Everything you need to know
to help you avoid cervical cancer

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**What is cervical cancer?**

Cervical cancer is a disease that develops in the cervix, the part of the uterus that opens into the vagina. It occurs when cells of the cervix become abnormal and start to grow in an uncontrolled fashion. If these abnormal cells are not found and removed, they may progress over time and eventually develop into a cancer.

**What causes cervical cancer?**

The process starts when the cells of the cervix are infected by certain types of the Human Papilloma Virus, or HPV. There are more than 100 types of HPV; about 15 of these can cause the cells of the cervix to become abnormal and eventually develop into a cancer. Fortunately, most women will fight-off their HPV and the abnormal cervical cells will also disappear. Then, the risk of developing cervical cancer practically disappears.

The problem occurs when some women do not clear their HPV and the infection persists. In these cases, the abnormal cervical cells may become worse and progress to cervical cancer if they are not detected and removed.

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*Most adults will have had a HPV at some time but will fight off the infection without any problem. A few women will not clear their HPV - then the abnormal cervical cells can progress and can eventually develop into a cancer.*
Abnormal cervical cells have no outward signs or symptoms to indicate that something is going wrong and the only way they can be found is by cervical screening. Symptoms only appear once a cancer has developed. Unfortunately, this is a stage when treatments are far more difficult and less successful.

The symptoms of cervical cancer are:
- vaginal bleeding after intercourse,
- unusual vaginal discharge,
- pain in the genital area.

These symptoms can be caused by cervical cancer, but they can be caused by other conditions as well. Regardless, if you have any of them, you should immediately see your GP.
How can cervical cancer be prevented?

Regular cervical screening has until recently been the only protection against cervical cancer. Screening works by detecting the abnormal cervical cells in the early stages when, if necessary, they can be removed before they develop into a cancer. The treatment of abnormal cervical cells is simple, successful and usually has little effect on your sexual life or fertility.

Vaccination is now also available to protect women against the 2 most common types of HPV (types 16 & 18) which cause about 2 of every 3 cases of cervical cancer. However, it will not protect you against all HPV types and even if you have been vaccinated, you should still be screened. Together, screening and vaccination offer the greatest protection against cervical cancer.

The objective of cervical screening is to identify women who have abnormal cells so that they can be treated. Without screening, abnormal cells may progress and eventually develop into a cancer.
Who should be screened?

In Ireland, it is recommended that all women between the ages of 25 and 60 should be screened every three to five years, depending on their age and previous smear results. This includes women who have passed the menopause, had their tubes tied, and those who are no longer sexually active.

The Irish Cervical Screening Programme, as part of the National Cancer Screening Service, currently recommends the following screening intervals in Ireland:

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>25-44</td>
<td>Once every 3 years</td>
</tr>
<tr>
<td>45-60</td>
<td>Once every 5 years, after two consecutive negatives</td>
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What do you need to do?

The rollout of the Irish National Cancer Screening Service is due to begin in 2007: until your region is covered you will need to make an appointment for a smear test with your general practice/well woman clinic or family planning clinic.

For women who live in the mid-west area; the Irish Cervical Screening Programme currently offers free smear tests to women aged 25-60 years. If you live in the mid-west area contact the Irish Cervical Screening Programme (1800 252 600) to see if you are registered. If you are registered, you will be sent a letter advising you when to make an appointment with a registered smear taker (family doctor or practice nurse).

You should try to arrange your appointment during the middle of your menstrual cycle, about 2 weeks after the end of your last period. When you call to book your appointment, they will tell you what you need to do to prepare for it.

In general, you should:
- avoid using any treatments inside your vagina for 2 days before your appointment,
- avoid having sex the night before your appointment.

The purpose of these recommendations is to make sure your cervical smear can be screened properly and to save you from having to make another appointment for a repeat smear.
How does screening work?

Cervical screening is done using the cervical smear. This is a simple procedure that should take about ten minutes and involves little more than a vaginal examination. You will be asked to lie on a couch and an instrument called a speculum will be gently inserted into your vagina. Most women do not find this painful, although it can be uncomfortable if you are very tense. The speculum is needed so that the doctor or nurse can clearly see your cervix. Some cells will then be collected from your cervix with a small spatula or brush.

The sample of cells will be sent to the laboratory where it will be examined on a microscope to search for abnormal cells. If any are found, they will be graded according to the degree of the abnormality that is seen. This grading helps the doctor to decide what needs to be done next. A report will be sent to your doctor who will then send a letter to you to advise you of the results.

What happens next?

Most women will have a normal cervical smear result. In this case, you should just continue your regular screening.

About 1 out of every 20 women will have an abnormal result. This means that some abnormal cervical cells have been found on the cervical smear. These can range from very mild to very severe, including cancer, but this is very rare in women who are regularly screened. Fortunately, the majority of abnormal results are mild and most of these women will not even need treatment. However, all women with an abnormal Pap test must be carefully followed-up to find those with abnormal cervical cells that do need to be removed.

Depending on what is found, one of the following will be recommended:
• another cervical smear in 6 months,
• a colposcopy (a procedure that allows your cervix to be examined more closely).

Abnormal cervical cells that either do not go away on their own or are severely abnormal should be removed so that they will not develop into cancer. This usually requires only a simple treatment that can be done in the gynaecology outpatient clinic. Generally, these treatments will not affect your sex life or ability to have children.
How reliable is cervical screening?

Effective organised screening programmes based on the cervical smear test can reduce the number of cervical cancers by up to 80%. However, no screening programme or screening test will prevent all cases of cancer. The cervical smear may miss some abnormal cells (a false negative result) and some cells may be classified as abnormal when they are not (a false positive result).

These errors can occur because:
- the sampling spatula or brush may miss the area of the cervix where the abnormal cells are located,
- the abnormal cells can be picked-up by the spatula or brush, but may not be transferred to the microscope slide or vial,
- the abnormal cells can be transferred to the microscope slide but may not be found by the person screening the slide,
- the abnormal cells that are found may have developed for some other reason and not because they are pre-cancer or cancer.

Although the cervical smear is not perfect, cervical screening has saved tens of thousands of lives since it was introduced in the 1940's.

How can you lower your risk for cervical cancer?

Until recently, the single most important thing you could do to lower your risk of cervical cancer was to be regularly screened. Cervical screening is still a very effective means of preventing this cancer.

HPV vaccination is now another way to lower your risk of cervical cancer. However, vaccination will not completely remove this risk and you should continue to be screened regularly.

In addition to screening and vaccination, if you smoke, stopping will lower your risk. Cigarette smoking is well known to increase the risk of developing a number of cancers and it has also been shown to double the risk of cervical cancer. Fortunately, this risk appears to decrease again after quitting smoking.
What is Human Papilloma Virus (HPV)?

There are more than 100 types of HPV. About 40 of these can infect the genital area of both men and women, and are called genital HPVs. Some of these cause genital warts and others, about 15 types, may cause abnormal cervical cells that can eventually progress to cervical cancer. Of these, HPV types 16 & 18 are the most common, causing about 2 of every 3 cervical cancers and many abnormal Pap tests.

HPV is so common that most adults are likely to have had it at some time in their lives. Fortunately for the majority of people, their immune system will fight-off the HPV and clear it in 6 to 24 months. While a woman has HPV, it can produce the abnormal cervical cells found on her cervical smear, but these also usually disappear once the virus has been cleared.

The problem occurs when some women do not clear their HPV. In these cases, the abnormal cervical cells may progress and develop into cervical cancer if they are not found first and removed. Abnormal cervical cells are very easy to treat, but they have no outward signs or symptoms and the only way they can be found is by cervical screening.

HPV types 6 & 11 cause the majority of cases of genital warts and also a number of mildly abnormal Pap tests. However, the HPV types that cause genital warts are not the same types that can lead to cervical cancer. Therefore, women with genital warts do not have an increased risk of developing cervical cancer and they do not need to be screened more often.

Most adults will have had HPV at some time in their lives but most clear it within 24 months. While a woman has HPV, it can produce the abnormal cervical cells that usually clear once the HPV has gone. But a few women will not clear their HPV and then the abnormal cells can progress to become a cancer.
How is HPV transmitted?

Genital HPV is usually spread by sexual contact and it is easily transmitted from one person to another by any skin-to-skin contact, not just sexual intercourse. Because HPV is both common and easily transmitted, most adults will have had it at sometime in their lives.

Although HPV is usually cleared in 6 to 24 months, it can sometimes remain for many years, all the time without any signs or symptoms. Because of this, it is often very difficult to know when or where it came from.

Can HPV infection be prevented?

Although condoms are very effective in preventing other sexually transmitted infections, they are not as effective in preventing HPV, probably because HPV can be found on skin not covered by the condom.

Vaccination can prevent infection with certain types of HPV. Studies have shown that the currently available vaccines are very effective in preventing infection by HPV 16 & 18 and may also provide protection against a few other types. However, they will not protect against all types of HPV.

Are there treatments for HPV?

While there are medical treatments for the HPV types causing genital warts, these have not been shown to work for the types that can cause cervical cancer. Fortunately, most HPV infections will disappear on their own without treatment.

If the HPV has caused abnormal cervical cells and these do not disappear or are severely abnormal, they should be removed to decrease the risk of cervical cancer developing. Removal of these abnormal cells usually leads to clearance of HPV as well.

Will HPV affect my pregnancy?

The HPV types that can cause cervical cancer are not known to have any effect on pregnancy. If you have one of these, there is no need to alter your normal obstetrical care.
THE FUTURE OF CERVICAL CANCER PREVENTION

With the understanding that cervical cancer is caused by certain types of HPV, came the idea that HPV testing could be used to improve cervical cancer screening and that vaccination could be used to prevent both HPV infection and cervical cancer.

What is HPV testing?

HPV testing is used to find out if you have HPV and it can be done on a sample of cervical cells taken in the same way as a cervical smear. Although there currently are no treatments for the HPV types that can cause cervical cancer, finding out if you have HPV or not can help to define your risk for developing this disease. If you do not have HPV, then your risk is very low and you can safely go back to routine screening. If you do have HPV and your immune system does not fight it off, then a follow-up to find out if you have abnormal cervical cells may be needed so they can be removed to prevent cancer developing.

Three possible uses have been proposed:
• as a test to screen women for cervical cancer,
• as a test for women who have mild abnormalities on their Pap test to help decide if follow-up is needed or not,
• as a test to follow-up women who have been treated for abnormal cervical cells to help decide if further treatments are required or not.

HPV testing to screen women for cervical cancer

HPV testing has been proposed as a test to screen women either together with the cervical smear or as a replacement for the cervical smear.

As with the cervical smear, women who have a negative HPV test would simply continue with their routine screening. But, for women who have a positive test, further follow-up would be recommended to find out if there are any abnormal cervical cells which need to be removed.

Because HPV is extremely common in younger women, HPV testing is not recommended for women under the age of 30. This is because it would find too many HPV infections that would disappear on their own without any problem.

HPV testing has not been approved for screening anywhere in Europe at this time, although 5 countries (Finland, Sweden, Italy, the Netherlands and the UK) are running large-scale studies of this use. The European Guidelines for Cervical cancer Screening have recommended that HPV testing should not be used for screening until the outcomes of these studies are available.
**HPV testing for the follow-up of a mildly abnormal cervical smear**

About 1 in every 10 women with a mildly abnormal cervical smear will have abnormal cervical cells that need to be removed. Therefore all women with this result need to be carefully followed-up. The accepted follow-up for this is to repeat the cervical smear at 6-month intervals, but this is not ideal because it causes stress and inconvenience for the women and it is expensive for the healthcare system.

Given that cervical cancer will not develop without HPV, women who have a negative HPV test are not likely to need treatment and should be able to safely return to routine screening. This has been shown to be true in a number of studies and the European Guidelines for Cervical Cancer Screening have now recommended HPV testing as an alternative to repeating the Pap test for the follow-up of a mildly abnormal Pap test. As a result, some countries in Europe have moved to approve HPV testing for the follow-up of mildly abnormal Pap tests while others are still studying whether it will work within their systems.

**HPV testing for the follow-up of women who have been treated for abnormal cervical cells**

It has now been well established that the successful removal of abnormal cervical cells also usually leads to the disappearance of the HPV within 12 months or so. Because of this, women who test negative for HPV 12 months after their treatment should be able to return to routine screening, while those who still test positive may require further follow-up.

Here again, a number of studies have show this to be true and the European Guidelines for Cervical Cancer Screening have now recommended HPV testing as an alternative to repeating the Pap test for the follow-up of women who have been treated for abnormal cervical cells. As a result, some countries in Europe have moved to approve HPV testing for the the follow-up of women who have been treated for abnormal cervical cells while others are still studying whether it will work within their systems.

**What is HPV vaccination?**

Because cervical cancer will not develop in the absence of HPV, vaccines that prevent HPV infection will also protect against the development of cervical cancer. Vaccination is now available to protect against the 2 most common types of HPV, types 16 & 18, which cause about 2 of every 3 cases of cervical
cancer and many abnormal Pap tests. Studies have shown that vaccination is very effective in preventing infection by HPV 16 & 18 and may also provide protection against a few other HPV types. However, the current vaccines do not protect against all the HPV types that can lead to the development of cervical cancer.

Also, the current vaccines have been designed to prevent HPV infection occurring in the first place. Therefore, it is thought that they will provide the greatest protection if given before exposure to HPV has occurred, for example, to pre-adolescents before the start of sexual activities. However, infection with the HPV types included in the vaccines can occur at any time and therefore adolescents and adults may also benefit from vaccination even if they have already started sexual activities.

HPV vaccination is an important advance in the battle against cervical cancer. Together, cervical cancer screening and HPV vaccination will offer the most effective protection against cervical cancer.
The ECCA supports the reduction of cervical cancer in Europe by promoting awareness of cervical cancer and the means by which it can be prevented. Drawing upon the expertise of researchers, clinicians and public health organisations from across Europe, the ECCA has prepared:

**The leaflets**
- Cervical cancer screening
- Human Papilloma Virus (HPV) and cervical cancer
- Follow-up and treatment of an abnormal cervical smear

**The booklets**
- Everything you need to know to help you avoid cervical cancer
- Everything you need to know if you have an abnormal cervical smear

**For additional information**
- Visit our website: www.ecca.info
- Send your questions to: info@ecca.info
Key points

- Cervical screening (the Pap test) helps to prevent cervical cancer by finding abnormal cervical cells before they become cancer, at a stage when they can be removed.

- All women between the ages of 25 and 60 should be screened regularly every 3 or 5 years depending on their age.

- Cervical cancer is caused by certain types of the Human Papilloma Virus (HPV). Most women who get HPV will fight it off within 24 months. If the HPV does not disappear, it can increase the risk of cervical cancer developing.

- Vaccination is now available to reduce the risk of cervical cancer. But, vaccination will not eliminate the need for screening. Together, screening and vaccination will offer the best protection against cervical cancer.