

About your PSA result



Prostate Cancer
Foundation
of Australia

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What is PSA?

Prostate specific antigen (PSA) is a protein made in the prostate gland. The prostate is a walnut-sized gland that sits below the bladder in front of the rectum. It surrounds the urethra, the passage in the penis through which urine and semen pass.

PSA is produced by prostate cells and enters the blood stream. As men get older and the prostate gland grows larger, they may produce higher levels of PSA. However, higher levels of PSA can also be caused by other conditions. One of these is prostate cancer. An elevated PSA level means something is happening in the prostate gland and further investigation may be required.

How is PSA measured?

PSA is measured through a simple blood test. The initial PSA test usually measures the **total PSA** in the blood stream.

Sometimes, if a person has an elevated total PSA, another blood test will be given to measure and compare the levels of two different forms of PSA – PSA bound to protein and free (non-bound) PSA. This is called the **free to total PSA** ratio.

The free to total ratio can indicate whether the elevated PSA is more likely due to a benign (enlarged prostate) or a cancerous cause.

What do the results mean?

A PSA level that stays elevated suggests something is going on in the prostate and further tests are required to determine if it is cancer or something else.

If your PSA level is over 3.0 ng/ml, your PSA test should be repeated within 1 to 3 months. This is because the PSA sometimes returns to normal levels. Your doctor may also order a free to total PSA ratio test. If the PSA is still elevated and the free to total ratio is low, then you may be referred to a specialist (urologist) for more tests.

If you have a family history of prostate cancer and/or are aged in your 40s, your doctor may recommend further PSA testing if your PSA level is above 2.0 ng/ml.

An abnormal PSA result does not necessarily mean you have prostate cancer.

What are the next steps?

Your doctor will consider the results of your repeat PSA test, as well as your age and family history before recommending the next steps for you.

If your repeat PSA results are not cause for concern, talk to your doctor about future PSA testing.

If your repeat PSA results still indicate a concern, your doctor will refer you to a urologist for further investigations.

The urologist will likely perform a **digital rectal examination (DRE)**. This is a procedure where a doctor inserts a gloved, lubricated finger into the rectum to feel the size and shape of the prostate gland. A normal DRE result does not necessarily rule out prostate cancer.

If the DRE and/or your PSA tests indicate a possibility of prostate cancer, the next steps can include an MRI scan and/or a tissue biopsy.

Magnetic resonance imaging (MRI) is a scan to assess the size of the prostate and look for any abnormal areas. An MRI is used to determine if a cancer is present and which part of the prostate it can be found in. This helps the urologist to decide whether a biopsy is needed and which area of the prostate to target for the biopsy. The MRI is performed as an outpatient procedure. Let your doctor know if you suffer from claustrophobia or if you have any metal implants, medical devices or have had joint surgery.

A **biopsy** is a procedure where a needle is used to remove multiple small samples of tissue from the prostate gland. The samples are sent to a laboratory to be examined. This will show whether the cells in the prostate are malignant (cancerous) or benign (non-cancerous). A biopsy is the only way a definitive diagnosis of prostate cancer can be made. A biopsy can be performed either through the rectum under local anaesthetic or through the perineum under anaesthetic.

If the biopsy is negative, you will probably be offered routine monitoring of your PSA levels.

If subsequent tests show a rise in PSA levels, you may need another biopsy or MRI scan.

What if it's prostate cancer?

A positive biopsy is the only way to confirm that you have prostate cancer. The cancer **grade**, which is determined from the biopsy, gives an indication of how fast the cancer is growing.

You may be required to have further tests to determine the **stage** of the cancer. The cancer stage indicates whether the cancer has remained within the prostate gland or has spread outside of the prostate to surrounding areas or other parts of the body.

How your prostate cancer is treated will depend on your PSA results, the grade and stage of the cancer, your symptoms, your overall health and your personal preferences.

If there is a low risk that your prostate cancer will cause you harm, you may be offered Active Surveillance. This involves regular testing to check for any changes to the cancer. If the cancer changes, you may need treatment.

If your cancer is higher risk, you will be offered treatment. Different treatments come with differing side effects, some of which include urinary problems, erection and ejaculation problems, bowel problems, fatigue, depression and anxiety.

You may need to meet with several different cancer specialists such as a urologist, radiation oncologist and/or medical oncologist to discuss your treatment options.

More information can be found in *Prostate cancer – a guide for newly-diagnosed men* downloadable at pcfa.org.au.

Taking your partner, family member or a close friend with you when you see your doctor can be helpful when discussing your diagnosis and treatment options.

Relative to the general population and taking into account other causes of death, 95% of men with prostate cancer will survive at least 5 years after diagnosis and 91% of men with prostate cancer will survive 10 years or more.

What could affect my PSA level?

A 'normal' PSA level is different for everyone. It depends on several things, including:

- your age (the older you are, the higher your PSA level will be)
- the size of your prostate (levels are higher with an enlarged prostate)
- your ethnicity
- medications you are taking
- a urinary infection
- certain types of exercise such as bicycle riding or vigorous exercise
- how recently you had sex or ejaculated
- anal sex or prostate stimulation.

Other conditions that could cause an elevated PSA level are:

Benign prostatic hyperplasia (BPH) or enlarged prostate: This is a common condition that happens when the prostate grows larger with age. It can affect urination. It is treated with medications or surgery.

Prostatitis (infection or inflammation of the prostate): Prostatitis is when the prostate gland becomes inflamed and sore. It can be very painful and causes more frequent urination. It can be treated with antibiotics, other medications or surgery.

In very rare cases men can have prostate cancer even if their PSA test result is normal. Talk to your doctor if you notice any worrying symptoms such as:

- feeling the frequent or sudden need to urinate
- finding it difficult to urinate (for example, trouble starting or not being able to urinate when the feeling is there or poor urine flow)
- discomfort when urinating
- finding blood in urine or semen
- pain in the lower back, upper thighs or hips.

For more information and support you can:

Contact us: PCFA is here to help. Call us on **1800 22 00 99** or email us on **enquiries@pcfa.org.au**

Find out more: PCFA has a range of evidence-based sources for men with prostate cancer and their families. Visit: **pcfa.org.au**

Join a support group: Support groups around the country bring together men and women affected by prostate cancer. To find a support group, visit: **pcfa.org.au/support/find-a-support-group**

Join the online community: PCFA hosts Australia's largest online group dedicated to connecting people who have been impacted by prostate cancer. You can join the online community at this link: **onlinecommunity.pcfa.org.au**

For more information on prostate cancer visit:

Cancer Australia: www.canceraustralia.gov.au/affected-cancer/cancer-types/prostate-cancer

Cancer Council Australia: cancer.org.au/about-cancer/types-of-cancer/prostate-cancer

Healthy Male Andrology Australia: healthymale.org.au/mens-health/prostate-cancer

For further support contact:

MensLine Australia: mensline.org.au

Beyond Blue: beyondblue.org.au

Lifeline Australia: lifeline.org.au

Prostate Cancer Foundation of Australia (PCFA)

We are Australia's leading community-based organisation for prostate cancer research, awareness, and support. As the nation's predominant charity fund for Australian-based prostate cancer research, we exist to protect the health of existing and future generations of men in Australia and to improve quality of life for Australian men and families impacted by prostate cancer.

Our vision is a future where no man dies of prostate cancer and Australian men and their families get the support they need.

For further information or to make a donation, please contact us on:

1800 22 00 99 (toll free) or visit: **pcfa.org.au**



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