

# The Pros and Cons of PSA Screening for Prostate Cancer

**If you are a man aged 45-75 years this pamphlet will give you information to assist you in making an informed decision about screening using the PSA test (prostate specific antigen)**



## The pros and cons of PSA screening for prostate cancer

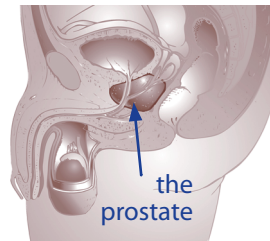
A screening test for prostate cancer has been available for some years. It is known as the PSA test and is a blood test.

There is some debate at the moment on the benefits of using this test in men who show no signs of cancer. The reason for the controversy is that the PSA test does not yet meet the generally accepted criteria for a screening test. However, we know that the PSA test is the best way to detect prostate cancer at an early stage of the disease, when there is a good chance of cure.

This pamphlet is designed to give you the information you need to discuss prostate cancer screening with your doctor before making your own decision.

## The Prostate: what, where, why

The prostate is a small gland, the size and shape of a walnut. It is below the bladder and in front of the rectum and surrounds part of the urethra, the tube carrying urine from the bladder. The prostate creates fluid that carries sperm during ejaculation.



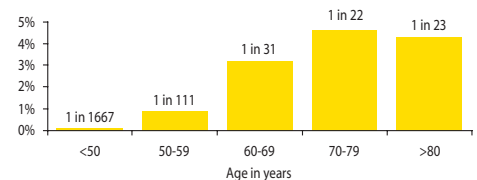
## Problems?

The most common prostate problems are:

- Age-related prostate enlargement — called benign prostate hyperplasia (BPH).
- Inflammation of the prostate (prostatitis), which may be caused by infection.
- Prostate cancer.

## What is my risk?

Prostate cancer is the most frequent type of cancer in men, and the second most common cause of cancer death. It generally affects men over 60 years of age. As you grow older, your chance of getting prostate cancer increases, as shown in the graph below, which shows your risk of developing prostate cancer in the next five years based on your current age.



The cancer is frequently restricted to the prostate alone, and may cause no problems. In fact, most men with prostate cancer die from other causes.

But prostate cancer can turn into a very serious disease when it invades other parts of the body. It can cause discomfort, pain and eventually death.

A 50-year-old man who would be expected to live until age 77, has a 4 in 10 risk of developing microscopic prostate cancer sometime in his lifetime, a 1 in 10 chance of having cancer diagnosed, and a 3 in 100 chance of dying of it.



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## Signs or symptoms to look for

There are no specific symptoms that enable prostate cancer to be detected at an early stage. You should talk to your doctor if you are experiencing difficulties in urinating, or urinating more frequently. Most of the time, however, these are symptoms of prostate enlargement, not cancer.

Men who have a relative who has already had prostate cancer are at a higher risk of contracting prostate cancer themselves.

## What is screening?

“Screening” refers to testing men with no symptoms for prostate cancer. If a man has symptoms, these need to be investigated and this is not routine screening.

There are two methods of screening for prostate cancer: checking the prostate by means of a digital rectal examination (DRE) and the PSA test. Checking the prostate by means of a DRE is the simplest, but is not particularly effective. Used alone, it may miss about 50% of cancers and is therefore inadequate for screening purposes.

## What is PSA?

PSA testing requires a blood test to determine prostate-specific antigen (PSA) levels present in the blood. PSA is a protein produced only by the prostate, and high or low PSA levels can indicate whether there is cancer activity or not. PSA testing also has certain limits.

Combining the PSA test and DRE is a more effective means of screening than PSA testing alone, and can identify most prostate cancers. The chance that a man with a normal PSA and a normal DRE has a significant prostate cancer is very low. Even if the test shows an increased PSA level or the DRE is abnormal, it does not necessarily mean that cancer is present. In fact, approximately 70% of men with one abnormal result do not have prostate cancer. However, if PSA levels are very high or both test results are abnormal, there is a 50% chance that cancer will be found.

## What happens if I test positive?

For a more definite diagnosis, another step and third procedure is required: a biopsy.

*Biopsy of the prostate* consists of inserting a needle into the prostate through the front wall of the rectum and removing fragments of prostate tissue, which will then be examined under a microscope. Local anaesthetic is used but it can cause a certain degree of discomfort. No hospitalisation is required, and the complication rate is very low.

## What would happen if a biopsy finds prostate cancer?

Every case of prostate cancer is unique. Treatment depends on the person’s age, health and the type of cancer. When the cancer is limited to the prostate, the treatment goal is to cure it using surgery or radiation:

- Radical prostatectomy is the complete surgical removal of the prostate.
- Radiotherapy uses radiation to destroy the cancer cells. The radiation may be given from the outside (external beam radiation) or from the inside (brachytherapy), where radioactive seeds are implanted directly into the prostate gland.
- Hormone therapy may also be used, alone or in combination with radiation or surgery.

Where the cancer is stable or progressing very slowly, especially in men who are not expected to live more than 10 years, no treatment may be necessary. Instead the disease should be monitored (watchful waiting).



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## Benefits and limitations of treatment

Most men with prostate cancer that has been caught early will be cured by treatment. Overall about 1 in 6 men with prostate cancer die of it, but where the cancer is caught early that falls to less than 1 in 10. For early prostate cancers the success rates of surgery and radiotherapy are very similar, and the treatment that might be best for you needs to be decided in consultation with a Urologist and a Radiation Oncologist (cancer specialist).

The most common complications of the surgical treatment are some degree of incontinence (inability to retain urine), and some loss of erectile function (impotence). With radiotherapy, there is also a risk of impotence, and a possibility of radiation-induced inflammation of the rectum and/or bladder.

## Can prostate cancer be prevented?

Unfortunately, we do not yet know the cause of prostate cancer, nor how to prevent it. Some studies suggest that a high-fat diet (especially red meat) increases the risk, and a diet rich in vegetables and soy products may provide protection. Eating a healthy diet is good advice for many other reasons as well!

## Does PSA screening really help?

Based on medical knowledge today, we cannot answer this question definitively. PSA testing, which is the most accurate means of screening, has advantages but it also has its limits. Large-scale studies are underway to determine the reduction in prostate cancer mortality due to PSA testing. These studies will give an answer over the next 5-10 years. In the meantime there is consensus among experts that men should be informed about the test and make their own decision whether to have it or not.

## Could I benefit?

### Yes.

- If you have prostate cancer then PSA testing, combined with a DRE, is the most effective way of detecting it, usually years before symptoms appear.
- Most cancers detected in this way are found before they have spread beyond the prostate, in which case a cure is more likely. In other words, it is likely that the earlier a cancer is detected the greater the chances are of a cure. Men whose prostate cancer is not detected early enough, (if their PSA value is too high, or if the cancer has clearly spread outside the prostate gland), may not be eligible for treatment by either brachytherapy or surgery.
- Early treatment of prostate cancer appears to improve survival for patients with intermediate or high-grade cancer.

## Could I be harmed?

### Yes.

- A negative biopsy for a raised PSA result does not absolutely rule out prostate cancer. In most cases, screening should continue at intervals recommended by your doctor.
- You would be aware that you have cancer for longer than you would otherwise have known, and perhaps be worried as a result.
- Opting for 'watchful waiting' if cancer is diagnosed may also bring on anxiety and uncertainty.
- You could be harmed by unnecessary surgery or radiation treatment for a low grade, slow growing (silent) cancer that you would not otherwise have known you had, and that would never have shown up before you died of old age.

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## Know what the numbers mean

If you do get tested, ask your doctor for your PSA number and keep a record. Knowing where you stand helps you take care of yourself. You may not need to be tested every year if the first two test results are well within the normal range.

Check your age on the chart to find the typical PSA level for your age.

Age	Typical PSA level
40-49	less than 2.5
50-59	less than 3.5
60-69	less than 4.5
70-80	less than 6.5

PSA rises with age. The rate of increase is also of importance. As any one result may be high for other reasons (infection, recent ejaculation, etc.) an abnormal result should always be checked. If your PSA is over the typical number, ask your doctor if the increase is of concern.

## Recommendations

The BC Cancer Agency recommends that men should be informed about the benefits and limitations of prostate cancer screening (PSA testing combined with a DRE).

Remember:

- Screening should not usually start before 45 years of age.
- You should be in reasonably good health with a life expectancy of at least 10 years. Screening should usually stop around age 75 years, (but it is important that men over 75 with symptoms see their doctor).
- You should be prepared to undergo a biopsy of the prostate if the PSA level or rectal examination is abnormal.
- If the biopsy reveals prostate cancer is present, you should be prepared to choose between several treatment options. If a low-grade tumour is involved, one option will be watchful waiting.
- If your doctor has no suspicion that you may have prostate cancer, you will have to pay the cost of the test yourself. (About \$30)

Your doctor is the best person to answer your questions and help you to decide what is best for you. Get your doctor's input before you decide if you should be tested.

## More information?

- BC Cancer Agency  
1-800-663-3333  
[www.bccancer.bc.ca](http://www.bccancer.bc.ca)
- Canadian Cancer Society  
1.888.939.3333  
[www.bc.cancer.ca](http://www.bc.cancer.ca)
- BC Foundation for Prostate Disease  
[www.bcprostatecancer.org](http://www.bcprostatecancer.org)
- Canadian Prostate Health Council  
[www.canadian-prostate.com](http://www.canadian-prostate.com)
- Canadian Prostate Cancer Network  
[www.cpcn.org](http://www.cpcn.org)

Prepared by: BC Cancer Agency, Genito-Urinary Tumour Group and the Vancouver Prostate Support and Awareness Group.

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