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Prostate Specific Antigen (PSA) Test

Prostate cancer is a serious condition. The prostate specific antigen (PSA) test is a blood test to see if you might have prostate cancer and to monitor treatment for prostate cancer.

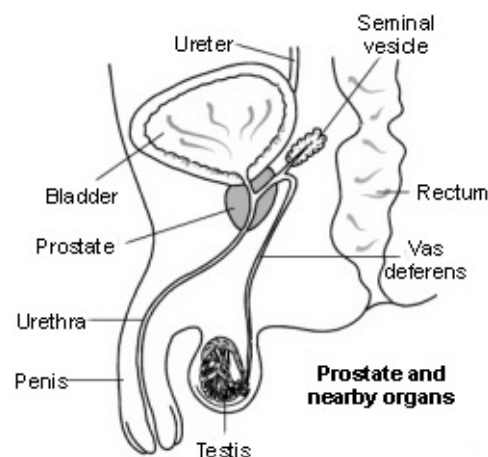
The PSA blood level is also increased in other conditions. So having an increased PSA test result does not mean that you have prostate cancer. Experts disagree on how useful the PSA test is. There is a lot of ongoing research about PSA. At the moment there is no national screening programme for prostate cancer in the UK.

What is the prostate gland?

The prostate gland (just called prostate from now on) is only found in men. It lies just beneath the bladder. It is normally about the size of a chestnut.

The tube which passes urine from the bladder (this is called the urethra) runs through the middle of the prostate. The prostate's main function is to produce fluid which protects and enriches sperm.

The prostate often gets bigger (enlarges) gradually after the age of about 50. By the age of 70, about 8 in 10 men have an enlarged prostate. It is common for older men to have urinary symptoms caused by a non-cancerous (benign) enlargement of the prostate. Some men also develop prostate cancer.



See also the separate leaflet called [Prostate Gland Enlargement](#).

What is prostate cancer?

Prostate cancer is a cancer which develops from cells in the prostate gland. It is the most common cancer in men in the UK. Each year, about 40,000 men are diagnosed with prostate cancer in the UK. It affects about 1 in 9 men in the UK at some point in their life. Most cases develop in men over the age of 65.

Prostate cancer is different to most other cancers because small areas of cancer within the prostate are actually very common, especially in older men. These may not grow or cause any problems for many years (if at all).

See also the separate leaflet called [Prostate Cancer](#).

What is a PSA test?

The PSA test is a blood test that measures the level of PSA in your blood. PSA is made by the prostate gland. The PSA level in your blood stream is measured in nanograms per millilitre (ng/mL).

When you have a PSA test, you should not have:

- An active [urine infection](#);
- Ejaculated (produced semen during sex or masturbation) in the previous 48 hours;
- Exercised heavily in the previous 48 hours;

- Had a prostate biopsy in the previous six weeks; or
- Had a digital rectal examination (examination of the back passage with a gloved finger) in the previous week.

Each of these may produce an unusually high PSA result.

If you decide to have a PSA test, your doctor will give you a digital rectal examination to feel the prostate. This is to find out if the prostate is enlarged or feels abnormal in any way.

What is a normal result?

The normal range changes as you get older.

PSA Cut-off Values	
Age (years)	PSA Cut-off
40-49	2.7
50-59	3.9
60-69	5.0
70-75	7.2

The higher the level of PSA, the more likely it is to be a sign of cancer.

The PSA test can also miss cancer. 15 out of 100 men with prostate cancer will have a normal PSA result. A one-off test is not reliable and repeating the test may provide important information.

What causes a raised PSA level?

A raised PSA level may mean you have prostate cancer but about 2 out of 3 men with a raised PSA level will not have prostate cancer.

Other conditions may also cause a raised PSA level, including:

- Acute retention of urine (unable to pass urine, causing an enlarged bladder).
- **Enlargement of the prostate which is non-cancerous (benign).**
- Older age.
- **Urine infection.**
- **Acute prostatitis.**
- Transurethral resection of the prostate (TURP) operation. TURP is an operation used to remove the prostate if you have benign enlargement of the prostate.
- If you have a catheter to help pass urine

What happens after a PSA test?

If your PSA level is not raised

You are unlikely to have cancer. No immediate further action is needed, but you may need further tests to confirm the result.

If your PSA level is slightly raised

You probably do not have cancer. You might need further tests, including more PSA tests.

If your PSA level is definitely raised

Your GP will refer you to see a doctor who is a specialist for further tests to find out if you have prostate cancer. The specialist will usually arrange for you to have a biopsy of your prostate gland.

If prostate cancer is found, what are my options?

For information about the treatment options for prostate cancer, see the separate leaflet called [Prostate Cancer](#).

Further help & information

Prostate Cancer UK

Tel: 0800 074 8383

Web: prostatecanceruk.org/

Prostate Cancer Support Association

Mansion House Chambers, 22 High Street, Stockport, SK1 1EG

Tel: (Helpline) 0845 6010766, (Admin) 0161 474 8222

Web: www.prostatecancersupport.info

Tackle Prostate Cancer

16 Kirby Street, London, EC1N 8TS

Tel: (Helpline) 0800 035 5302, (Admin) 020 7228 5952

Web: www.tackleprostate.org

Cancer Research UK

Angel Building, 407 St John Street, London, EC1V 4AD

Tel: (Nurse team) 0808 800 4040, (Switchboard) 020 7242 0200

Web: www.cancerresearchuk.org

Macmillan Cancer Support

89 Albert Embankment, London, SE1 7UQ

Tel: (Support Line) 0808 808 00 00

Web: www.macmillan.org.uk

Further reading & references

- [Prostate Cancer Risk Management](#); NHS Cancer Screening Programmes
- [PSA measurements, frequently-asked questions](#); British Association of Urological Surgeons, March 2014
- [Moyer VA](#); Screening for prostate cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2012 Jul 17;157(2):120-34. doi: 10.7326/0003-4819-157-2-201207170-00459.
- [Prostate cancer](#); NICE CKS, January 2011 (UK access only)
- [Djulbegovic M, Beyth RJ, Neuberger MM, et al](#); Screening for prostate cancer: systematic review and meta-analysis of randomised controlled trials. *BMJ*. 2010 Sep 14;341:c4543. doi: 10.1136/bmj.c4543.
- [Wilt TJ, Ahmed HU](#); Prostate cancer screening and the management of clinically localized disease. *BMJ*. 2013 Jan 29;346:f325. doi: 10.1136/bmj.f325.

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