cancer can be prevented if you have regular screening tests. It is estimated that up to 3,900 women are prevented from developing cervical cancer every year in the UK, due to cervical screening.

Where do I go for a cervical screening test?
Most women have the test at their GP surgery. It is usually done by the practice nurse. You can have it done at a family planning clinic if you prefer. A copy of the result is usually sent to you, your GP and the health authority. This takes about two weeks. Ask at your GP surgery for the result of the test if you do not receive it.

What do the results of the cervical screening test mean?
The results are reported as one of the following:

- Normal.
- Inadequate.
- Abnormal. Of which there are several grades or degrees of abnormality:
  - Borderline.
  - Mild dyskaryosis.
  - Moderate dyskaryosis.
  - Severe dyskaryosis.
  - Invasive or glandular neoplasia.

The test also looks for Human papillomavirus (HPV). This is a type of wart virus that can be passed on by having sex. It is involved in the development of most cases of cervical cancer. However 9 in 10 infections with HPV will clear completely from the body within two years. This means that most women who are infected with HPV do not develop cancer.

Normal result
About 9 in 10 routine cervical screening tests are normal. You will be sent a letter inviting you for another one after 3-5 years, depending on your age. A normal result means you have a very low chance of developing cervical cancer. It is not a guarantee that cervical cancer will not occur.

No screening test is 100% accurate. Some tests will be falsely reassuring (so-called false-negative results) - where the test is reported as normal but an abnormality is present. This is why it is important to have tests regularly. Cervical cancer takes years to develop from the earliest abnormalities, so there should be plenty of opportunity to detect abnormalities before problems do develop. (It is also possible to have false-positive results. This means that a result is incorrectly labelled as abnormal. This can cause a lot of worry, but usually a colposcopy examination - see below - will reveal that things are normal.)

Inadequate test
About 2 tests in every 100 are inadequate and need to be repeated. Inadequate simply means no result can be given, as not enough cervical cells were present for examination under the microscope. In the unusual event that a woman has three inadequate tests in a row, she should be referred on for colposcopy examination (see later section).

Abnormal result
About 1 in 20 tests is reported as abnormal. There is a range of changes that may occur. In nearly all cases, these changes do not mean cancer.

Dyskaryosis is a medical term used to describe abnormal cell changes, seen with cervical screening. Dyskaryosis is not cancer. About 9 out of 10 cases of dyskaryosis revert back to normal on their own, without treatment. Nearly all abnormal tests show no more than small changes in the cervical cells.

Depending on the degree of abnormality, women with abnormal results may:
Have a repeat cervical screening test at a shorter time interval.

Borderline change

Borderline change is the mildest abnormality seen on cervical screening. About 3-4 in 100 results are borderline. Whilst the cells are not quite normal, they are not abnormal enough to be categorised as dyskaryosis.

Mild dyskaryosis

Mild dyskaryosis is a common abnormal result from cervical screening. About 2 tests in every 100 show mild abnormalities of the cervical cells. Most of these changes go back to normal without any treatment.

Moderate or severe dyskaryosis

For even fewer women, cervical screening will show moderate or severe dyskaryosis. About 6-7 in every 1,000 smear tests show either of these abnormalities. If your test shows moderate or severe dyskaryosis it is still very unlikely that you will have cervical cancer. The main difference is that these changes are less likely to return to normal by themselves. You will probably need some treatment and this will happen at colposcopy.

Invasive or glandular neoplasia

Less than 1 test in 1,000 has one of these more serious abnormalities. Neoplasia means new growth of cells. Invasive neoplasia suggests cervical cancer might be present. This is not proven until a sample of cervical tissue (a biopsy) has been taken at colposcopy.

Glandular neoplasia is another significant abnormality that can be seen on cervical screening. It suggests that there is an abnormality in the lining of the womb (the endometrium), rather than on the cervix. This is because glandular cells (found lining the womb) are different to the ones normally found on the cervix. Glandular neoplasia again does not necessarily mean cancer, but cancer needs to be excluded. You will probably need to have colposcopy and may need to have a small camera passed into the womb (called hysteroscopy).

It is important to remember that it is rare for cervical cancer to be found on cervical screening. Remember that screening is designed to find early changes that could become cancer in the future, if left untreated.

What is colposcopy?

Colposcopy is a more detailed examination of the cervix. In this test a speculum is gently put into the vagina so the cervix can be seen. This part is exactly the same as for a cervical screening test. The doctor (or specialist nurse) uses a magnifier (colposcope) to look at the cervix in more detail. The actual colposcope does not go inside your vagina. A liquid is used to paint the cervix, which shows up the abnormal cells. It takes longer than a normal cervical screening test (about 15 minutes). It is usually done in a specialist colposcopy clinic at hospital. During colposcopy it is usual to take a small piece of tissue from the cervix (biopsy) to make a more detailed assessment of the cells.

You may be referred for a colposcopy if you have one of the higher grades of abnormality on your test. You may also be referred for colposcopy if you have had three inadequate or borderline results in a row, or if you have had three abnormal results (of any grade) within a 10-year period.

The laboratory that reports the cervical screening results will determine what action needs to be taken (based on the current result and your past results). Either the laboratory will refer you directly to colposcopy, or they may ask your GP to make this referral. You should contact your GP if you have any questions or worries about your result, or the colposcopy examination (although you would usually be sent an information leaflet too).

See separate leaflet called Colposcopy for more information.

Can abnormal cells be treated?

Yes. A minor abnormal change often goes away by itself. This is why a repeat test after 3-12 months may be all that is needed. If the cells remain abnormal, or the changes are more marked, then treatment is offered. This will stop cancer from developing in the future. Treatment, if needed, is simple and almost 100% effective.

Some common questions about the cervical screening test

How effective is the cervical screening test?

The test is about 80% effective. This means that for every 10 women who would have developed cancer of the cervix, about 8 cases can be prevented. So, although it does not detect an abnormality every single time one occurs, overall it is a reliable test.

I have never had sex. Do I need a cervical screening test?

The test is recommended for all women - even if you have never had sex. However, the risk of getting cervical cancer is very low if you have never had sex. This is because the main cause of cervical cancer is a past infection with HPV - the type of common wart virus that is normally passed on by having sex. There are other, less common types of cervical cancer, not caused by HPV, so women who have never had sex are still at risk.

See separate leaflet called HPV Immunisation for more information and also the leaflet dealing with cervical cancer. You may decide that you do not want to have a test if you have never had sex.

I am a homosexual woman. Do I need a cervical screening test?

Yes. If you are a homosexual (lesbian, gay) woman, you are still advised to have cervical screening. This is because there is still a risk of cervical cancer, and HPV can still be transmitted between partners. Additionally, some homosexual women may have had sexual contact with a man in the past.

I have had a hysterectomy - do I need to have a cervical screening test?

This depends on the type of hysterectomy, and why it was done. Your doctor will advise you on this. In general, if you have a total hysterectomy (removal of the uterus and cervix) for a reason not due to cancer, then you no longer need cervical screening tests. Some types of hysterectomy leave the cervix (called subtotal hysterectomy), and some are done to remove a cancer. In these situations, a test of the cells of the remaining cervix, or of the top of the vagina (called the vault), may still be advised.
Cervical cancer is extremely rare in women under 25 years of age. Cervical screening in these much younger women may do more harm than good. Women may be very anxious and worried about abnormal cervical screening test results are very common in women under the age of 25. Many of these changes seen revert back to normal without any treatment. Cervical screening in these much younger women may do more harm than good. Women may be very anxious and worried about abnormalities that eventually go away anyway. Also, there is the potential for harm to occur, as these women might end up being over-treated. This would mean removing cells from the cervix earlier than was needed, perhaps without waiting for the problems to go away by themselves.

It is really important that women in England and Northern Ireland (especially sexually active women), do not miss their first invitation for cervical screening at age 25. Otherwise, there is the potential (especially if the woman has been sexually active since her teenage years) for abnormalities in the cervix to become more serious. So, the main risk of starting the screening programme in England at age 25, is that some women might miss their first invitation.

Can I have my cervical screening test or colposcopy when I am having my period?
It is best to have your cervical screening test when you are not having your period (menstruating). Ideally, the test is best performed mid-cycle. If you are bleeding heavily, there may be too much blood and mucus on the brush and too few cells from the cervix will be removed. Similarly, it is probably best to delay your colposcopy examination if your period starts. It is not impossible to perform colposcopy when you are menstruating, but it can make it difficult to get a good view. You should ring up the clinic where you have your appointment to check whether they would prefer you to reschedule or not.

Can I have cervical screening when I am pregnant?
If you are due your routine cervical screening test and you are pregnant, this should be put back until after your baby is born. Usually, it is advisable to wait until you are at least 12 weeks postnatal. This gives the cervix a chance to recover from pregnancy and childbirth. Tests performed earlier are more likely to be inadequate. If you have had an abnormal cervical screening result and have been invited for colposcopy, it is important you attend, even if you are pregnant. Colposcopy can be safely carried out on pregnant women. As long as no major problems are found, treatments will probably be delayed until after you have had your baby. Sometimes repeat colposcopy may be done later in pregnancy. It is possible to give treatment to the cervix, if it is essential, whilst you are pregnant.

I have irregular bleeding - do I need to have a cervical screening test straightaway?
No. Cervical screening is a routine test performed on women without any symptoms. The aim is to look for problems in cervical cells that could become cancer in the future. A cervical screening test would not be used as an investigation for irregular bleeding (but you should still attend for your cervical screening test when invited).

I am a transgender man - do I need cervical screening?
If you were born female and have had a sex change, you need only have cervical screening if you have retained your cervix. If you have had a total hysterectomy (with removal of the cervix), you do not need to attend for screening.

I have HIV infection - do I need to do anything differently?
Women with HIV infection should ideally have cervical screening and colposcopy when their disease is diagnosed. Current recommendations are to have a cervical screening test every year. This is because HIV increases your risk of developing cervical cancer.

Does being immunosuppressed increase my risk of cervical cancer?
Yes - women who are immunosuppressed are at an increased risk of having changes that may become cancerous. Immunosuppressed means your immune system doesn't work well. This may be because of certain diseases or drugs. The main groups affected are:
- Women with HIV - the virus that causes AIDS. These women need yearly cervical screening (see above).
- Women who have had a kidney transplant. However, it is not recommended that these women have more frequent cervical screening - just that early referral to colposcopy is advisable with any abnormal screening results.

Women taking cytotoxic drugs for rheumatological disorders, immunosuppressive drugs after other transplants, chemotherapy for cancer, steroids or tamoxifen have not been shown to be at increased risk.
Further sources of information

CancerHelp UK - Cervical Cancer
Web: http://cancerhelp.cancerresearchuk.org/type/cervical-cancer/
This site gives information on cervical screening, treatments for abnormal cervical cells, diagnosis of cervical cancer and its treatment.

Cervical Screening Programmes:
Wales - www.screeningservices.org.uk/cssw/pub/index.asp
Northern Ireland - www.cancerscreening.hscni.net/cervical/toc.html
Scotland - www.healthscotland.com/topics/health-topics/screening/cervical.aspx

Further reading & references
- Cervical screening, Prodigy (October 2010)
- Cervical cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up; European Society for Medical Oncology (2010)

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Last Checked: 5/16/2012  Document ID: 4213  Version: 45  © EMIS

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