

Prostate Specific Antigen testing – a quick one page summary

- PSA is a protein produced by prostate cells that is produced normally to liquefy semen and thus allow spermatozoa to move more freely..
- Although PSA is secreted into prostatic fluid and semen, small amounts of PSA are present in blood.
- As a result of altered prostate architecture in prostate cancer, more PSA leaks out increasing the levels in the blood.

However, blood PSA is an **inaccurate** marker for prostate cancer, because **cancer can be present without increased PSA levels**, and **there are many other causes of increased PSA levels** (for example, benign prostatic enlargement, prostatitis, and urinary tract infection).

NICE recommend doctors offer PSA testing to:

- Men older than 50 years of age who request a PSA test.

And consider a PSA test in men with:

- Lower urinary tract **symptoms** (LUTS), such as nocturia, urinary frequency, hesitancy, urgency or retention. (Local urologists do not recommend doing a PSA when patients are in acute retention).
- Erectile dysfunction.
- Visible haematuria.
- Unexplained symptoms that could be due to advanced prostate cancer (for example lower back pain, bone pain, weight loss).
- Routine screening for prostate cancer is not national policy because the benefits have not been shown to clearly outweigh the harms.

PSA testing should not be offered to asymptomatic men aged under 50

Before a man makes a decision about PSA testing doctors should advise:

- **Benefits of PSA testing, including:**
 - **Early detection** — PSA testing may lead to prostate cancer being detected before symptoms develop.
 - **Early treatment** — detecting prostate cancer early before symptoms develop may extend life, or facilitate a complete cure.
- **Limitations and risks of PSA testing, including:**
 - **False-negative PSA tests** — about 15% of men with a negative PSA test may have prostate cancer, and 2% will have high-grade cancer. However, it is not known what proportion of these cancers become clinically evident.
 - **False-positive PSA tests** — about 75% of men with a positive PSA test have a negative prostate biopsy.
 - **Unnecessary investigation** — a false positive PSA test may lead to invasive investigations, such as prostate biopsy, and there may be adverse effects (for example bleeding, or infection).
 - **Unnecessary treatment** — a positive PSA test may lead to the identification and treatment of prostate cancers which would not have become clinically evident during the man's lifetime. Adverse effects of treatment are common and serious and include urinary incontinence and sexual dysfunction.

The [NHS Shared Decision Aid on PSA testing \(http://bit.ly/PSA-SDA\)](http://bit.ly/PSA-SDA) can help too and there's lots of information at www.prostatecanceruk.org