CANCER RESEARCH UK

Together we are beating cancer

Understanding the PSA blood test

Information to help you decide

This leaflet is for people without symptoms, who are thinking about having a PSA test because they're worried about prostate cancer.

Prostate cancer mostly affects men. Trans women, and non-binary people who were assigned male at birth can also get prostate cancer.

What is prostate cancer?

Prostate cancer starts in the prostate gland. The prostate is part of the male reproductive system. It helps to make semen and control the flow of urine from your bladder and out of your body.

Most prostate cancers grow slowly.

Slow-growing prostate cancers often don't need treatment right away. It might be surprising, but some prostate cancers never cause symptoms or affect how long someone lives. These cancers may never need treatment. A smaller number of prostate cancers grow more quickly and need treatment sooner.

It's not always clear which cancers need treatment.

Even with tests such as MRI scans and biopsies, it can be hard to tell which prostate cancers need treatment and which ones do not. This means some people may have treatment for a prostate cancer that would not have caused them any problems.

Many people feel that finding a cancer must always be a good thing.

But finding a slow-growing cancer can lead to worry, tests and treatment that may not be needed. Treatment can cause life-changing side effects such as difficulty getting an erection or leaking urine (incontinence).

What is a PSA test?

A PSA test is a blood test that measures the amount of **prostate specific antigen (PSA)** in your blood. PSA is a protein produced by the prostate gland. It is normal for all men to have some PSA in their blood.

When is the PSA test used?

A high level of PSA can be a sign of prostate cancer, so **for men with symptoms** a PSA test is sometimes used to help diagnose cancer. However, it's not a very reliable test and doesn't diagnose prostate cancer on its own.

You might have a PSA test if you:

- have symptoms that could be caused by prostate cancer
- do not have symptoms but have asked your doctor for a test
- are aged 45 to 61, with a BRCA2 gene change and a family history of certain cancer types
- are having treatment for prostate cancer
- are taking part in a trial or study, such as TRANSFORM

Why is the PSA test not very reliable?

The PSA test isn't a very reliable way of diagnosing prostate cancer. This is because:

- PSA levels can be high for reasons other than cancer. These can include a urine infection, vigorous exercise, recent ejaculation, anal sex, or an enlarged prostate. This means many men have a high PSA level but don't have prostate cancer.
- some men have a normal PSA level but do have prostate cancer
- PSA testing can pick up many slow-growing prostate cancers that will never cause symptoms or affect how long you live. This is called **overdiagnosis**. These cancers often still get treated, which can have life-changing side effects that are hard to live with.

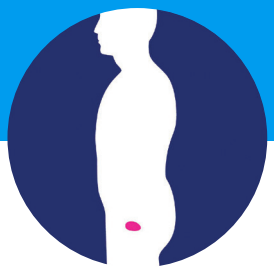
Screening looks for signs of cancer in people who don't have symptoms.

The PSA test is not reliable enough to be used as a screening test for all men.

Research shows that while some men may benefit from screening using a PSA test, many more would experience harms such as overdiagnosis and unnecessary treatment.

There is a new recommendation made by the UK National Screening Committee to offer prostate screening to men aged 45 to 61 with a BRCA2 gene change and a family history of some cancer types. For these men, screening using the PSA test is helpful. This is because they are at higher risk of developing a fast-growing prostate cancer that needs treatment. It may take time before this is available across the UK.

Talk to your doctor if you have a BRCA2 gene change or a strong family history of cancer.



Understanding the benefits and harms of a PSA test

While more testing sounds like a good thing, PSA testing has both possible **benefits and harms**. Understanding these can help you decide whether a PSA test is right for you.

PSA testing can help to detect some prostate cancers. But **if you don't have symptoms**, the harms of having a PSA test could outweigh the benefits.

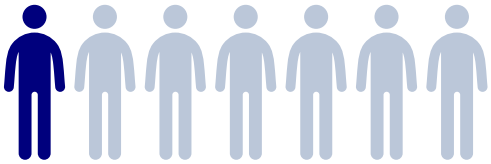
Possible harms:

- It could mean that you are diagnosed with a prostate cancer that may never cause symptoms or affect how long you live (**overdiagnosis**). This can lead to unnecessary treatment. Treatment can have life-changing side effects, such as difficulty getting an erection or leaking urine (incontinence).

  There are different treatment options for prostate cancer. **For those that have surgery, around half will have difficulty getting an erection, and around 20 in 100 men will still leak urine 5 years later.**

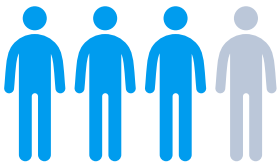
- It could miss some prostate cancers. This means some men with prostate cancer get a normal test result.

  The PSA test misses cancer in around 15 out of every 100 men without symptoms (about 1 in 7 men).



- It could suggest you have prostate cancer when you don't. PSA levels can be raised for other reasons. This means you might need an unnecessary test like a prostate biopsy which can have side effects.

  Around 75 out of every 100 men with a raised PSA will not have cancer (about 3 in 4 men).



Possible benefits:

- It could help to detect prostate cancer at an earlier stage before there are symptoms. This could mean you have more treatment options.

If I have symptoms, what should I do?

If you notice a change that's unusual for you, **talk to your doctor**.

Early-stage prostate cancer often doesn't cause symptoms. But later-stage prostate cancer can cause back or bone pain, tiredness and weight loss for no reason.

Most urinary symptoms such as difficulty peeing are not caused by prostate cancer, but it's important to get them checked.

You won't be wasting your doctor's time. They will want to hear from you about any symptoms.

I'm worried about my prostate cancer risk but I don't have any symptoms. What should I do?

Some people are more likely to be diagnosed with prostate cancer than others. **This includes older men, Black men, men with a family history of some cancers, and men with certain genetic conditions**. However, this doesn't mean you will definitely get prostate cancer.

Talk to your doctor if you have a strong family history of cancer or are worried about your risk of prostate cancer.

I am unsure what to do, what can help me decide?

Having a PSA test is a **personal choice**. It's important you have all the information before you make this decision.

Your doctor can explain the possible benefits and harms of having the test and help answer any questions you have.

It might be helpful to think about these questions:

- Do I have any symptoms of prostate cancer, or have I noticed an unusual change?
- Do I have a family history of cancer that I'm worried about?
- What are the possible benefits of having the PSA test?
- Am I comfortable with the possible harms of the PSA test?
- If my PSA levels were higher than expected, would I want follow-up tests? **These can include a digital rectal examination, a prostate biopsy, or an MRI scan.**
- Am I comfortable with the risk of being diagnosed with a cancer that may cause no symptoms or affect how long I live? **Being diagnosed with cancer can cause anxiety and you may have unnecessary treatment.**
- Am I comfortable with the risk of being treated for a cancer that may cause no symptoms or affect how long I live? **Tests can't always tell us which cancers need treatment. Treatment side effects can be life-changing so it's important to discuss these with your doctor. Sometimes the side effects of treatment can cause more problems than the cancer itself.**

These questions are to help you think about whether a PSA test is right for you. You can bring this leaflet with you if you are talking to your doctor about having a PSA test.

How to find out more

Visit our website

Find out more about the prostate and prostate cancer at **cruk.org/prostate**

Give us a call

Our Nurse Helpline is there if you're looking for any information or support. Just call **0808 800 4040.**

And if you have any questions about Cancer Research UK or would like to support what we're doing, you can call **0300 123 1022.**

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This information is based on the best available evidence when published and is reviewed regularly. It isn't a substitute for advice from your own doctor, who can talk through what the test might mean for you.