

# PSA BLOOD TEST

## WHAT IS A PSA TEST?

The PSA test (prostate specific antigen) is a blood test that measures the level of prostate specific antigen in the blood. PSA is a protein which is made by the prostate gland. The PSA level in the bloodstream is measured in nanograms per millilitre (ng/mL). PSA is made by normal prostate cells but also by prostate cancer cells.

In England, the PSA test may be offered to any man aged 50 and over (if they haven't had one in the last year) who requests it as long as they have considered the pros and cons of having the test. The test may be offered to younger men who have a higher risk of prostate cancer.

If you have the following symptoms you will need to see your GP as well as having a blood test:

- needing to pee more frequently, often during the night
- needing to rush to the toilet
- difficulty in starting to pee (hesitancy)
- straining or taking a long time while peeing
- weak flow
- feeling that your bladder has not emptied fully
- blood in urine or blood in semen

## Before having a PSA test, it is important not to have:

- A urine infection
- Had sex or masturbated in the last 48 hours
- Exercised a lot in the last 48 hours
- Had receptive anal sex in the last 48 hours
- Had prostate stimulation in the last 48 hours
- Had a prostate biopsy in the last 6 weeks
- Had an examination of your back passage in the last week.

Each of these may produce an unnaturally high PSA result, resulting in unnecessary further investigations. So wait before you have your PSA test done.

## BENEFITS AND LIMITATIONS OF A PSA TEST

### Benefits of PSA testing

- PSA testing may lead to prostate cancer being detected earlier, before symptoms develop.
- Detecting prostate cancer early before symptoms develop may improve the outcome (prognosis) and improve the chance of a complete cure.

### Limitations and risks of PSA testing

- False negative result: about 15 out of 100 men with a negative PSA test may have prostate cancer. This means some may be missed – which is why knowing the symptoms and seeing your GP if you have symptoms is so important.
- False positive result: about 75 out of 100 men with a positive PSA test have normal prostate investigations, i.e. no evidence of cancer. This may lead to unnecessary investigations, such as a prostate biopsy, and there may be side-effects from this investigation, such as bleeding or infection.
- A positive result may also lead to unnecessary treatment. Many prostate cancers are slow growing and may not become evident during a man's lifetime. Side-effects of treatment are common and can be serious, such as urinary incontinence and sexual problems.

Current statistics suggest that, in men between the ages of 50 and 66 who are screened for 13 years, annual PSA testing would result in the avoidance of death from prostate cancer of 1.3 per 1000 men.

## **NORMAL RANGE FOR A PSA TEST**

Age	PSA cut off
40-49	2.5 micrograms/litre or higher
50-59	3.5 micrograms/litre or higher
60-69	4.5 micrograms/litre or higher
70-79	6.5 micrograms/litre or higher
80+	There are no age-specific reference limits for men older than 80 years of age

If the PSA level is not raised prostate cancer is less likely but an examination of your back passage may be needed after the PSA result. Annual PSA tests might be advised.

If the PSA level is definitely raised the GP will do an urgent referral to a urologist (a specialist doctor) for further tests for prostate cancer. The specialist will discuss the options for further investigations, which may include a sample of the prostate gland being taken and an MRI scan.

## **CAUSES OF A RAISED PSA**

A raised PSA level may be due to a diagnosis of prostate cancer but about three out of four men with a raised PSA level will not be found to have prostate cancer. Other conditions may also cause a raised PSA level including:

- Inability to pass urine, causing an enlarged bladder
- Enlargement of the prostate that is non-cancerous (benign)
- Older age
- Acute prostatitis
- Transurethral resection of the prostate (TURP) operation. TURP is a prostate operation used if you have benign enlargement of the prostate.
- Having a catheter in place to help pass urine.

More information can be found here:

<https://www.nhs.uk/tests-and-treatments/psa-test/>

<https://www.gov.uk/government/publications/prostate-specific-antigen-testing-description-in-brief/psa-testing-and-prostate-cancer-advice-for-men-without-symptoms-of-prostate-disease-aged-50-and-over>