

Testing for Prostate Cancer



Information for men and their families



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The information in this pamphlet is drawn from the evidence-based report Population-based Screening for Prostate Cancer and Testing of Asymptomatic Men in New Zealand published by the New Zealand Guidelines Group in April 2004; The Early Detection of Prostate Cancer in General Practice: Supporting Patient Choice published by the Queensland Cancer Fund in 2005 and updated in 2007; and Testing for Prostate Cancer: A Consultation Resource, a companion to this resource, produced by the New Zealand Guidelines Group in 2008. Information on specific treatments has been provided by the Ministry of Health. Additional information sources have been used where indicated.

Information on prostate disease is constantly being updated. NZGG has made all reasonable effort to ensure that information was current at the time of production.

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Should you be tested for prostate cancer?

Prostate cancer is recognised as an important health issue for New Zealand men.

A national screening programme for prostate cancer has not been established because results from good-quality research studies are required to confirm whether the benefits of testing outweigh the harms. Although a national screening programme for prostate cancer is not appropriate given current information, every man has the right to decide for himself whether or not to be tested to check for prostate cancer.

Information about prostate cancer and prostate cancer testing remains under review by the Ministry of Health and interested groups.

Doctors and other health practitioners have a duty under the Code of Health and Disability Services Consumers' Rights Regulations 1996 to provide you with good, balanced information on prostate cancer and the possible benefits and harms of testing and treatment.

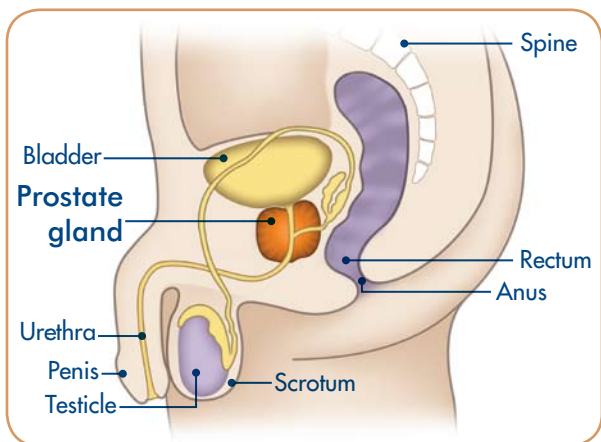
This booklet provides information to help you in your decision about whether to be tested for prostate cancer. You may wish to discuss this information further with your family, whānau and your doctor.

What is the prostate?

All men have a prostate gland. It lies deep in a man's pelvis below the bladder and behind the penis (see figure 1 below).

The prostate surrounds part of the urethra (tube taking urine from your bladder to your penis) and produces some of the fluid in semen. It is not essential for erection or orgasm and does not make hormones. A normal prostate is about the size of a golf ball. It often increases in size in older men (over 50 years) and blocks the easy flow of urine.

Figure 1: The prostate



Do you have any prostate problems?

Most men with prostate problems **do not** have prostate cancer. Early prostate cancer will not usually produce any symptoms because it develops at a location distant from the urethra.

If you do have symptoms your doctor can help you to find the cause and to manage it.

Symptoms of prostate problems can include:

- a weak flow when urinating
- difficulty starting or stopping urination
- urinating often during the day
- waking often to urinate at night
- pain or a burning sensation when urinating.

Most men with prostate problems do not have prostate cancer.

What is prostate cancer?

Prostate cancer is a malignant tumour* of the prostate gland. Early prostate cancer is contained within the prostate gland.

Prostate cancer ranges from very fast growing to slow growing cancer. Slow growing cancers are common and may not cause symptoms or shorten life. Others may develop into a serious cancer, growing within the prostate gland and later spreading to surrounding areas or to elsewhere in the body.

* A tumour that is malignant (or cancerous), can invade and destroy nearby tissue and may spread to other parts of the body.



For New Zealand men, prostate cancer is the third most common cause of death from cancer (after lung cancer and bowel cancer).

About 4 in every 100 male deaths are due to prostate cancer. The majority of these deaths (about two-thirds) are in men aged 75 years or older. About one-third of deaths due to prostate cancer occur in men younger than 75 years.

Risk of death from prostate cancer in New Zealand men

For a man in his 40s	Less than 1 in 10,000 men
For a man in his 50s	1 in 1000 men
For a man in his 60s	1 in 167 men
For a man in his 70s	1 in 43 men

These risk estimates are for the whole decade eg, 40–49 years, not per year of the decade.

Source: New Zealand Health Information Service data for 2001, published in 2005.

What is your risk?

It is not yet known what causes prostate cancer and so there is currently no useful advice available on what you can do to prevent it.

Prostate cancer is found more often in older men and in men with close relatives who have had prostate cancer.

Age

Prostate cancer is rare in men below the age of 50 years. Younger men have a smaller chance of having prostate cancer. However, the risk of dying from prostate cancer is higher for younger men as they have more time for the cancer to progress. Older men are more likely to die of other causes.

What is the chance of a diagnosis of prostate cancer?

For a man in his 40s	1 in 500 men
For a man in his 50s	1 in 50 men
For a man in his 60s	1 in 14 men
For a man in his 70s	1 in 9 men

These risk estimates are for the whole decade eg, 40–49 years, not per year of the decade.

Source: New Zealand Health Information Service data for 2001, published in 2005.

Relatives with prostate cancer

If you have a close relative (ie, father or brother) with prostate cancer your risk of developing cancer is increased.

ONE relative (father, brother) diagnosed
Risk is about **2 and a half times** higher

TWO relatives (father, brothers) diagnosed
Risk is about **4 to 5 times** higher

The risk is higher if more than one close relative is affected and is also higher if a close relative is diagnosed at a younger age (less than 65 years)

Sources: Johns & Houlston. British Journal of Urology International. 2003;91:789–794. Zeegers et al. Cancer 2003;97:1894–1903.

It is not known if the risk for Māori men and Pacific Island men or Asian men living in New Zealand is higher or lower than the risk for other New Zealand men. The risk for Asian men living in Asia is lower than for New Zealand men.

The above risk information is only an estimate to help you assess your own risk. The estimates also assume you have the same general risk as other men.

What tests check for prostate cancer?

PSA test

A PSA test is a blood test to measure the level of prostate specific antigen (PSA) in your blood. PSA is made by the prostate gland and naturally leaks out into the bloodstream.

PSA levels can be raised because of:

- a urinary infection
- a prostate infection (prostatitis)
- an enlarged prostate (non-cancerous or benign prostatic hyperplasia)
- prostate cancer

or

- for other reasons, such as recent ejaculation (within the last 48 hours).

Men normally have a very small amount of PSA in their blood and this increases with age. A standard PSA level of 4.0 ng/ml is commonly used as an indication for more tests. Age-based normal ranges for PSA (see the example on page 9) are also often used by New Zealand medical laboratories.

There is no absolute PSA level that detects a cancer.

An example of age-based PSA levels:

Age	PSA upper limit of normal
40 to 50	2.5 ng/ml
50 to 60	3.5 ng/ml
60 to 70	4.5 ng/ml
70 and over	6.5 ng/ml

ng/ml = nanograms per millilitre

Not all men with prostate cancer have a raised PSA and not all men with a raised PSA have prostate cancer. Digital rectal examination and sometimes repeat measuring of PSA over time are used to increase the accuracy of testing.

Digital rectal examination

This is performed by a doctor who will insert a gloved finger into the rectum (back passage) to feel the size and texture of the prostate.

PSA testing and digital rectal examination are available through your local doctor (GP).

Not all men with prostate cancer have a raised PSA and not all men with a raised PSA have prostate cancer.

If your PSA is raised or your prostate is not normal on digital rectal examination, your doctor will discuss the options with you. You are likely to be referred to a specialist (usually a Urologist) for further assessment.

If the specialist thinks cancer, rather than other problems are likely, you may be asked to consider having a TRUS (transrectal ultrasound guided) biopsy.

TRUS biopsy

A TRUS biopsy is necessary to make a diagnosis of prostate cancer and provides information about the type of cancer (if any) present. About 4 in 5 cancers will be found (1 in 5 missed) by this procedure.

In a TRUS biopsy, a needle is inserted into your prostate gland under local anaesthetic via the rectum (back passage). Very small samples of prostate tissue are taken and analysed under a microscope. This test is usually now done with the aid of a local anaesthetic and sometimes light sedation to reduce discomfort. Possible complications of TRUS biopsy are bleeding and infection.

A TRUS biopsy is necessary to make a diagnosis of prostate cancer.

What are possible benefits and harms of prostate testing?

Benefits	Harms
<ul style="list-style-type: none">+ May find prostate cancer at an early stage when there are no symptoms and the cancer is still confined within the prostate gland	<ul style="list-style-type: none">- Clinical trials are inconclusive as to whether treating prostate cancer found after PSA testing leads to a longer and better life for men
<ul style="list-style-type: none">+ If prostate cancer is detected, treatment may potentially cure the disease	<ul style="list-style-type: none">- May lead to unnecessary medical tests and possible side effects when no cancer is present
<ul style="list-style-type: none">+ The problems with more advanced prostate cancer are avoided if treatment is successful	<ul style="list-style-type: none">- May lead to treatment for a prostate cancer that is slow growing and may not threaten life
	<ul style="list-style-type: none">- The treatments for prostate cancer may cause permanent side effects and may not result in a cure

What are the treatments for prostate cancer?

There are studies being completed overseas to find out if treatment definitely reduces the chance of dying from prostate cancer. Treatment for localised prostate cancer (confined to the prostate gland) may prevent progression of the disease and death from prostate cancer in some men.

Curative treatment aims to cure the disease using either surgery to remove the cancer or radiation to destroy the cancer. The cancer must still be localised to reliably achieve this.

Non-curative treatment aims to delay the progression of the disease or improve symptoms. Non-curative treatment is used when it is no longer possible to achieve a cure because the cancer has spread. Non-curative treatment is also used when it is not in the man's best interest to apply curative treatments. This may be because the cancer appears unlikely to cause health problems during the man's lifetime due to age, other health problems or the nature of the prostate cancer. Generally, it is uncommon for curative surgical treatment to be used for men more than 75 years of age and for curative radiation treatment to be used for men over the age of 80 years.

Treatment options

There are three main treatment options for localised prostate cancer:

- **active monitoring** – you are checked regularly by a specialist. Treatment may be started if there is a change in your PSA level or found on DRE
- **radical prostatectomy** – surgery to remove the prostate. The aim is to cure the disease. Side effects may include bladder and erection problems
- **external beam radiotherapy** – radiation treatments given over a number of weeks to the prostate gland from a linear accelerator (radiotherapy treatment machine). The aim is to cure the disease. Side effects may include bowel or bladder problems and reduced sexual function.

Other treatment options

- **Brachytherapy** – this is a newer type of radiation treatment that can be given in two different ways. One method (high dose rate brachytherapy) is done with the temporary placement of wires into the prostate and the other (low dose rate brachytherapy) with the permanent placement of small radioactive seeds into the prostate. The aim is to cure the disease. Side effects may include bladder problems and reduced sexual function. Brachytherapy is not yet widely available throughout New Zealand.
- **Hormone therapy** – sometimes used with radiotherapy or surgery for localised prostate cancer. Hormone therapy is also used (as a non-curative treatment) when the cancer



is advanced. The aim is to stop or slow the growth of the cancer by reducing levels of androgens (male hormones) in the body. Side effects may include reduced sexual function, breast swelling and hot flushes.

- **Cryosurgery (cryotherapy)** – a method that freezes and thaws prostate tissue to destroy prostate cancer cells. It can be used with more advanced disease (as a non-curative treatment) where prostatectomy (removal of the prostate gland) is not an option or where the cancer returns after radiation treatment. Long-term results are not yet known. Side effects may include damage to the bowel. This is a very new treatment in New Zealand and it is not available in the public health system.
- **Laparoscopic surgery** – a new form of surgery to remove the prostate gland through a tube (laparoscope) inserted into the abdomen. Like other treatments there is a risk of side effects. It is not widely available in New Zealand.



What is most important to you?

These boxes present some common thoughts and feelings about prostate cancer and prostate cancer testing. You may find it helpful to review them as you consider your own reasons for deciding whether or not to be tested for prostate cancer.

For testing: is this like you?

- ✓ I'm worried I might have prostate cancer and want the best chance of finding it early
- ✓ Having a PSA test will reassure me
- ✓ I have a family history of prostate cancer
- ✓ If I am diagnosed with prostate cancer, I would be prepared to accept the side effects of treatment or to live with knowing I had cancer if I chose not to have treatment
- ✓ I accept that results from studies on PSA testing are conflicting but I'm not interested in waiting for all the proof to be in



What are your thoughts?

Against testing: is this like you?

- ✓ I'm not worried about prostate cancer and I think my chance of getting prostate cancer is low
- ✓ I don't want to risk finding out I have cancer when it may not cause me problems
- ✓ I am more concerned about treatment side effects if there is no guarantee I would be reducing my risk of dying from prostate cancer
- ✓ I am not convinced that studies have yet proven that treatment following PSA testing will save lives
- ✓ I am prepared to accept the possibility that future research may show that PSA tests benefit men's health

Further information

More information on prostate tests and prostate cancer are available from:

- your doctor (GP)
- the Cancer Society of New Zealand Information Service (0800 800 426)
- your local Cancer Society (listed in the phone book)

Some useful websites are:

www.cancernz.org.nz

www.cancerscreening.nhs.uk

www.dipex.org/prostatecancer

www.urosoc.org.au/consumer-information

Copies are available free from:

- Wickliffe 04 496 2277; Order No. HP: HP4659
- www.nzgg.org.nz (click on 'Consumer resources' and then 'Prostate Cancer')
- info@nzgg.org.nz (to request a copy)

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The Royal New Zealand
College of General Practitioners



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