

## Further information

If you would like to know more about having a cervical smear, about cervical smear results or about the National Cervical Screening Programme, you can ask your doctor or smear taker.

You can also contact:

- the National Cervical Screening Programme, freephone 0800 729 729
- your doctor or practice nurse
- your local women's or health centre
- your local Family Planning Association (FPA)
- your local Cancer Society.

Visit the National Screening Unit's website at [www.nsu.govt.nz](http://www.nsu.govt.nz)

Visit the Health Education website at [www.healthed.govt.nz](http://www.healthed.govt.nz)

# Prevention of Cervical Cancer A Guide for Women in New Zealand

Taku hauora, taku tinana, taku tūmanako  
My health, my body, my future



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**Hei tō hauora te rama māu**  
**Let your health be the guiding light**

**Wāhine ora, whānau ora**  
**Healthy women, healthy family**



The logo is the rounded shape of a stone that is smooth but solid. The koru symbolises the preciousness of life and new beginnings.

#### **Acknowledgement**

This booklet was originally prepared by the Women's Health Action Trust for the National Screening Unit of the Ministry of Health. It has been updated to reflect the new cervical screening legislation, which came into effect on 7 March 2005, and subsequent changes to the National Cervical Screening Programme.

We would like to thank all those involved in the preparation and revisions of the booklet.

## Did you know that ...

- 🕒 Cervical cancer is one of the most preventable of all cancers.
- 🕒 Cervical cancer is caused by certain types of the human papillomavirus (HPV), a very common virus passed on by sexual contact.
- 🕒 Most people will come into contact with HPV at some stage during their life. Most HPV infections clear by themselves, but some high-risk types can cause cell changes on the cervix that may lead to cervical cancer 10 to 20 years after infection. Other types can cause genital warts, but these strains do not lead to cancer.
- 🕒 A woman's best protection against developing cervical cancer is having regular cervical smear tests. A cervical smear test is a screening test to find abnormal changes in the cells of the cervix.
- 🕒 HPV testing may sometimes be carried out to see if certain high-risk types of HPV are present in the cervix. This helps to define the risk of cervical cancer.
- 🕒 Immunisation is now available to protect women against two common types of HPV (types 16 and 18) that cause around 70 percent of cervical cancer.
- 🕒 The vaccine does not protect against all HPV types; therefore, women who have been immunised must still continue to have smear tests.
- 🕒 Regular cervical smear tests every three years are recommended for women, if they have ever been sexually active, from the age of 20 until they turn 70.
- 🕒 Having regular cervical smears can reduce a woman's risk of developing cervical cancer by 90 percent.
- 🕒 Together, screening and immunisation offer the most effective protection against cervical cancer.

### See your doctor if you have:

- 🕒 bleeding between menstrual periods
- 🕒 bleeding after sexual intercourse
- 🕒 bleeding after menstrual periods have stopped (menopause)
- 🕒 unusual discharge from your vagina
- 🕒 persistent pain in your pelvis
- 🕒 pain during sexual intercourse.

These symptoms can occur for many reasons, but they should always be checked out.

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## Introduction – Tēnā koutou katoa

Cancer of the cervix is one of the most preventable of all cancers. It is estimated that up to 90 percent of cases of the most common form of cervical cancer could be prevented if women have smear tests every three years. Cervical smear tests check for abnormal cell changes before they become cancer.

Cervical cancer is caused by the human papillomavirus (HPV) and cannot develop without it, making HPV the 'necessary cause'. Studies have identified more than 200 genotypes of HPV 40 of which can infect the genital tract. Of these, at least 15 have been classified as high risk as they can lead to cervical cancer. Most women who get HPV will clear it in 6–24 months without ever knowing they had it, especially women under 30 years. However, some will not clear their HPV infection, and it is these women who have an increased risk of developing cervical cancer.

Testing for high-risk HPV is sometimes used to define a woman's risk of cervical cancer.

Immunisation is now available to protect women against the two most common types of HPV, types 16 and 18, which cause around 70 percent of cervical cancer. The vaccine is most effective if given before women become sexually active. It does not protect against all HPV types. Therefore, women who have been immunised must still be regularly screened.

Many women are embarrassed or whakamā about having a cervical smear test. For some, the cervix is a sacred area and not easy to talk about. But regular testing protects both the health of each woman and the wellbeing of her whānau (immediate and extended family). If abnormal cell changes are found early through cervical screening, they can be treated very effectively.

The National Cervical Screening Programme (NCSP) was set up in 1990 to reduce the number of women who develop cancer of the cervix and the number who die from it. The Programme encourages women to have regular cervical smear tests and to check that abnormal results are followed up.

This booklet has been written to help women understand:

- 👁 HPV infection and cervical cancer
- 👁 preventing cervical cancer
- 👁 the NCSP.

A glossary explaining the meanings of words used in the booklet is provided at the back.

## Other resources

The following free pamphlets summarise what this booklet explains more fully:

- 👁 *Cervical Smear Tests: What Women Need to Know*, HE1256
- 👁 *Cervical Screening: What Wāhine Need to Know/Atawhaitia te Wharetangata*, HE1837
- 👁 *Cervical Screening: What Pacific Women Need to Know*, HE1831
- 👁 *Understanding Cervical Smear Test Results*, HE4598.

Ask your health professional for a copy of any of these pamphlets or order one from [www.healthed.govt.nz](http://www.healthed.govt.nz)

Health professionals can also provide you with a wallet-sized smear test reminder card, HE1912.



**Ko te hauora te paiaka o te tupuranga**

The basis for development and growth is good health

## Section 1: HPV and Cervical Cancer

**Mā te āraitanga ka ora**

Prevention is better than cure

### Did you know that ...

- 👁️ Cervical cancer is one of the most preventable of all cancers.
- 👁️ The primary cause of cervical cancer is HPV (human papillomavirus).
- 👁️ There are two main ways to prevent cervical cancer:
  - cervical screening
  - HPV immunisation.

## What is cervical cancer?

Cervical cancer refers to the abnormal, uncontrolled growth of cells in the cervix, the lower part of the uterus (womb) where it opens into the vagina. When the cells of the cervix are infected with HPV, they may become abnormal and start to grow in an uncontrolled way.

## Types of cervical cancer

The two main types of cervical cancer are:

- 👁 squamous cell cancer
- 👁 glandular cell cancer.

**Squamous cell cancer** is the most common form of cervical cancer (about 80 percent of cases). Abnormal changes are found in the squamous cells of the transformation zone, where the vagina meets the cervix. (See fig. 1, on facing page.)

**Glandular cell cancer** is found in the glandular cells, sometimes called columnar cells or endocervical cells, which line the cervical canal (about 15 percent of cases). (See fig. 1, on facing page.)

Cervical cancer usually grows very slowly, taking 10 or more years to develop. It starts when some cells on the surface of the cervix become abnormal.

These abnormal pre-cancerous cells may return to normal by themselves. In a small number of cases, they may develop into cancer if not treated.

It is impossible to tell which abnormal pre-cancerous cells will return to normal and which may become cancer. This is why all abnormal cells must be followed up.

If women have regular smear tests, there is a high chance that any abnormal pre-cancerous cells will be found and treated long before they develop into cancer.

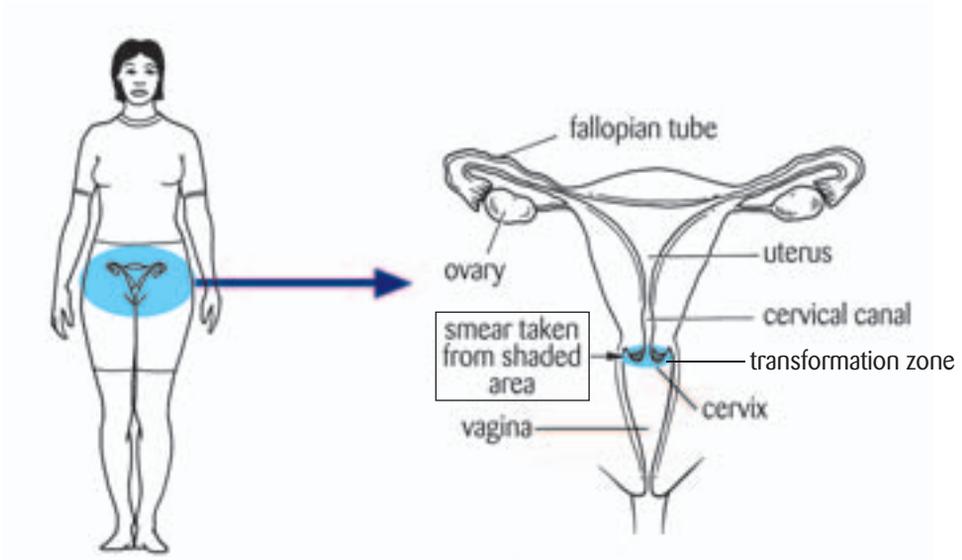


Figure 1: The uterus, showing the cervix

## What causes cervical cancer?

Cervical cancer is caused by certain types of HPV. Of the nearly 200 types of HPV, about 40 infect the genital area, and about 15–20 of these high-risk types can cause abnormal cells, which may progress to cancer. The 15 high-risk oncogenic (cancer-causing) types of HPV are: 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68 and 73.

Genital HPV is spread by skin-to-skin contact during sexual intercourse with a person who has the virus. Genital HPV is the most common sexually transmitted infection, affecting an estimated 80 percent of sexually active women at some point in their life and probably as many men.

Most women who get HPV (especially those under 30 years) will clear it in 6–24 months without even knowing they had it. However, some will not clear their HPV and will develop a persistent infection. Women who have a persistent infection with a high-risk type of HPV may go on to develop cervical cancer if not treated.

## Can HPV infections be treated?

The body's own immune system will successfully clear most HPV infections. There is currently no treatment for HPV, including for persistent infections with high-risk HPV types. However, there is treatment for the abnormal cervical cell changes that HPV can cause. This is why regular cervical screening to detect and, where appropriate, treat abnormal cell changes is important.

## How can infection with HPV be prevented?

### 1. Practise safe (or safer) sex

If used properly and consistently, condoms will give a high level of protection against infection with HPV.

### 2. Immunisation

The vaccine works best to prevent cervical cancer, pre-cancerous lesions and genital warts in young women who have not yet had sex or have not yet been exposed to HPV.

## What can increase the risk of cervical cancer?

The following factors can increase a woman's risk of getting HPV or of HPV becoming persistent:

-  first sexual activity at an early age
-  having more than one sexual partner
-  having a partner who has HPV and has had more than one sexual partner
-  smoking
-  the oral contraceptive pill.

Of the factors that can be linked to increased risk of cervical cell changes and development of cervical cancer, the greatest is smoking.

If you have any of the listed risk factors, regular screening is even more important.

## Symptoms of cervical cancer

Abnormal cell changes do not usually cause any symptoms and may be picked up only when a woman has a cervical smear test. Symptoms may not appear until abnormal cells become cancer. See your doctor if you have:

- bleeding or spotting between menstrual periods
- bleeding or spotting after sexual intercourse
- bleeding or spotting after menstrual periods have stopped (after menopause)
- unusual discharge from your vagina
- persistent pain in your pelvis
- pain during sexual intercourse.

These symptoms can happen for several reasons and rarely mean that you have cervical cancer. However, they should be checked out.

**He ara hei whakatutuki ki te hauora pai**  
The pathway to good health is achievable

## Section 2: Preventing Cervical Cancer – Cervical Screening

## What is cervical screening?

Cervical screening aims to detect abnormal changes to the cervix (the neck of the uterus or womb) before they can develop into cancer. Safe and effective treatment for pre-cancerous lesions detected by screening will prevent progression to cancer.

## The benefits of regular screening

The best way to reduce the risk of developing cervical cancer is to have regular cervical smear tests every three years. Women who have been immunised must also continue to have regular cervical smear tests because they will not be protected against all HPV types that cause cervical cancer.

In New Zealand, approximately 160 women develop cancer of the cervix each year, and about 60 women die from it. Some groups of women have higher rates of cervical cancer. These groups include:

- women over 40
- Māori women
- Pacific women
- Asian women
- unscreened women
- under-screened women.

In countries where there are organised screening programmes, the largest group of women who are diagnosed with invasive cervical cancer or who die from it are those who have never had a cervical smear test.

A cervical smear test is a screening test to look for abnormal cell changes to the cervix.

## Who should have cervical smear tests?

All women who have ever been sexually active should have regular cervical smear tests from the time they turn 20 until they turn 70. This includes:

- 👁 all women who have been immunised against HPV
- 👁 women who are single
- 👁 lesbians
- 👁 disabled women
- 👁 women who have been through menopause
- 👁 women who are no longer having sex.

### **HPV immunised women must continue to be screened.**

Women who have been immunised should continue with screening because the vaccine does not protect against all types of the virus that cause cervical cancer. Furthermore, no vaccine can guarantee complete protection to everyone immunised.

All women are advised to start having regular cervical smear tests at the age of 20. Screening at a younger age is not recommended, even if a woman has had sex. Screening from 20 onward is recommended because, in New Zealand, it is very rare for women under this age to develop cervical cancer.

Some older women think they do not need to have cervical smear tests, especially if they are no longer sexually active. However, there is still a chance that abnormal cells will appear in later life and progress to cancer. If older women continue to have regular cervical smear tests until they turn 70, it is likely that any abnormal cells will be found and treated before they become cancer.

It is very unlikely that women over 70 will develop cervical cancer if their previous smears have been normal. However, women aged 70 and over who have never had a cervical smear test are advised to have a smear test followed by another a year later. If both tests are normal, no further tests will be needed.

If a woman has had abnormal smears in the past, her smear taker or doctor will advise her when it is best to stop having cervical smear tests.

Women who have never been sexually active do not need to have cervical smear tests.

## Women who have had a hysterectomy

Women who have had a **subtotal hysterectomy** (in which the cervix is not removed) need to continue to have cervical smear tests.

Women who have had a **total hysterectomy** (in which both the uterus and the cervix are removed) do not usually need to have smear tests unless advised to do so. Reasons they need to continue to have smear tests might include:

- 🕒 a history of abnormal cell changes confirmed by biopsy
- 🕒 cervical abnormalities found at the time of surgery
- 🕒 having had the hysterectomy because of abnormal cells or cervical cancer.

When a woman has had a total hysterectomy, the smear (called a vaginal vault smear) is taken from the top of the vagina.

**If you are not sure whether you need to continue to have cervical smear tests after a hysterectomy, ask your doctor.**

## Women who are pregnant or who have just had a baby

Women who are pregnant or have a new baby and are due for a cervical smear test should check with their midwife, specialist or lead maternity carer (LMC) before having a smear.

## How often do women need a cervical smear test?

The NCSP recommends that women have a cervical smear test every three years from the time they turn 20 until they turn 70.

Three-yearly testing has been chosen because it gives very good protection against developing cervical cancer while keeping to a minimum the number of smears a woman needs in her lifetime. (See fig 2, over.)

**Figure 2: The protection women gain from regular screening at different intervals**

Interval between cervical smear tests	Reduction in incidence of cervical cancer	Number of tests in a woman's lifetime
1 year	93.5%	50
2 years	92.5%	25
3 years	90.8%	16
5 years	83.6%	10
10 years	64.1%	5

The table above shows that there is very little extra benefit in having tests more often than three-yearly.

It is normal for cells on the surface of the cervix to go through changes. However, cells can sometimes change in an abnormal way without causing any symptoms. Cervical screening finds abnormal cells so that they can be treated before they develop into cancer.

Abnormal cells in the cervix usually change very slowly. In the early stages, many will disappear by themselves, and no treatment will be needed. For a few women, abnormal cells could develop into cervical cancer if not treated.

A screening test will not always pick up abnormalities. However, if abnormalities have been missed in one test, it is likely that they will be picked up in the next test. This is why it is important to have cervical smear tests every three years.

## Benefits of three-yearly cervical screening

Studies indicate that when women have cervical smear tests every three years as part of a screening programme their chances of getting cervical cancer can be reduced by about 90 percent. It has been estimated in New Zealand that:

- without screening, a woman has about a 1-in-90 chance of developing cervical cancer and about a 1-in-200 chance of dying from it
- with screening every three years, the chances of developing cervical cancer are reduced to 1 in 570, and the chances of dying from it are reduced to 1 in 1280.

**Figure 3: The benefits of cervical screening**

Without screening*	With regular three-yearly screening*
1 in 90 women will develop cervical cancer	1 in 570 women will develop cervical cancer
1 in 200 women will die of cervical cancer	1 in 1280 women will die of cervical cancer

\* Estimated New Zealand figures

Put another way, if a group of 1000 women do not have regular smear tests, 11 women will get cervical cancer before their 75th birthday, and about five will die from it. If each of the women in the same group of 1000 has regular three-yearly smear tests, about two women will get cervical cancer before their 75th birthday, and one will die from it.

## When should you have cervical smear tests more often?

There are certain clinical situations in which a woman may be advised to have cervical smear tests more often than every three years.

- When a woman has her first cervical smear test, or has not had a smear test for more than five years, she will be advised to have another smear test a year later. This is to reduce the chances of any abnormal cells being missed. If both results are normal, she will then be advised to have cervical smear tests every three years.
- If a woman has had an unsatisfactory smear or has had an abnormal cervical smear result, she will be asked to come back sooner than in three years. Her smear taker or doctor will advise her when to have her next smear or if she needs further checks.
- Women who are treated for a high-grade abnormality are advised to have a cervical smear test each year. Some of these women may return to three-yearly screening if two consecutive annual tests (including both a cervical smear test and an HPV test) come up clear.

- 🕒 Women who have a lowered immune system because:
  - they are taking certain drugs, for example, steroids, for an organ transplant, or for other conditions
  - they have certain illnesses or infections, for example, HIV

may have a higher risk of developing cervical cell abnormalities and will be advised to have cervical smear tests each year.

## Where to go for cervical screening tests

It is important that you feel comfortable with the person who takes your smear. You have a choice of where to go to have smears:

- 🕒 your local doctor or practice nurse
- 🕒 the Family Planning Association (FPA)
- 🕒 your sexual health service
- 🕒 marae-based or other Māori health centres
- 🕒 community health services, for example, Pacific or women's health centres.

### Where can you find a female cervical smear taker?

Many women prefer to have a cervical smear test done by a woman. Several of the services listed above have female smear takers.

Some male doctors will arrange for you to have a cervical smear test with a female doctor or nurse who is trained to take smears.

If you want to know more about where to go for a female smear taker, you can ring the NCSP freephone, 0800 729 729.

## Having a cervical smear test if you are disabled

Disabled women may face other challenges when having a cervical smear test. If you have a disability that affects having a cervical smear test, talk to your smear taker about your needs when you make an appointment. Your smear taker may then be able to prepare for your needs, for example, by getting extra equipment or by rearranging a room.

It may be possible to find a smear taker who is experienced in doing smears for disabled women. Some local disability services may know of someone in your area who is specially trained or experienced.

## The cost of a cervical smear test

The cost of a smear test will be what you normally pay to see your doctor or nurse. Some community or primary health organisations offer a free or low-cost service.

## Having a cervical smear test

### Before the test

Discuss any timing or other concerns about having your smear test with your smear taker when you ring to make an appointment. Before you have the test, your smear taker will usually talk you through the process. They may also explain about the NCSP.

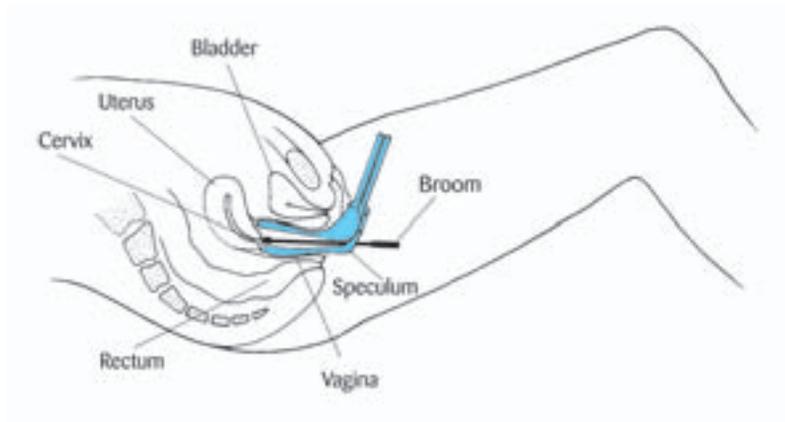
### Taking the smear

You will be asked to lie on your side or your back with your knees bent up. The lower part of your body will be covered with a sheet. The smear taker gently opens the vagina with a plastic or metal speculum (see fig. 4, over) and carefully sweeps a sample of cells from the surface of the cervix with a thin broom or brush.

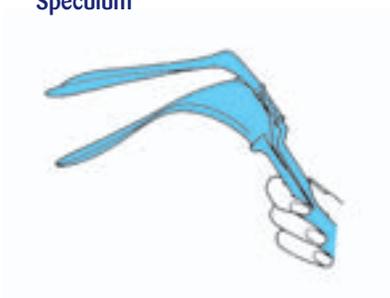
It takes only a few minutes to take the smear. Some women may find the test a little uncomfortable.

The test sample is either smeared onto a glass slide or placed in a liquid. It is then sent to a laboratory approved by the NCSP.

**Figure 4: Having a cervical smear**



### Speculum



## The cervical smear test

There are two ways of processing a cervical smear.

- 🕒 In the **conventional (pap) smear test**, the smear taker smears cervical cells onto a glass slide. At the laboratory, these cells are stained and looked at under the microscope.
- 🕒 Using **liquid-based cytology (LBC)**, the smear taker places cervical cells into a liquid solution. The laboratory then uses a machine to produce a layer of cells on a glass slide. The cells are stained and examined under the microscope in the same way as in the conventional smear test.

Both of these methods can be used for a cervical smear test in New Zealand. Studies have shown that both methods are of an acceptable standard. Smear takers may offer women the choice of having either the usual smear or LBC.

### When you have a cervical smear test ...

- 🕒 If you or someone in your family needs an interpreter or has another special need, talk to the person making your appointment about how this need can be met.
- 🕒 You may like to take a support person with you. This could be a friend, family or whānau member, partner, nurse or interpreter.
- 🕒 If you want a sheet or blanket to cover yourself and it is not offered, ask for one.
- 🕒 Some women like to wear a skirt that they can keep on while having their smear.
- 🕒 Many women find it helpful to breathe deeply and to relax the vaginal muscles when the speculum is being inserted.
- 🕒 If you had a bad experience last time you had a smear, you can go to a different smear taker next time. It helps if you tell your new smear taker about your past experience.

## Receiving your result

The result of your smear will be reported to your smear taker by an NCSP-accredited laboratory. Your result will also be reported to the NCSP and recorded on a computerised database called the NCSP Register.

When your first cervical smear test result is recorded on the NCSP Register, the Programme will send you a letter with that result.

For subsequent tests, including those for HPV, your smear taker will be advised of your result. The Programme will contact you directly only if you have an abnormal result. If your result is abnormal, you will be informed by mail and also advised of any follow-up needed. This letter may take about two to four weeks to reach you.

If you would like to be sure that your result is normal, ask your smear taker to tell you.

## Knowing when your next cervical smear test is due

Your smear taker should have a system for letting you know when your next cervical smear test is due. The Programme will send a reminder letter if your test is a few months overdue.

## How accurate are cervical smear tests?

There is a small chance that some abnormal cells will be missed during sampling or slide reading (called a false negative). Abnormal changes to cervical cells progress very slowly. It is likely that any abnormal cells missed at one regular check will be picked up at the next.

There is also a small chance that a result will say that abnormal cells have been found when the cervix is quite normal (a false positive). If the result from further testing shows that there are no abnormal cells, no treatment will be needed.

A cervical smear has a false negative rate of about 20 percent for high-grade lesions. The test is not reliable in the presence of clinical symptoms.

## What your cervical smear test shows

The result of your cervical smear test shows whether the cells taken from the surface of your cervix are normal or have changed in some way. If some cells have changed, the test will indicate how they have changed.

### Why you may need further tests

The cervical smear test is a screening test. (See Glossary.) If a screening test indicates abnormal changes, further diagnostic tests will be needed to identify the changes more exactly, for example, through colposcopy.

HPV is the main cause of abnormal cell changes that can lead to cervical cancer. In some circumstances, HPV testing may be offered in conjunction with cervical smear tests. Discuss this with your smear taker.

A cervical smear test uses very reliable techniques but may occasionally produce an unsatisfactory result. Some women will be asked to come back for another smear test within three months if:

- 👁 there were not enough cells on the slide prepared by the smear taker or in the LBC sample
- 👁 blood or mucus was hiding most of the cells.

## What the different results mean

### Normal results

About nine out of ten cervical smears are normal. If you have a normal result, you have a very low risk of developing cancer.

## Inflammation or infection

Sometimes the laboratory will report that inflammation or an infection is present. These changes are not linked to cancer. You will need to discuss the result with your smear taker. Often no treatment is needed.

## Abnormal results

An abnormal cervical smear result means some of the cells on the cervix differ in some way from normal cervical cells. **An abnormal result hardly ever means cancer.** There are three main types of abnormal cervical smear test results, those that show:

- 🕒 atypical cell changes
- 🕒 mild (low-grade) changes
- 🕒 moderate to severe (high-grade) changes.

(See fig. 5 on facing page, and fig. 6, over.)

## Atypical cell changes

Atypical cell changes are associated with the squamous cells that line the vagina and outer layers of the cervix. A result of **atypical squamous cells of undetermined significance (ASC-US)** indicates changes that are not clearly normal or abnormal. Quite often, the next smear will be normal. After a first atypical smear result, your smear taker may advise you to have another smear in 12 months or refer you for colposcopy, according to the Guidelines for Cervical Screening in New Zealand (2008). An HPV test may be done after the atypical cells have been detected. Depending on the result, you may be referred for colposcopy.

## Mild (low-grade) changes

Mildly abnormal cells are called **low-grade squamous intraepithelial lesions (LSIL)**. This means there are mild changes in the surface cells of the cervix. LSIL is the lowest grade of change. Quite often, these cells will become normal again. As for ASC-US (above), you will need to have your next smear in 12 months or have a colposcopy, according to the Cervical Screening Guidelines. An HPV

test may be done after the low-grade cells have been detected. If these changes persist or if you have a history of abnormal smear results, you will be referred for colposcopy.

## Moderate to severe (high-grade) changes

Moderate to severe abnormal cell changes are called **high-grade squamous intraepithelial lesions (HSIL)**. In some women, these cell changes may develop into cancer if they are not treated. You will be referred for colposcopy, and it is important for you to attend your colposcopy appointment.

Sometimes a result will show **atypical squamous cells present and high-grade changes cannot be excluded (ASC-H)**. Women with this result are managed the same as those with an HSIL result.

**Figure 5: What your cervical smear test result means**

Result	What this means	Recommended follow-up
Normal	Cells are normal	Next smear in 3 years
Unsatisfactory result	Not enough cells to give a result	Repeat smear within 3 months
Inflammation or infection	Inflammation or infection is present	Discuss possible treatment with your smear taker or doctor
Atypical cells (ASC-US)	Between normal and abnormal	Next smear in 12 months or referral for colposcopy*
Mild (low-grade) changes (LSIL)	Some cells are mildly abnormal	Next smear in 12 months or referral for colposcopy*
Moderate to severe (high-grade) changes (HSIL)	Some cells have more severe changes	Referral for colposcopy

\* HPV testing may also be used to help determine management.

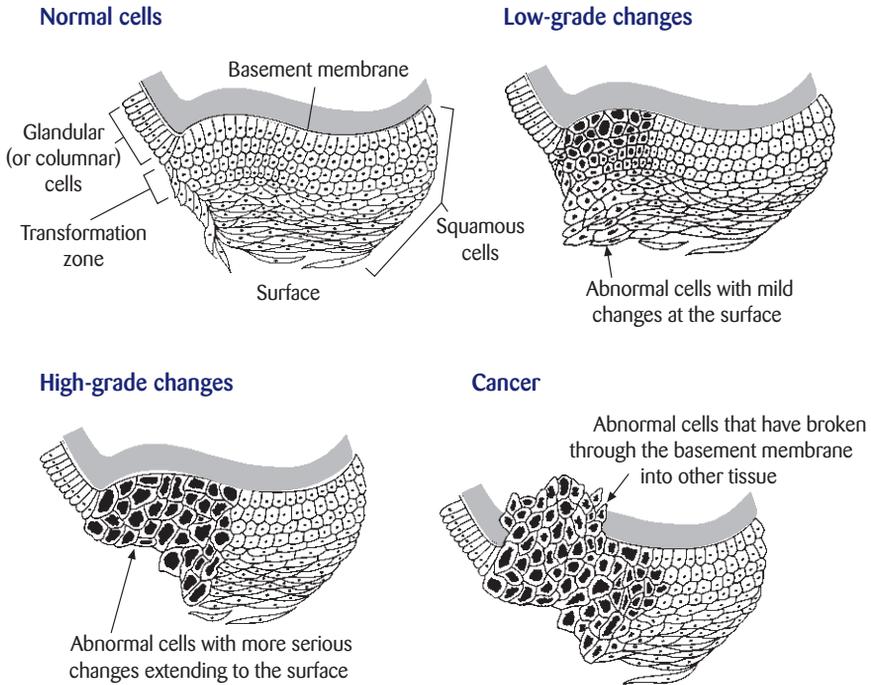
## Glandular cell changes

Although the cervical smear test is not designed to detect glandular cell changes, such changes are sometimes found. You will be referred for colposcopy, and it is important for you to attend your colposcopy appointment.

## Cancer

If your smear test shows any changes that might suggest cervical cancer, you will be referred immediately to a specialist (within one week).

**Figure 6: Stages of abnormal cell changes**



## The HPV test

In some situations, women having a cervical smear test will also be offered an HPV test. This test is an accurate way to tell if one of the high-risk HPV types is present in a woman's cervix. The test is usually taken at the same time as the smear test and can use the same sample of cells. A positive test result means that a woman has high-risk HPV. She should be monitored to see that the infection goes away and that she does not develop abnormal cells.

A positive HPV test does not mean that a woman has cancer.

A person can have HPV for a long time before it is found.

Screening for high-risk HPV is usually carried out as recommended by the Cervical Screening Guidelines, which can be found in the section for health professionals on [www.nsu.govt.nz](http://www.nsu.govt.nz)

Women under 30 are not recommended to have an HPV screening test in addition to the cervical smear test, because HPV infection is very common in this age group and usually goes away on its own.

For more information about the HPV test, go to [www.cervicalscreening.govt.nz](http://www.cervicalscreening.govt.nz)

## Colposcopy

If your cervical smear test has shown that you have high-grade changes or that you are continuing to have low-grade changes, your smear taker will refer you for an examination called colposcopy. It is important for you to attend your colposcopy appointment.

Most women with abnormal cervical smear results feel well and have no obvious symptoms. However, it is important to have colposcopy to get a more accurate picture of the cell changes.

## What is colposcopy?

Colposcopy is an examination of the cervix, using a microscope called a colposcope. The colposcope looks like a pair of binoculars on a stand. It magnifies the cervix and vagina so that any abnormal areas can be seen. A liquid is wiped onto the cervix so that areas with abnormal cells show up. The examination may involve taking a small sample of tissue (a process called a biopsy). The process takes only a couple of seconds but may be uncomfortable.

The specialist will discuss the result of your colposcopy with you. The tissue sample will be sent to the laboratory to be examined under a microscope.

You can have colposcopy free at a public hospital as part of the Programme. If you choose to go to a private colposcopy service, you will have to pay. You may take a support person with you to your appointment.

Some women may feel uncomfortable having tissue removed from their body and sent to a laboratory. The NCSP requires that laboratories handle tissue samples sensitively. Talk to the specialist if you have any concerns about the colposcopy procedure and tissue samples.

## What the biopsy result shows

A biopsy (histology test) will usually confirm a cervical smear test result. Sometimes the result will be different, showing less severe or more severe cell changes than the smear test result suggested. Sometimes the result will be normal.

The specialist will say if:

- 🕒 the abnormal cells were treated at the time of the biopsy
- 🕒 further treatment is required
- 🕒 colposcopy needs to be repeated after a certain time.

Treatment at the time of the biopsy will remove abnormal cells over 90 percent of the time. Occasionally, further treatments will be needed. Women who have had treatment for abnormal cells hardly ever develop cancer of the cervix in the future.

## For more information on colposcopy

If you would like more information on colposcopy, you can talk to your doctor or smear taker or phone your local colposcopy clinic.

## Treatment for abnormal cervical cells

The treatment of cervical abnormalities involves removing or destroying the abnormal cells. The type of treatment used will take into account the sort of abnormality and where it is on the cervix.

### Large loop excision of the transformation zone (LLETZ)

This treatment uses an electrical wire loop to remove abnormal cervical cells, usually under anaesthetic.

### Laser treatment

Heat from a laser beam is used to remove or destroy abnormal cervical cells under anaesthetic.

### Diathermy

Heat is used to destroy abnormal cervical cells under anaesthetic.

### Cone biopsy

A cone-shaped section of the cervix containing the abnormal cells is surgically removed under anaesthetic.

The specialist who carries out the treatment will explain what kind of care needs to be taken afterwards.

### Will treatment affect the chances of becoming pregnant?

The above treatments for abnormal cells on the cervix will mostly not affect a woman's ability to become pregnant. The available evidence suggests that a woman's chances of becoming pregnant are not impaired after treatment for abnormal cells on the cervix. On rare occasions, the cervix may be weakened. This can lead to an increased risk of miscarriage or premature delivery.

## **Hysterectomy as a treatment for abnormal cells**

A total hysterectomy is a major operation to remove the uterus and cervix under anaesthetic. Normally there is no need to have a hysterectomy solely because abnormal cervical cells are present. Some women choose this option for treatment if they have other problems, such as heavy bleeding, for which a hysterectomy might be recommended.

## **What happens after a woman has had treatment?**

Another colposcopy may be carried out four to six months after treatment to check that it was effective in removing all abnormal tissue. A cervical smear and an HPV test may be done 12 months after treatment and again 12 months later.

## Section 3: Preventing Cervical Cancer – HPV Immunisation

## About HPV immunisation

### What is the HPV vaccine?

In New Zealand, the publicly funded HPV vaccine is Gardasil®.

The vaccine contains virus-like particles (VLPs) of four HPV types (16, 18, 6 and 11). These particles are a part of the virus (proteins from the outer shell) and cannot cause infection. The particles mimic HPV to stimulate the immune system to make antibodies against it.

Gardasil® is highly effective against the two high-risk HPV types 16 and 18, which cause around 70 percent of cervical cancer, and also against the low-risk HPV types 6 and 11, which cause around 90 percent of genital warts but do not cause cervical cancer.

### Who should get the vaccine?

The vaccine is licensed for use with females aged between 9 and 26 years of age.

The vaccine works best when the recipient has not yet had sex and has not been exposed to HPV. Girls in year 8 at school are offered the vaccine as part of the National Immunisation Schedule. There is also a catch-up programme for older girls born on or after 1 January 1990.

The vaccine is available through participating schools and through primary care GPs, practice nurses and local health clinics.

### How is the vaccine administered?

The vaccine is injected intramuscularly into the upper arm. Three injections are usually given over a six-month period: the second dose two months after the first dose, followed by a third dose four months later.

### How safe is HPV immunisation?

The vaccine has been shown to be safe in large clinical trials. Some mild reactions common to vaccines (pain, swelling or redness at the injection site, mild fever or fainting) are likely.

## How effective is HPV immunisation?

The vaccine protects against four HPV types but does not protect against all HPV types. Therefore, all women who have ever been sexually active should continue with regular (three-yearly) cervical screening from 20 until they reach 70.

## Is HPV immunisation compulsory?

Immunisation against HPV is voluntary. Ideally, parents or guardians should discuss the immunisation with their daughter(s) and decide together. If there are any concerns, these are best discussed with the family doctor, practice nurse or public health nurse.

Immunisations are recorded on the National Immunisation Register (NIR), a computerised database of all immunisations on the National Immunisation Schedule.

## More information about the HPV vaccine

For more information:

- 👁️ talk to your GP, practice nurse or public health nurse
- 👁️ view the National Screening Unit website at [www.nsu.govt.nz](http://www.nsu.govt.nz)
- 👁️ view the Ministry of Health website at [www.cervicalcancervaccine.govt.nz](http://www.cervicalcancervaccine.govt.nz)

**Mā te mōhio ka ora**

**Knowledge improves health and wellbeing**

## **Section 4: The National Cervical Screening Programme**

## The National Cervical Screening Programme

The NCSP aims to reduce the number of women in New Zealand who develop cervical cancer and the number who die from it. The Programme:

- informs women about the importance of having cervical screening tests
- offers cervical screening tests on a regular basis to women aged 20–70
- ensures high-quality and culturally appropriate services
- supports women with abnormal tests.

The Programme is monitored to ensure that these goals are being met.

The NCSP acknowledges the importance of the Treaty of Waitangi in providing a screening programme that is successful for all New Zealand women.

## What are the benefits of being in the Programme?

- Your screening history will be fully recorded in a secure electronic database, the NCSP Register.
- This information helps smear takers and laboratories to decide when the next smear is due or if follow-up is required.
- You will receive a letter welcoming you to the Programme. This letter includes the result of your first cervical smear taken within the Programme.
- You will receive a reminder if you are a few months overdue for your smear test.
- If you have a smear test result that is abnormal, you will receive a letter from the Programme.
- If you have a smear test result that is abnormal, the NCSP Register provides a back-up system to check that you received the appropriate follow-up investigation and/or treatment.
- You will receive a letter informing you when you no longer need to have cervical smears.

Your enrolment in the Programme will help make it a success for all New Zealand women. A high number of women must take part to enable it to work well and achieve its aims.

**Ko tō oranga ngākau te mea nui**

**Your wellbeing is the primary consideration**

## **The National Cervical Screening Programme Register**

The NCSP Register is a computer system that holds the details of women enrolled in the Programme as well as details of smear takers, specialists and laboratories. Women who are enrolled are entitled to have access to the information the NCSP Register holds about them.

The NCSP Register stores:

- sufficient personal details to identify each woman correctly
- cervical screening tests and biopsy results to help decide when the next test is due or if follow-up is required
- contact details so the Programme can remind each woman when her smear is overdue or if she needs to have another smear taken or requires further follow-up
- ethnicity details, which are used to plan better services.

### **Confidentiality**

Only authorised personnel have access to information stored on the NCSP Register. The National Screening Unit of the Ministry of Health holds this information securely.

The National Kaitiaki Group has been set up by law to protect the use of Māori women's summary information on the NCSP Register.

The Pacific Women's Data Advisory Group advises on the use of Pacific women's summary information on the NCSP Register.

## How do women enrol in or withdraw from the Programme?

### Initial enrolment

Laboratories send all cervical smear results, HPV test results or biopsy results to the Programme, and they are entered on the NCSP Register unless otherwise indicated.

A woman who does not want to be enrolled may notify the Programme of her wishes. The Programme will then confirm that the woman does not want to be enrolled.

### Withdrawing from the Programme

Women may choose to withdraw from the Programme, even though they continue to have smears. You can withdraw from the Programme by completing a Withdraw from the Programme form.

To obtain a form, call the Central Register Team on 0800 50 60 50 or discuss it with your smear taker.

You may wish to remain on the Programme but have decided to stop having smears and/or do not want to receive reminder letters from the Programme. Some reasons that may apply in this situation are:

- you no longer choose to have smear tests (and are nearly 70 years of age)
- you are going overseas
- you have had a complete hysterectomy, including removal of your cervix (the need for further smear tests needs to be discussed with your smear taker or doctor)
- you are too unwell to have further smears for other medical reasons.

Under these circumstances, you do not need to complete the Withdraw from the Programme form.

The Programme is able to record on the NCSP Register the circumstances that apply, and you will not receive reminder letters. Your records will remain on the NCSP Register.

## What does withdrawing from the Programme mean?

When you withdraw from the Programme, you and your smear taker are responsible for your own screening. This means the Programme will not:

- hold a record of your cervical screening history even if you change your doctor or smear taker
- send reminder letters if you are overdue for a smear
- make sure you get follow-up if you have an abnormal result.

## What happens to personal information after withdrawal?

When your completed form is received, the Programme is required to delete all of your electronic information (except for your background details) after 20 working days.

Any paper records (including a copy of your screening history if requested) will also be destroyed unless you have ticked the box(es) requesting that these be returned to you.

There is a small chance that some of your paper records from before March 2005 will be kept by the Programme.

Before March 2005, when the law was changed, the filing of paper records was done in date order and not by the names of individual women. With this type of filing system, the Programme cannot always guarantee that all your paper records have been found. If your records are found, they will not be used.

## Re-enrolment in the Programme

A woman who withdraws is welcome to re-enrol at any time by filling in a Re-enrol in the Programme form or by writing to the Programme. If a woman re-enrols, her screening history will begin with her most recent smear.

## Governing legislation

A number of changes aimed at improving the quality, safety and effectiveness of the Programme for women took effect from 7 March 2005. The changes resulted from the passing of the Health (National Cervical Screening Programme) Amendment Act 2004. This Amendment Act replaced section 74A of the Health Act 1956 with a new Part 4A. (Government Acts can be viewed online at [www.legislation.govt.nz](http://www.legislation.govt.nz))

Part 4A of the Health Act 1956 sets out objectives for the National Cervical Screening Programme to improve its operation. Part 4A also provides for the appointment of experts (called evaluators) and the establishment of a review committee to assess the performance and safety of the Programme.

### Access to information about the NCSP

The National Screening Unit provides the public with up-to-date information on cervical screening on its website at [www.cervicalscreening.govt.nz](http://www.cervicalscreening.govt.nz)

This includes information such as reports, government announcements, press releases, information about relevant legislation and much more.

You can contact the NCSP with any inquiries on freephone 0800 729 729.

### Code of Health and Disability Services Consumers' Rights

The Code of Health and Disability Services Consumers' Rights spells out your rights when using any health services. You have a right to:

- access the information you need to make informed decisions about your health, provided in a way that you can understand
- give your informed consent before you receive treatment
- be treated respectfully, taking into account your cultural needs and values
- have services provided with reasonable care and skill.

The Code of Health and Disability Services Consumers' Rights allows you to make a complaint in a way that is appropriate to you. You should not be treated unfairly in any way because you have made a complaint.

To inquire about rights or to contact an advocate from the Office of the Health and Disability Commissioner to help you with a specific complaint, freephone 0800 11 22 33 or go to [www.hdc.org.nz](http://www.hdc.org.nz)



## Section 5: Glossary



## Glossary

**Abnormal cervical cells** – cells on the cervix that differ in some way from normal cells.

**Biopsy** – the removal of a small piece of body tissue for testing in the laboratory to help diagnose cell changes or disease.

**Cancer** – a general term for a large number of diseases in which there is uncontrolled growth and spread of abnormal cells.

**Carcinoma** – cancer that begins in the lining or covering of a tissue.

**Carcinoma in situ (CIS)** – high-grade cell changes confined to the surface (epithelial) layer of the cervix. Without treatment they may develop into invasive cancer. CIS is an old term that is equivalent to CIN 3 or HSIL.

**Cervical intraepithelial neoplasia (CIN)** – abnormal changes or growth in the skin layers of the cervix. These changes are not cancer, but some could develop into cancer if not treated. CIN is graded as CIN 1, 2 or 3. CIN 3 means the most severe changes.

**Cervical smear test** – a screening test in which cells are taken from the cervix, preserved on a slide and sent to the laboratory for examination. This test is also known as a pap smear.

**Cervix** – the neck of the uterus, where it opens into the vagina.

**Colposcope** – an instrument that looks like a pair of binoculars on a stand. It has a light and magnifies the cervix so it can be examined more closely. A colposcope may have a camera attached, which allows a woman to see her cervix on a CCTV screen.

**Colposcopy** – examination of the cervix and vagina to check for abnormal cells, using a magnifying instrument called a colposcope.

**Cone biopsy** – surgical removal of a cone-shaped section of the cervix to remove abnormal cells. The procedure may be used to diagnose or treat cell changes.

**Diagnosis** – identification of a disease or illness.

**Diagnostic test** – a test used to identify a disease or illness.

**Genital area** – the area at the lower part of the body, between the legs.

**Genotype** – the genetic constitution of a cell, an organism or an individual.

**Glandular cells of the cervix** – cells lining the inner canal of the cervix (also called columnar or endocervical cells).

**High-grade abnormality: high-grade squamous intraepithelial lesion (HSIL)** – the more serious cell changes in the cervix that may lead to cancer if not treated. The term ‘high-grade abnormality’ covers CIN 2 and CIN 3.

**Human papillomavirus (HPV)** – a type of small, double-stranded DNA virus that infects the epidermis (skin) and mucous membranes of humans.

**Hysterectomy** – an operation in which the uterus is removed. A hysterectomy can be total (the removal of the uterus and the cervix) or subtotal (the cervix is not removed).

**Immunisation** – a process by which the body’s immune system is strengthened to recognise, and protect itself against, infection. Immunisation can be actively stimulated by administering a vaccine to the individual.

**Incidence** – the number of new cases of a condition that occur in a set period of time in a particular group of people.

**Invasive (of cancer)** – cancer that has spread beyond the layer of tissue in which it has developed into surrounding healthy tissues.

**Lesion** – an area of tissue damaged by disease or injury.

**Liquid-based cytology (LBC)** – an alternative method of processing a cervical cytology sample (commonly known as the ThinPrep® or SurePath® test).

**Low-grade abnormality: low-grade squamous intraepithelial lesion (LSIL)** – mild changes to cells in the cervix. The term ‘low-grade abnormality’ includes abnormalities due to HPV changes and CIN 1. These changes need careful follow-up but may not need treatment.

**Menopause** – the ‘change of life’, the time when a woman stops having menstrual periods.

**NCSP** – National Cervical Screening Programme of New Zealand.

**NHI number** – The National Health Index number is a unique number assigned to each person using health and disability support services.

**Oncogenic** – tending to cause cancerous cells leading to the formation of tumours; used of viruses, physiological processes or other biological causes.

**Pap smear or pap test** – cervical smear test (a medical screening method invented by George Papanicolaou).

**Pathologist** – a person who studies changes caused by disease in body tissues, including cells and organs.

**Screening test** – a test for people who do not have any symptoms but are at risk of a particular disease. It predicts the likelihood of someone having or developing a particular disease.

**Sexual activity** – any genital contact between two people, not just sexual intercourse.

**Smear taker** – a person who takes cervical smear tests for women. Nurses have to complete a recognised training course on cervical screening before they are able to take smears as part of the National Cervical Screening Programme.

**Speculum** – a metal or plastic instrument used to open the vagina so that the cervix can be seen.

**Squamous** – the type of multilayered cells that line the vagina and outer layers of the cervix. They are similar to cells on the skin.

**Squamous cell carcinoma** – the most common form of cervical cancer, occurring in squamous cells in the epithelium (tissue that lines the vagina and the outer layer of the cervix).

**Standard** – a minimum requirement to measure a service against. Services that are funded by the National Cervical Screening Programme are monitored in accordance with standards set by the National Cervical Screening Programme.

**Subtotal hysterectomy** – the surgical removal of the uterus, leaving part or all of the cervix.

**Total hysterectomy** – the surgical removal of the uterus, including the cervix.

**Transformation zone** – the region of the cervix where the glandular (columnar) cells have changed or are changing to squamous cells. The process of changing from one cell type to another may become abnormal.

**Unsatisfactory smear** – a smear that cannot be read by the laboratory.

**Uterus** – the womb.

**Vaccine** – a biological preparation, usually administered by mouth or intramuscular injection, which improves immunity to a particular disease.

**Vaginal vault smear** – a smear taken from the top of the vagina after a hysterectomy.

