



[The Lambda Clinic - Sexual Health Advice - Patient Information Leaflet](http://www.lambdaclinic.co.uk/psa.html)
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PSA test for prostate cancer

What is the prostate gland?

The prostate gland is a gland that sits just underneath the bladder and only found in men. It is normally about the size of a chestnut. The urethra (the tube which passes urine from the bladder) runs through the middle of the prostate gland. The prostate gland also helps make semen, but this is mostly made by the seminal vesicle which is another gland nearby the prostate gland.

Prostate gland enlargement

The most common problem of the prostate gland is benign enlargement (also called 'Benign Prostatic Hyperplasia'). This is a benign (non-cancerous) condition where the size of the prostate increases gradually after the age of about 50 years. By the age of 70 about 80% of men have an enlarged prostate gland.

As the prostate gets bigger it can cause narrowing of the urethra. This enlargement may partially obstruct the flow of urine from the bladder and cause symptoms such as:

- poor stream – the flow of urine is poorer and it takes a long time to empty the bladder
- hesitancy – having to wait a long time before urine starts to flow
- terminal dribbling – urine may trickle and stain the underpants after finishing at the toilet
- poor emptying – you have a feeling that you have not completely emptied the bladder

The enlarged prostate may also 'irritate' the urethra and lower bladder causing symptoms such as:

- urgency – means you have to get to the toilet quickly when the urge to pass urine occurs
- frequency – passing urine more often than normal
- nocturia – you have to get up several times at night

Prostate cancer

The symptoms of prostate cancer can be similar to benign prostatic enlargement. Prostate cancer is a common cancer in older men. Every year in the UK about 22,000 men are diagnosed with prostate cancer. About 80% of prostate cancer cases occur in men over the age of 65. It is a rare condition in men under the age of 50. Unlike many other cancers, prostate cancer is often present for years without realising it. This is because the cancer is a slow growing process and can take many years to cause any symptoms. By the age of 80 years, more than half of all men will have some cancer cells in their prostate gland – but only 1 in 30 of these men will actually die from prostate cancer.



What is the PSA test?

PSA stands for Prostate Specific Antigen which is a protein made by the prostate gland. PSA blood test measures the level of PSA protein in your blood.

What does the PSA test tell me about my prostate gland?

A raised PSA level may be a sign that you have prostate cancer. The PSA level is often raised well before any symptoms of prostate cancer develop. The test can help to detect early prostate cancers, which may have a better chance of being successfully treated. As a general rule, the higher the PSA level, the more likely that you have prostate cancer.

However, a mildly or moderately raised PSA level can also occur in benign enlargement of the prostate gland and inflammation of the prostate gland, called prostatitis. Overall, about 2 in 3 men with a raised PSA level do not have prostate cancer.

A single PSA test cannot tell you whether a prostate cancer is slow or fast growing. Similarly, in some cases, the PSA level may be normal even when there is a prostate cancer present. In up to 20% of cases of men with prostate cancer have a normal PSA level. Therefore, the PSA test is not always an accurate test for prostate cancer.

What happens if my PSA level is high?

This depends on whether there are any symptoms, your personal risk of prostate cancer, how high the PSA level is, and your age. Overall, the older you are and with a high PSA level, this is likely to indicate a higher chance of prostate cancer.

As a rough guide, there are 3 main options after a PSA test:

PSA not raised: highly unlikely to have cancer. No further action is needed.

PSA slightly raised: probably not cancer, but might need to repeat the test.

PSA definitely raised: probably need a biopsy to find out if you have prostate cancer.

Biopsy of the prostate gland

If your PSA level is raised, you may be referred to a specialist for a prostate biopsy. This is because a definite diagnosis of prostate cancer can only be made by taking cells from the prostate gland and examining them carefully under a microscope. A biopsy involves using an ultrasound scanner to guide a needle through the rectum (back passage) to take a small tissue sample from the prostate gland.

The biopsy itself is unfortunately not always 100% accurate. If the biopsy does not show any cancer cells, that does not completely rule out an early cancer. This occurs in about 20% of cases.

Even if you are diagnosed as having prostate cancer, there is still some disagreement among experts as to when to treat it, and if so, what is the best treatment. For example, there is no proof that treating early prostate cancers helps men live longer. Most men with early prostate cancer will not die as a result of it, in particular older men in their 70s or 80s, or those with a slow-growing cancer. Also some of the treatments for prostate cancer can cause serious side effects in some cases.



Pros and cons of the PSA test?

Possible benefits of having the PSA test:

- It may provide reassurance if the test result is normal.
- It can help to detect prostate cancer before any symptoms develop.
- Treatment in the early stages of prostate cancer could help you live longer and avoid the complications of cancer (although there is currently disagreement between the specialists about this and there is no good evidence that this is so).

Possible disadvantages of having a PSA test:

- It could miss cancer in the prostate gland, and falsely reassure you that all is well.
- It could lead to unnecessary anxiety and a needless biopsy when you have no cancer.
- It might detect a slow-growing cancer that may never cause any symptoms or ever shorten your life span. But the diagnosis of 'cancer' may cause you significant anxiety which could affect your quality of life.
- It may lead you to have treatment for early prostate cancer which might not help you live longer. Also, the main treatments for early prostate cancer do carry some risks and side-effects.

[The Lambda Clinic](#)

BMI The Edgbaston Hospital
22 Somerset Road
Edgbaston
B15 2QQ
Telephone: 0121 452 2815