The communications union

LETTER TO BRANCHES

@CWUNews The Communications Union www.cwu.org

No. 198/24

6th June 2024

Dear Colleagues,

Prostate Cancer – Raising Awareness and Campaigning for a National Screening Programme

As we approach Men's Health Week 2024 with the UK theme "Lets Talk Prostate" this is an update report on the research, campaigning and raising awareness work undertaken by the Health, Safety and Environment Department and in particular the call for a national screening programme.

As CWU Branches, Regions and health and safety reps will well know Prostate Cancer is an important subject matter that the Health, Safety & Environment Department has done a huge amount of work and campaigning on over the years to raise awareness amongst our Regions, Branches and members.

Prostate Cancer is a subject which is also personally dear to our heart as two former CWU National Official colleagues and long-standing friends died of Prostate Cancer; Dave Ward former CWU Education and Training Officer lost his battle against prostate cancer and passed away on 1 February 2020. Former CWU National Romec/RMP&FS Rep and Chair of our London Postal Engineering Branch, Cyril Onyejekwe, passed away on Sunday 10 March 2019 after a long battle with Prostate Cancer and myelofibrosis.

Prostate cancer is the second most common cancer in men, and rates are on the rise. By 2030 its forecast that there'll be 1.7 million men living with prostate cancer in the UK. It's already killing hundreds of thousands of men each year, and those who survive face serious side effects.

The Health, Safety & Environment department has worked hard on awareness raising, producing LTBs, Fact Sheets, Posters and a Black Workers Fact Sheet/Leaflet/Flyer has been produced, as requested by the Black Workers Conference which was very well received indeed – Black Workers being higher risk etc. (See copies attached).

The first **Prostate Cancer** Campaign we in the Health, Safety & Environment Department ran was our "Water Works" Campaign with Posters and Leaflets in 2003.

We ran our first 'Movember' Help Save Men's' Lives Campaign in 2016 Highlighting **Prostate Cancer**, Testicular Cancer and Suicide Prevention with posters, leaflets and pocket cards.

In 2017 we published LTB 165/17 – launching a CWU 'Prostate Cancer Awareness Campaign' in conjunction with 'Prostate Cancer UK'. (Copy attached). This included;

- Five pages of general information plus,
- Diet and physical activity for men with prostate cancer,
- Know your prostate - A guide to common prostate problems,
- Prostate cancer - A guide for men who've just been diagnosed,
- What is my risk of prostate cancer? Guide.

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In 2017 we repeated the 'Movember' **Prostate Cancer** campaign with an extensive, detailed report and Guidance in LTB 597/17. The Guidance on Prostate cancer links in the LTB are;

- https://uk.movember.com/mens-health/prostate-cancer
- https://uk.movember.com/about/prostate-cancer

Also in 2017 we ran our "Seven Health Checks Men Must Do" Campaign which focused on Prostate Cancer.

In 2019 we ran the CWU **'Prostate Cancer** and Your Risk' campaign with a New CWU Leaflet & Information for Black Men following CWU Conference Motion 47(2018), launched at the CWU Black Workers Conference which was exceptionally well received. Figures state that black, Caribbean and mixed-race men are more likely to die from prostate cancer than any other group of men. (See Leaflet pdf copy attached).

Branches and Regions will be aware that 'Calling on the UK Government to introduce **'Prostate Cancer Screening'**. As well as raising awareness amongst members of Prostate Cancer, its signs, symptoms and to encourage members to get checked and PSA tested where appropriate is already CWU Conference Policy through the carriage of Composite Motion 36(2022) and Composite Motion 68(2016), Motion 47(2018) and this year Motion 12(2014) was carried.

The Health, Safety and Environment Department has pursued and investigated the issue of Prostate Cancer Screening with national subject matter experts and in fact we had correspondence and discussions with Laura Kerby CEO, Jonathon Waxman OBE President and Jonathan Kay Health Information Team Lead of 'Prostate Cancer UK', the main Charity in this area, to seek their expert advice and check on the up to date medical and research situation regarding **Prostate Cancer Screening** and in particular the suitability of using the PSA test for this purpose. A copy of the detailed written advice and response from 'Prostate Cancer UK' dated April 2022 is attached. This has been previously shared with Branches and Regions involved in past Conference Motions to update them.

See also attached the Gov.UK – 'UK National Screening Committee' advice and recommendation which is supported by all the main Cancer charities and Royal Colleges

In short 'Prostate Cancer UK' along with the 'UK National Screening Committee' and other medical experts and stakeholder organisations do not currently recommend screening for prostate cancer. This we are informed, is because the PSA test is not accurate enough to detect prostate cancer that needs treatment and the potential harm from PSA-based screening programmes. PSA testing in the UK is only recommended in people suspected of having prostate cancer and symptoms. In terms of a national screening programme for prostate cancer, they confirmed that the PSA test is not a suitable screening tool, due to its low specificity and sensitivity. A man's PSA can be high when he does not have cancer (false positive), conversely he can have a low PSA when he has clinically significant cancer (false negative). The PSA test can't differentiate between low-risk cancer that may never cause any harm, and aggressive disease that requires immediate treatment. Although, clinical trials have shown that using the PSA test to identify prostate cancer within a population can save lives, screening using the PSA tests also increases over diagnosis, overtreatment and invasive biopsies.

(Note: The UK National Screening Committee (UK NSC) in part of Public Health England and advises ministers and the NHS in the 4 UK countries about all aspects of population screening and supports implementation of screening programmes).

At 2022 CWU Conference, the above information was presented to CWU Conference and after the debate on Composite Motion 36, which the NEC supported with the qualified support, representatives of the two Regions and four Branches (Midland Regional Committee, Eastern Regional Committee, South Midlands Postal, Scotland No.2 and South Central Postal) were invited to meet outside Conference to be briefed on the Prostate Cancer UK advice with copies distributed to those delegates who attended.

There is no screening programme for prostate cancer currently because unfortunately we don't have a reliable enough test to use, and the PSA test available at the moment, referred to in the motion 36(2022) has significant risks, so the experts tell us. We're informed by the experts that the PSA test can help doctors to work out how likely a man is to have prostate cancer but this test is not reliable enough to use as part of a national screening programme. Ongoing research is seeking to find a reliable test suitable for screening.

UK National Screening Committee:
The UK National Screening Committee has decided that the disadvantages of regularly screening men using the PSA test outweighs the possible advantages as it could lead to over-diagnosis and over treatment of 'harmless' Conditions. The Charities (Prostate Cancer UK and Cancer Research UK) supports this position on screening but the charities also both support and monitor developing research into screening for prostate cancer.

The UK National Screening Committee was established in 1996 and since April 2013 it has been part of Public Health England. It consists of a number of eminent medical experts and advises Government Ministers and the NHS across the four UK countries on all aspects of screening policy and it supports implementation by co-ordinating the screening of people for medical conditions within the United Kingdom. It assesses the evidence for programmes against internationally recognised criteria, using research evidence, economic evaluation and pilot programmes.

The "Stockholm-3" model for Prostate Cancer detection:

In a widely publicised development (see attached Daily Mirror News Clip), the "Stockholm-3" model for Prostate Cancer detection has been claimed to offer a solution with potential to improve the accuracy of prostate cancer diagnosis for men across Europe and around the world. Professor Henrik Grönberg a Swedish doctor, cancer researcher and professor of cancer epidemiology developed the new diagnostic blood test process because he said the major problem with PSA screening is too many unnecessary biopsies and inaccurate diagnosis. Stockholm 3 is available in Sweden, Finland, Norway and Denmark, with plans to launch across the rest of Europe and the world. The technology is not currently used in the NHS.

The UK National Institute for Health and Care Excellence (NICE) have considered the "Stockholm-3" model for prostate cancer screening and subsequently published a Medtech innovation briefing [MIB303] on 9 August 2022 (copy attached). Four experts were drafted in to look at "Stockholm-3" and contributed to the development of the briefing along with Prostate Cancer UK. They were; Dr John Bolodeoku, consultant chemical pathologist, Mr Aniruddha Chakravarti, consultant urological surgeon, Mr Freddie Banks, consultant urologist and Prof Sanjeev Madaan, consultant urological surgeon, along with Prostate Cancer UK. The experts concluded that there were advantages and potential disadvantages with the "Stockholm-3" model and <u>All experts recommended additional research.</u>

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One expert felt that there was a need for long term (over 15 years) longitudinal follow-up data in people who had testing with the 'Stockholm 3' technology and who did not have an MRI or biopsy. Another expert noted the need for research to see how the technology works in Black, Asian and minority ethnic populations. The expert also acknowledged there is an ongoing study in the US which might address this issue. One other expert recommended that additional research in the UK setting was needed and stated that the issue which would prevent adoption of the technology would be the additional cost of it and the unclear benefits in the NHS setting.

Prostate Cancer UK saw some benefits of Stockholm 3 in respect of resulting in quick or accurate care provision also preventing harm from unnecessary biopsies but noted the potential disadvantages of the technology which may include possible side effects and practical difficulties, for users or carers. Regular use of this technology within the NHS could create delays within pathology which could delay a person's diagnosis. The cost of the Stockholm 3 test is also significant and would be an issue for mass use within the NHS.

'The REIMAGINE study' and 'The LIMIT study'

I attach for your interest and information two recent reports on two interesting and promising 'Prostate Cancer screening studies', the 'The REIMAGINE study' and 'The LIMIT study'. Both involve top expert Consultants, Doctors, medical imaging experts. These reports explain well the current situation and problems with existing screening and diagnosis and of course the need to develop more reliable and consistent diagnosis methods on which to base a 'National Screening Programme.'

Luminal Index MRI Identification of Prostate Cancer (LIMIT Study) Supported by Cancer Research UK the team involved have developed a new MRI technique that can allow prostate cancer to be detected using a 5-minute scan as opposed to the current 35–40-minute MRI scan. As this novel scan is simple, cheap and has good performance, it can be delivered within the community setting even using an MRI scanner located in a travelling van. We believe that providing scans in the community setting could allow men, who would otherwise not be scanned, the opportunity to have their cancer detected earlier. Th**is research is being done on the basis that** MRI is the best available test for the detection of prostate cancer, but at present this can only be provided in a hospital setting. Whilst MRI is being used, there are still many men (about 16%) that are being diagnosed with late-stage disease and almost 12,000 men dying per year from prostate cancer in the UK. Clearly, these men are not being scanned early enough in the time-course of their disease for treatment to make a difference. If we can detect their cancer earlier, we think we might be able to reduce deaths from prostate cancer. If LIMIT is successful, a national-level trial would also be required before prostate cancer screening becomes standard clinical practice.

Professor Mark Emberton (UCL Surgical & Interventional Science and consultant urologist at UCLH), senior author of the study, said: "The UK prostate cancer mortality rate is twice as high as in countries like the US or Spain because our levels of testing are much lower than other countries. Given how treatable prostate cancer is when caught early, I'm confident that a national screening programme will reduce the UK's prostate cancer mortality rate significantly. There is a lot of work to be done to get us to that point, but I believe this will be possible within the next five to ten years."

Conclusion:

In respect of the CWU's support for a fit for purpose, universally recognised, accurate and effective screening programme, we are 'pushing at an open door' right now. What we need is a medical and scientific breakthrough by those working hard to find one. Hopefully, it will come sooner rather than later. In the meantime the advice available from the NHS and the Charities, 'Cancer Research UK', 'Prostate Cancer UK', 'Tackle Prostate Cancer', 'Orchid' etc. we are all looking forward to the day of a breakthrough and an effective, accurate test, fit for purpose and a UK wide national screening programme.

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The HS&E Department fully supports the need for a national screening programme and will continue working on this, supporting the call for continued and increased investment and support to find and deploy an effective reliable screening test which the scientists are still searching for and which the charities are supporting.

In the meantime the CWU will continue working with the Prostate Cancer Charities, NHS and the employers to raise awareness of Prostate Cancer amongst our Branches and members, encouraging members to be aware of the signs and symptoms of Prostate Cancer and not to delay going to their GP to get checked out and PSA tested as necessary and if recommended by specialist urologist consultants and doctors in order to diagnose conditions requiring treatment in order to catch it early and in doing so successfully treat the condition at an early stage when the cure success rate is at its highest.

Attachments:

- Jonathan Kay Prostate Cancer UK Advice
- Gov.UK – UK National Screening Committee Recommendation
- LTB 165/17Diet and Physical Actibity for Men with Prostate Cancer
- Know Your Prostate – A Guide To Common Prostate Problems
- Prostate Cancer – A Guide For Men Who've Just Been Diagnosed
- What is my Risk of Prostate Cancer
- CWU Prostate Cancer Awareness Black Workers Leaflet
- Prostate Cancer Screening – Daily Mirror 18 May 23
- NICE Briefing on 'Stockholm 3' Prostate Cancer Screening Aug 23

Regards and Best Wishes.

Yours sincerely

Dave Joyce
National Health, Safety & Environment Officer

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No. 165/2017

20th March 2017

Ref: P3/16

Prostate Cancer Awareness Campaign 2017

To: All Branches

Dear Colleagues,

Prostate Cancer is the most common type of cancer in men. It can be treatable if caught early. It usually affects men over 50 and is rare in younger men. It differs from most other cancers in the body, in that small areas of cancer within the prostate are very common. It may also stay dormant (inactive) for many years. Most Prostate Cancers grow very slowly. But in a proportion of men, Prostate Cancer can grow more quickly and in some cases may spread to other parts of the body, particularly the bones.

Below are some of the very basic facts and figures about prostate cancer.

Across the UK

- Prostate cancer is the most common cancer in men.
- Over 47,000 men are diagnosed with prostate cancer every year – that's 130 men every day.
- Every hour one man dies from prostate cancer – that's more than 11,000 men every year.
- 1 in 8 men will get prostate cancer in their lifetime.
- Over 330,000 men are living with and after prostate cancer.

In Scotland

- More than 3,000 men are diagnosed with prostate cancer every year in Scotland.
- More than 900 men die from prostate cancer every year in Scotland.
- Every day two men die from prostate cancer in Scotland.

In England

- Almost 40,000 men are diagnosed with prostate cancer every year in England.
- More than 9,500 men die from prostate cancer every year in England.
- Every hour one man dies from prostate cancer in England.

In Wales

- More than 2,500 men are diagnosed with prostate cancer every year in Wales.
- More than 600 men die every year from prostate cancer in Wales.

In Northern Ireland

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- More than 1,000 men are diagnosed with prostate cancer every year in Northern Ireland.
- More than 200 men die every year from prostate cancer in Northern Ireland.

Most Common Cancer in Men

Prostate Cancer is the most common cancer in men and many feel like it's hit them out of the blue. Often men have no signs or symptoms and little awareness of the disease that kills 11,000 men in the UK every year and the number of men with the disease is rising at an alarming rate. It's vital they know they can turn to Prostate Cancer UK for support and information. The CWU is joining the Cancer Charities along with other organisations and employers to reach out to men and spread the word about Prostate Cancer. The Charity also needs more people to know about Prostate Cancer to raise money and help save Men's lives through research, support and information.

What is Prostate Cancer?

Prostate Cancer can develop when cells in the Prostate Gland grow in an uncontrolled way. Often it grows slowly. It might never cause any problems but sometimes it's more aggressive and needs treating, to slow it down or stop it spreading to other parts of the body.

What are The Symptoms?

Some men with Prostate Cancer may have no symptoms at all and some men may have some of these symptoms:-

- needing to urinate more often than usual, including at night or needing to go again after two hours
- difficulty starting to urinate
- straining or taking a long time to finish urinating
- a weak flow when urinating
- a feeling that the bladder is not fully emptied
- needing to rush to the toilet
- dribbling urine after finishing.

Less Common Symptoms include

- pain when urinating
- pain when ejaculating
- blood in urine or semen*
- problems getting or keeping an erection – this isn't a common symptom of a prostate problem and is more often linked to other health conditions such as diabetes or heart problems.

*Blood in urine or semen can be caused by other health problems. Talk to your doctor if you see any blood in your urine or semen.

Are You At Risk?

In the UK, about 1 in 8 men will get prostate cancer at some point in their lives. See attached document: *'What is my risk of prostate cancer?'* to see if you are at risk.

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High Risk Group - Over 50's
Prostate Cancer mainly affects men over the age of 50 and your risk increases if your father or brother has had Prostate Cancer. Men are two and a half times more likely to develop Prostate Cancer if their father or brother has had it.

High Risk Group - Black African or Caribbean descent
Black men are three times more likely to develop Prostate Cancer than white men of the same age. If you're a black man over 45, speak to your GP about your risk of Prostate Cancer.

Prostate Cancer Affects Everyone including Women
Prostate Cancer may be a male disease, but it is important that women know about it too. Women have husbands, partners, brothers, fathers and family members, so everyone is affected and it's important that women know about it too!

Campaigns in 2017

Prostate Cancer UK is supporting many campaigns throughout 2017 and you can get involved wherever you are in the UK. See the links below for further information on how you can participate in 2017.

March For Men: http://prostatecanceruk.org/get-involved/march-for-men
Many events are planned across the nation in June - London, Leeds, Glasgow, Exeter, Newcastle and others being added all the time. A marathon walk visiting 40 Football Clubs is one confirmed event. Go to the above link if interested in participating, donating or sponsorship.

Find a Fundraising Event: http://prostatecanceruk.org/get-involved/find-a-fundraising-event
The new 'find an event' webpage helps locate just what those wishing participate want to do. By entering the dates, locations and type of event e.g. run, cycle, walk, gold, social event etc., the Charity Search engine does the rest and tells you what's already been organised.

Further Information:
For further information about Prostate Cancer follow the link to the Prostate Cancer UK website:

http://prostatecanceruk.org/?gclid=CNOQxdPbydICFQ4UGwody8wDaw

London

- Address: Prostate Cancer UK, Fourth floor, The Counting House, 53 Tooley Street, London SE1 2QN
- Phone: 020 3310 7000
- Contact online

Scotland

- Address: Prostate Cancer UK, Unit F22-24, Festival Business Centre, 150 Brand Street, Glasgow, G51 1DH
- Phone: 0141 218 4760
- Contact online

North West England

- Address: Prostate Cancer UK, 11th Floor, Regent House, Heaton Lane, Stockport, SK4 1BS
- Phone: 0161 475 1720
- Contact online

Prostate Cancer UK - Confidential Specialist Nurses Helpline: 0800 074 8383

- Know Someone Who Needs Help or Information?
- They can speak to a Specialist Nurse in confidence and free of charge on **0800 074 8383.**

Publications
Useful publications and information factsheets are available for purchase and download on the Prostate Cancer UK website:

http://prostatecanceruk.org/prostate-information/our-publications/publications

Attachments:-

- Know Your Prostate
- Prostate Cancer A Guide for Men Who've Just Been Diagnosed
- What Is My Risk Of Prostate Cancer
- Diet and Physical Activity for Men with Prostate Cancer

Raise awareness in your Branch - Order an Information or Supporters Pack:

An introduction to the prostate gland and common prostate problems Includes:- Know your prostate: a guide to common prostate problems**,** Understanding the PSA test and Diet, activity and your risk of prostate cancer.

Prostate Cancer UK's Information Pack and Supporter Pack has all the resources you need to start raising awareness of prostate cancer.

Inside you'll get posters, pocket guides and leaflets which explain what prostate cancer is, which men are most at risk, and what men should do if they are worried about their risk. Included is the Man of Men pin badge which you can wear to show you're a supporter of Prostate Cancer UK and the Stronger Knowing More campaign.

Links:-

http://prostatecanceruk.org/prostate-information/our-publications/publications/prostate-information-pack

http://prostatecanceruk.org/get-involved/black-men-and-prostate-cancer/help-us-spread-the-word/order-an-information-pack

Specialist Nurse Helpline 0800 074 8383:

Whether you have a Branch member who has been diagnosed or have concerns about prostate cancer, Prostate Cancer UK is here to give support. They can help individuals or help partners, family members, friends, and health professionals with any questions they have.

Call: 0800 074 8383
Mon-Fri: 9am-6pm
Weds: 10am-8pm

Individuals can e-mail by going to the Specialist Nurse Webpage at:
http://prostatecanceruk.org/get-support/our-specialist-nurses/email-our-specialist-nurses

Telephone translation service:
There is also a telephone translation service available via this helpline and the Prostate Cancer UK Specialist Nurses can speak to individuals over the phone, in their own or preferred language, via an interpreter. Just call 0800 074 8383 and say, in English, the language requested.

Yours sincerely

Dave Joyce
National Health, Safety & Environment Officer

"CWU - Supporting Prostate Cancer UK - Helping end male cancer deaths from Prostate Cancer"

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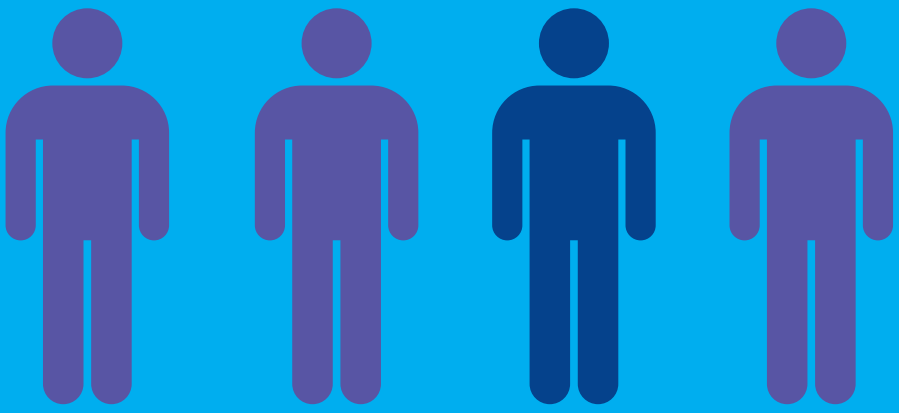
1 in 4 black men will be diagnosed with prostate cancer at some point in their lives.



If you're a black man and you're over 45, speak to your GP about your risk of prostate cancer, even if you don't have any symptoms.

What is the prostate?

The prostate is a gland. Only men have a prostate. The prostate is usually the size and shape of a walnut. It sits underneath the bladder and surrounds the urethra, which is the tube men urinate (pee) and ejaculate through. The prostate's main job is to help make semen – the fluid that carries sperm.

Does prostate cancer have any symptoms?

Most men with early prostate cancer don't have any symptoms. So, even if you don't have symptoms, if you're a black man over 45, speak to your GP about your risk of prostate cancer.

Some men with prostate cancer may have difficulty urinating. Men with prostate cancer that's spread to other parts of the body might have pain in the back, hips or pelvis, problems getting or keeping an erection, blood in the urine, or unexplained weight loss. These symptoms are usually caused by other things that aren't prostate cancer. For example, if you notice any changes when you urinate or have trouble controlling your bladder, this could be a sign of an enlarged prostate or prostatitis. But it's still a good idea to talk to your GP so they can find out what's causing them.

Why are black men at higher risk?

We don't know why black men are more likely to get prostate cancer than other men. But it might be linked to genes. Genes are sets of instructions inside every cell in your body and are inherited from your parents. If your father or brother has had prostate cancer, you are at a higher risk of developing it.

What is the risk for men with mixed black ethnicity?

If you have mixed black ethnicity, you are likely to be at higher risk of prostate cancer than men who aren't black. But we don't know your exact risk because we don't have enough information on prostate cancer in men with mixed black ethnicity. And we don't know whether it makes a difference if it's your mother or father who is black.

For further information, please visit:
www.strongerknowingmore.org
Or call the Prostate Cancer UK helpline:
0800 074 8383

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Diet and physical activity for men with prostate cancer

In this fact sheet:

This fact sheet is for men with prostate cancer who want to improve their general health. Your partner, family or friends might also find it helpful.

We describe how a healthy diet and regular physical activity may help you manage the effects of prostate cancer and its treatment. We also explain why staying a healthy weight may be very important for men with prostate cancer.

We don't recommend any set diet or exercise programme. Instead, we suggest ways to improve your overall health, including some changes that might help with your prostate cancer.

This fact sheet doesn't talk about eating problems caused by prostate cancer or its treatment. If you want information on these, ask your doctor or nurse. They may be able to refer you to a dietitian. You can also speak to our Specialist Nurses, in confidence, on 0800 074 8383.

PROSTATE CANCER UK

Why is a healthy lifestyle important?

A healthy lifestyle can give you more control over your health and help you to improve it. Lots of things can affect your health, including:

- body weight
- diet
- physical activity
- alcohol
- smoking.

Body weight

Staying a healthy weight can reduce your risk of many health problems, including heart disease, diabetes and some cancers. There is also strong evidence that being overweight or obese increases the risk of aggressive or advanced prostate cancer. So it may be particularly important for men with prostate cancer to stay a healthy weight.

Being a healthy weight may mean your prostate cancer is less likely to spread after surgery or radiotherapy. Hormone therapy may also be less effective if you are very overweight. Staying a healthy weight might also help you manage or reduce some of the side effects of treatments, such as urinary problems after surgery. See page 11 for more information.

How do I know if I am a healthy weight?

Your body mass index (BMI) can be a good way to check if you are a healthy weight for your height. You can use the chart below to work out if your BMI is healthy.

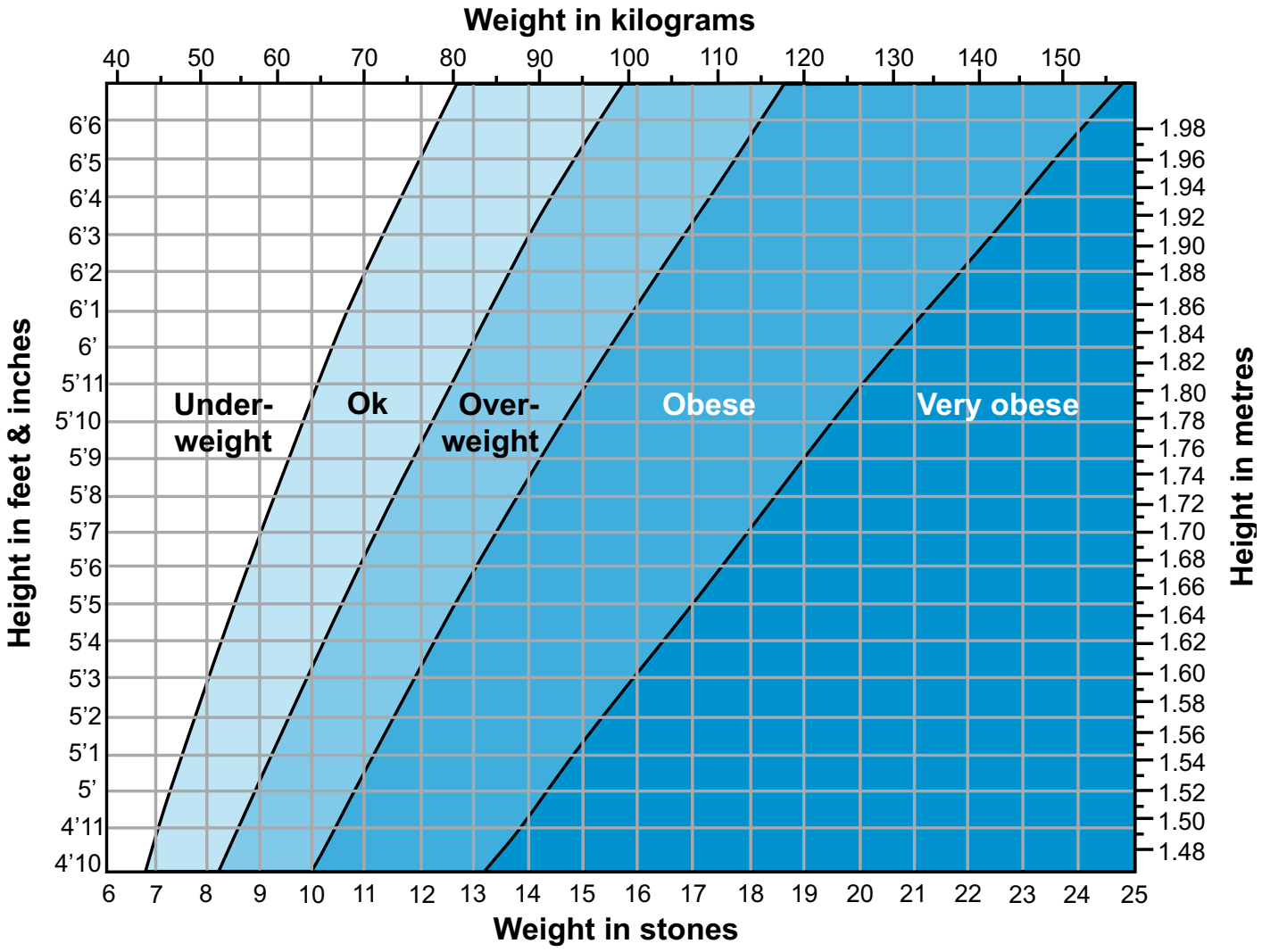
- Mark your weight in stones or kilograms and draw a line from top to bottom.
- Then mark your height in feet and inches or metres and draw a line from left to right.
- The two lines will meet in one of the shaded areas, showing whether you are a healthy weight for your height.

Another way to check if you're a healthy weight is to measure your waist size (circumference). You can work out your waist size by wrapping a tape measure around your body, half-way between the top of your hips and the bottom of your ribs.

For a man, if your waist size is more than 94cm (37 inches), you have a higher risk of health problems and you might want to try to lose some weight.

It's important to lose weight steadily by making healthy changes to your diet, and slowly increasing the amount of exercise you do. If you lose weight too quickly, your body may not get all the nutrients it needs, and you may put the weight back on again. See page 4 for more information about healthy eating, or page 10 for information on physical activity.

Being underweight can also affect your health. For example, underweight men have a higher risk of bone thinning. Some types of hormone therapy can also cause bone thinning, so men on hormone therapy may be particularly at risk of bone thinning if they are also underweight.



Talk to your doctor if you're worried about your weight. They can help you think about suitable changes to your diet or physical activity. They may be able to refer you to a dietitian. You can also get more information from other organisations (see page 15).

Diet

A healthy diet is important for general health. It can help you stay a healthy weight and can lower your risk of some health problems, such as heart disease, diabetes and some other cancers. Read more about healthy eating on page 4.

There are some foods that might be helpful for men with prostate cancer (see page 6). For example, certain foods might help reduce the chance of prostate cancer spreading to other parts of the body (advanced prostate cancer). Other foods may help reduce or manage some of the side effects of treatment (see page 11).

There are also some foods that you might want to eat less of, as they may be harmful for men with prostate cancer (see page 7).

Physical activity

Physical activity is any movement of the body that uses energy. It doesn't have to be a sport – it could be walking, swimming or gardening. Physical activity is important for general health and wellbeing. It can help you stay a healthy weight by using spare energy that the body would otherwise store as fat. Being a healthy weight may help to lower your risk of advanced prostate cancer (see above).

Physical activity can also help with some of the side effects of treatment (see page 11) and help you cope with feelings of anxiety or depression. Some research suggests that physical activity may help slow down the growth of prostate cancer, although other studies haven't found this. For more information about physical activity, see page 10.

Alcohol

We don't know if alcohol has any specific effect on men with prostate cancer. But we do know that drinking too much alcohol can make you put on weight and causes health problems such as heart disease and some other cancers. The government suggests that men should not regularly drink more than three to four units of alcohol a day.

How many units of alcohol are in a drink?

- A pint of lager, beer or cider contains 2-3 units.
- A 175ml glass of wine contains about 2 units.
- A 25ml measure of 40 per cent single spirit with mixer contains 1 unit.

Your doctor or nurse can tell you whether alcohol will affect your prostate cancer treatment. If you have urinary problems after treatment, try to drink less alcohol. Alcohol can irritate the bladder and make urinary problems worse. NHS Choices has more information about managing how much you drink.

Smoking

Smoking increases the risk of health problems such as heart disease, stroke and some other cancers. It may also be harmful for men with prostate cancer. Some studies suggest that smoking may increase the chance that prostate cancer will grow and spread to other parts of the body (advanced prostate cancer). The more you smoke, the greater the risk. If you smoke there is also a greater chance that your prostate cancer will come back after surgery or radiotherapy. And heavy smoking may mean you're more likely to die from prostate cancer. But if you stop smoking, your risk should start to drop – and after 10 years it could be as low as men who have never smoked.

Stopping smoking can also help to reduce the side effects of treatment for prostate cancer. For example, you may be less likely to get certain urinary problems after radiotherapy if you don't smoke. Smoking also increases your risk of bone thinning. If you're having hormone therapy for your prostate cancer you're already at risk of bone thinning, but stopping smoking will help reduce your overall risk.

For information about stopping smoking, talk to your doctor or visit the NHS Choices website.

How can I eat more healthily?

Food is an important and enjoyable part of everyday life. It's important to remember this if you decide to improve your diet. You should still be able to enjoy meals, as well as occasional treats.

A healthy diet doesn't need to be boring. In fact, it's good to eat lots of different foods to make sure you get a range of nutrients. You could try some new foods to add even more variety to your meals. For example, you could set yourself a goal to try a new fruit or vegetable each week.

Set yourself realistic goals and start by making small changes that you feel comfortable with. Trying to make lots of big changes at once can be difficult, and you may find it hard to keep them going over time.

Try to cut down on unhealthy foods, such as those high in sugar or saturated fat, and those with added flavouring or preservatives. Look at the labels on packaged foods to find out their calorie (energy), fat, salt and sugar content. You can then compare products to find the healthiest ones. Remember that low-fat foods aren't always healthy – some may still be high in sugar and calories.

If you want help to improve your diet, ask your doctor to refer you to a dietitian. They can help if you're making big changes to your diet, or if you have other health problems that could be affected by your diet, such as diabetes.

Fruit and vegetables

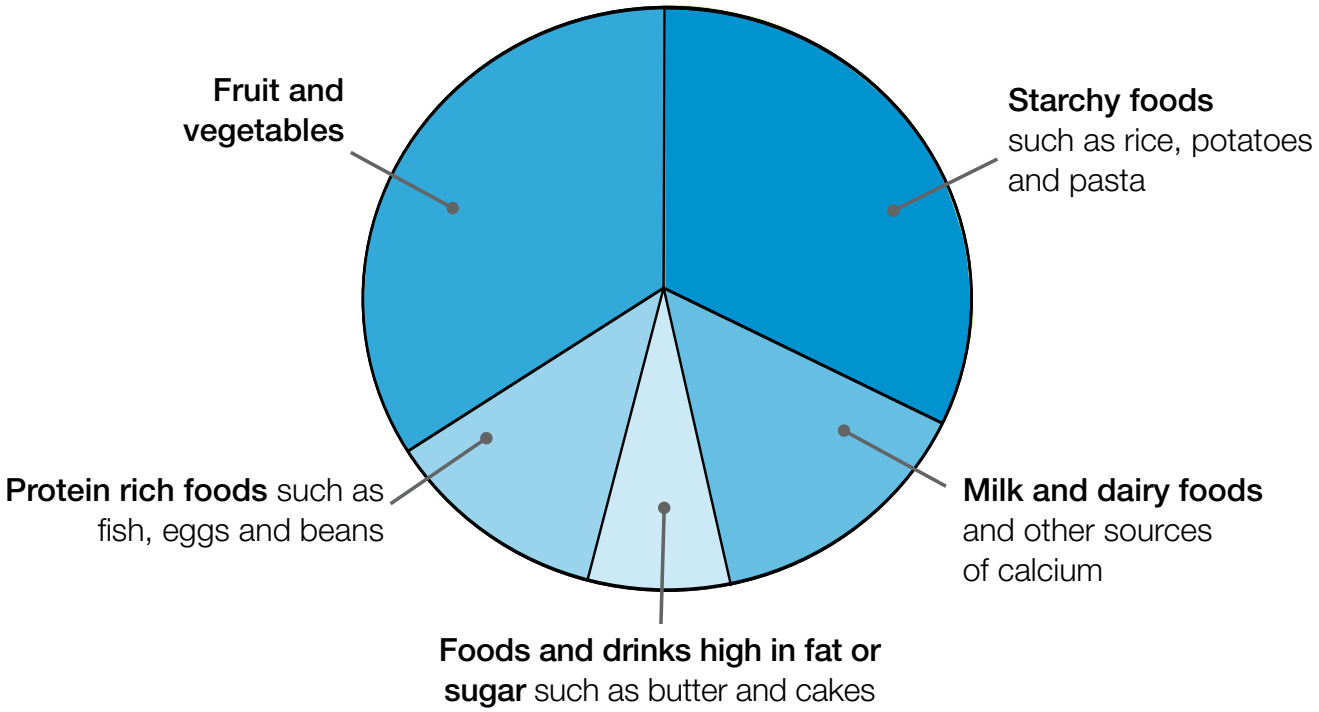
Fruit and vegetables are an important part of a healthy diet and a good source of vitamins, minerals and fibre. Eating lots of fruit and vegetables helps to reduce your risk of health problems, including heart disease and some cancers. It can also help you lose weight or stay a healthy weight.

Aim to eat at least five servings of fruit and vegetables each day. They can be fresh, frozen, dried or tinned with no added sugar or salt. One serving is roughly one handful or 80g in weight. Five servings may sound like a lot, but if you try to include one or two servings in each meal, and choose fruit as snacks, this should be enough. The table below gives examples of servings.

Some fruit and vegetables might help to slow down the growth of prostate cancer (see page 6). But we need more research before we can say for certain whether men with prostate cancer should eat more of these foods. For now, try to eat a variety of fruits and vegetables of different colours each day. Fruit and vegetables of different colours (for example, red, orange, purple and green) contain different nutrients.

Type of food	Examples of single servings
Small fruit	Two plums, two satsumas, seven strawberries, seven cherry tomatoes
Medium fruit	One apple, one banana, one nectarine
Large fruit	Half a grapefruit, one slice of melon, two slices of mango
Dried fruit	One tablespoon of raisins, two figs
Green vegetables	Two broccoli spears, four heaped tablespoons of green beans
Cooked vegetables	Three heaped tablespoons of carrots, eight cauliflower florets
Salad vegetables	One bowl of mixed lettuce leaves
Pulses and beans	Three heaped tablespoons of baked beans or kidney beans
Juice	One medium glass of unsweetened fruit or vegetable juice

The five main food groups



Ten steps to eating well

- **Eat three regular meals a day**. However, if you have loss of appetite or difficulty eating, try to eat small amounts regularly instead. If you're struggling to eat because of nausea (feeling sick), try to avoid strong smelling foods. It may help if someone cooks for you.
- **Include all the food groups**. The diagram above shows the proportions you should include in your diet to get the right balance of nutrients.
- **Eat at least five servings of fruit and vegetables each day**. See page 4 for more information and examples of servings.
- **Eat starchy foods at each meal**. These include potatoes, bread, rice, pasta, plantain, sweet potato and yam. Choose wholegrain and other high fibre options where possible. These give you energy and help you to feel full for longer if you are trying to lose weight.
- **Include some protein**. Protein-rich foods include fish, meat, eggs, nuts, seeds, beans and pulses.
- **Eat some dairy foods or non-dairy sources of calcium**. Choose low-fat dairy foods, such as skimmed or semi-skimmed milk and reduced-fat cheese. Non-dairy sources of calcium include soy products with added calcium, green leafy vegetables, and fish where you eat the bones. See page 7.
- **Choose foods that are low in saturated fat**. See page 8.
- **Eat less sugar**. Sugary foods include cakes, biscuits, puddings and sugary drinks.
- **Cut down on salt**. Eat less than 6g of salt each day. Look out for hidden salt in processed foods, such as bread, cereals, bacon and takeaways. Avoid adding salt when you cook – try using herbs and spices to add flavour instead.
- **Drink lots of water**. Try to drink around 1.5 to 2 litres (3 to 4 pints) a day.

Can any foods help with my prostate cancer?

There is some evidence that certain foods may help slow down the growth of prostate cancer or reduce the chance of it coming back after treatment. Below, we describe some of the foods that might be helpful for men with prostate cancer. But the evidence is very limited at the moment. We need more research before we can say for certain whether any single food can help slow down the growth of prostate cancer.

Soy and other pulses

Some studies suggest that chemicals in soybeans may help to slow down the growth of prostate cancer and prevent the cancer from coming back after treatment (recurrence). But other studies haven't been able to confirm this and we still need more research into the possible benefits of soy.

If you do decide to eat more soy, you could try soy products such as soybeans, soy milk, tofu, soy yoghurts, soy bread, miso and tempeh. Try to avoid soy products with added salt and sugar.

Soybeans belong to a group of plants called pulses or legumes. Some of the chemicals in soybeans are also found in other pulses, such as kidney beans, chickpeas and lentils. We need more research to find out whether men with prostate cancer might benefit from eating more pulses. But we do know that pulses are a good source of protein and other nutrients.

Top tip
Three heaped tablespoons of cooked pulses can count as one of your five daily portions of vegetables.

Green tea

Some evidence suggests that chemicals in green tea might protect against prostate cancer growth and advanced prostate cancer. But we can't be certain about the effects of green tea, as some other studies haven't seen the same benefits.

Green tea needs to be brewed for five minutes to ensure plenty of nutrients are released, making the flavour quite strong. You might want to choose a decaffeinated variety, as caffeine can irritate the bladder. This may be particularly important if treatment for your prostate cancer has caused urinary problems.

Top tip
Try drinking decaffeinated green tea instead of your usual hot drink.

Tomatoes and lycopene

Some studies have suggested that eating tomatoes may protect against prostate cancer growth and aggressive prostate cancer. This may be because of a plant chemical in tomatoes, called lycopene. But experts recently looked at all of the studies on lycopene and only found limited evidence of any benefit for men with prostate cancer. This means we can't be certain whether lycopene is helpful for these men.

Cooked and processed tomatoes, such as tomato sauces, soups, purees and pastes, are a better source of lycopene than fresh tomatoes. This is because the body absorbs lycopene more easily from tomatoes that have been cooked or processed, particularly with a little oil. Try to choose low salt and low sugar options as some products, such as ketchup, may have added salt and sugar.

Lycopene is also found in watermelons, pink grapefruits, guava and papaya. As lycopene isn't stored inside the body for very long, it may be useful to eat foods containing lycopene regularly. You may need to avoid grapefruit if you take certain medicines, including some drugs to lower your cholesterol or blood pressure, drugs to treat erection problems, and warfarin to thin your blood. Ask your doctor or pharmacist if you're unsure.

Top tip
If you want more lycopene in your diet, try cooking with a tomato-based sauce or eating tomato soup every couple of days.

Cruciferous vegetables

Cruciferous vegetables include broccoli, cauliflower, cabbage, Brussels sprouts, bok choy, spinach and kale. Some studies suggest that cruciferous vegetables may help slow down the growth of prostate cancer and reduce the risk of advanced cancer. But other studies haven't found this, so we need more research into the effects of cruciferous vegetables.

Top tip
You might want to include cruciferous vegetables in your five daily portions of fruit and vegetables.

Pomegranate

Some research suggests that pomegranate juice may be good for men with prostate cancer. But we don't yet know if this is the case. One small study looked at the effect of pomegranate juice in men whose prostate specific antigen (PSA) levels had started to rise after surgery or radiotherapy. Drinking one glass of concentrated pomegranate juice every day led to a slower increase in the men's PSA levels. However, another small study found that pomegranate juice had no effect on PSA levels in men with advanced prostate cancer.

If you want to try pomegranate, choose a variety with no added sugar. You may need to avoid pomegranate if you use certain prescription drugs. Ask your pharmacist for advice.

Top tip
You could try drinking a glass of concentrated, unsweetened pomegranate juice each day instead of your usual fruit juice.

Are there any foods I should limit in my diet?

There is some evidence that eating a lot of certain foods may be harmful for men with prostate cancer. Below, we describe some of these foods. We don't recommend avoiding them completely, as we need more research to fully understand their effects. Until there's more evidence, you may still want to eat moderate amounts of the following foods as part of a healthy, balanced diet.

Dairy foods and calcium

Calcium is important for strong bones and overall health, so you need some in your diet. Normal amounts of calcium and dairy foods – which are high in calcium – won't increase your risk of advanced prostate cancer. But we don't know enough about the effect of large amounts of calcium or dairy foods.

Some studies suggest that eating more than 2000mg of calcium per day (the amount in about 1.6 litres of milk) may increase the risk of advanced prostate cancer several years later. But other studies have found no link. We can't say for certain that there's a link between dairy foods and advanced or aggressive prostate cancer. If there is a link, it might be due to the high levels of calcium in dairy foods, or it might be caused by something else.

Non-dairy sources of calcium, such as soy milk with added calcium, are widely available in supermarkets and health food shops. Choose varieties which are low in fat and have added calcium.

Top tip
Try to eat 700mg of calcium per day (see table). This is much less than the level that might be harmful. Most people can get all the calcium they need from food without using supplements.

Dairy sources of calcium	Amount of calcium
Semi-skimmed milk (200ml portion)	245mg
Plain low fat yoghurt (150g portion)	245mg
Cheddar cheese (30g portion)	205mg
Non-dairy sources of calcium	**Amount of calcium**
Tinned sardines with bones (100g portion)	500mg
Tofu (100g portion)	110mg
Kale (95g portion)	145mg
Kidney beans (60g portion)	45mg
Broccoli (85g portion)	35mg

If you're on hormone therapy, you'll need extra calcium to protect your bones. This is because hormone therapy can cause bone thinning, which may increase your risk of bone fractures.

Men on hormone therapy should aim for 1200 - 1500mg of calcium each day. This is still a safe amount. If you don't think there's enough calcium in your diet, speak to your doctor or nurse about taking calcium supplements.

Meat

The effect of red and processed meat on men with prostate cancer isn't clear, but some studies suggest that eating too much may raise your risk of aggressive and advanced prostate cancer. Red meat includes beef, pork and lamb. Processed meat is meat that has been preserved by smoking, curing or salting, or with preservatives. It includes ham, bacon, sausages and burgers. Meat cooked at very high temperatures or very well done, such as barbecued, grilled or fried meat, may also increase your risk of advanced cancer, particularly if it's red meat, processed meat, or poultry with the skin left on. This may be caused by chemicals that are made when meat burns. These chemicals can damage normal cells and cause cancer.

Some studies have also suggested that a diet that is low in meat but high in fruit and vegetables helps to slow the growth of prostate cancer.

Top tip
Try to eat no more than 500g of cooked red meat (700 to 750g before cooking) a week. You could choose white meat such as skinless chicken or fish instead. Avoid processed meat and meat cooked at very high temperatures.

Fat

Some studies have suggested a link between dietary fat (the fat found in food) and prostate cancer. For example, eating lots of saturated fat might be linked with an increased risk of prostate cancer coming back after surgery, and of advanced prostate cancer. And replacing animal fats with vegetable oils may help men with prostate cancer to live for longer.

Eating too much fat can also make you put on weight, which increases your risk of aggressive or advanced prostate cancer (see page 1). But some studies have found no link between a high-fat diet and advanced prostate cancer.

There are different types of fat. Unsaturated fats are thought to be healthier. They are found in plant foods such as olive oil, vegetable oils, avocados, nuts and seeds, and in oily fish such as salmon, mackerel and sardines. Saturated fats are less healthy. They are found in meat, cakes, biscuits, pastries, butter, and high-fat dairy products such as cheese.

You need to eat some fat for your body to function properly. But think about the type of fats you eat, and try to choose foods that contain unsaturated fats, including vegetable oils, rather than saturated fats.

The following tips can help you eat less total fat or less saturated fat.

- Choose tomato-based sauces instead of creamy ones.
- Replace fatty snacks such as crisps and biscuits with healthier options such as fruit.
- Avoid processed meat such as ham, bacon, sausages and burgers.
- Eat less red meat and remove any visible fat. Try eating chicken or fish instead.
- Remove any skin from chicken or turkey. The skin contains lots of saturated fat.
- Add less fat when you cook, and grill, bake or steam food instead of frying.
- Choose rapeseed oil for cooking and olive oil for salad dressings.
- Eat healthy fats from plant foods, such as avocados, nuts and seeds.
- Choose low-fat or fat-free milk, cheese and yoghurt, or use soy milk, rice milk or oat milk instead of dairy products.

Top tip
Swap some of your saturated fats for olive oil, nut oils or seed oils.

Should I use dietary supplements or herbal remedies?

Some people like to use dietary supplements or herbal remedies. But there's little evidence they're helpful for men with prostate cancer, and some may even be harmful.

Dietary supplements

There's little evidence that supplements are helpful for men with prostate cancer. Some supplements may also interfere with your treatment for prostate cancer, so let your doctor or nurse know if you're taking any.

Most people should be able to get all the nutrients they need by eating a balanced diet, without taking supplements. If you do choose to take supplements, don't take more than the recommended daily allowance (RDA) for each nutrient – large doses could be bad for your health. Some men may need to take specific supplements. For example, if you're on hormone therapy, your doctor might recommend calcium and vitamin D supplements. See page 8 for more information.

Vitamin E supplements

Some research has found that vitamin E from food might help to prevent prostate cancer and protect against advanced cancer. But vitamin E supplements don't seem to lower the risk of prostate cancer and might even be harmful. You do need vitamin E in your diet as it's important for good health. But you can get enough vitamin E from foods such as vegetable oils, nuts, seeds, avocados and cereals, without taking supplements.

Selenium supplements

Selenium is an important nutrient found in Brazil nuts, fish, meat and eggs. But evidence suggests that selenium supplements don't help to prevent prostate cancer. They may even be harmful for men with prostate cancer who already get enough selenium from their diet. However, this isn't likely to be a problem for people living in the UK, as many don't get enough selenium from their diet.

‘Superfood’ supplements

Some supplements are made from foods that are high in nutrients that may be particularly good for health. These foods are known as ‘superfoods’.

A recent study looked at the effect of a supplement containing pomegranate, green tea, broccoli and turmeric in men whose prostate cancer was being monitored. It found that men who took the supplement for six months were less likely to see a rise in the level of prostate specific antigen (PSA) in their blood than men who took a dummy supplement known as a ‘placebo’. But we need more research, including larger studies lasting for several years, to find out whether the supplement actually helps slow down the growth of prostate cancer.

Herbal remedies

Some men like to take herbal medicines to help manage their prostate cancer or the side effects of treatment. For example, some men drink sage tea to help with hot flushes, which are a common side effect of hormone therapy (see page 12). But there is very little evidence that herbal remedies can help to treat prostate cancer or reduce side effects.

Not all herbal remedies in the UK are licensed, and the quality varies a lot. Be very careful when buying herbal remedies over the internet. Many are made outside the UK and may not be high-quality. Many companies make claims that are not based on proper research. There may be no real evidence that their products work, and some may even be harmful. Remember that even if a product is ‘natural’, this doesn’t mean it is safe. For more information about using herbal remedies safely, visit www.mhra.gov.uk

It’s important to tell your doctor about any complementary therapies you are using, including herbal remedies. Some herbal remedies may interfere with your cancer treatment. Some may also affect your PSA level, making the PSA test unreliable.

What type of physical activity should I do?

The type of physical activity you do isn’t really important – the main thing is to get active. If you find an activity you enjoy, and that fits into your life, you’ll be more likely to keep doing it. The following tips may help.

- Walking, swimming, cycling and gardening are all good exercise.
- You can do simple things, such as getting off the bus one stop earlier, or using stairs rather than a lift.
- You can even exercise from your chair or bed. Try lifting and stretching your arms and legs – this can help improve your movement and muscle strength.
- If you’re trying to be more active, an exercise programme such as walking 10,000 steps a day can be useful. You might not manage this at first – just do what you can, and try to walk a little further each day. For more information about walking 10,000 steps a day, visit the NHS Choices website.
- Gentle resistance exercise, such as lifting light weights or using elastic resistance bands, is particularly good if you’re on hormone therapy and are at risk of bone thinning (see page 12). If you’re on hormone therapy or have cancer that has spread to the bones, check with your doctor before doing high-impact exercises such as running and contact sports.
- Try a variety of activities or sports so that you don’t get bored, and set some goals to aim for. You may prefer to exercise with a friend or in a group.

How much physical activity should I do?

This will depend on many things, including the stage of your cancer, any treatments you are having, and your fitness levels. Even if you can’t do a lot of physical activity, a small amount can

still help. Take things at your own pace and don't do too much. Make sure you rest when you feel you need to.

Aim to be physically active at least two to three times a week. Start gently for short periods of time, such as 10 to 15 minutes, and gradually increase the amount as you become fitter. If you can, build up to include 30 minutes of moderate exercise three to five days a week.

Moderate exercise means your heart should beat faster but you should still be able to talk – about the level of a brisk walk. 30 minutes may seem like a lot, but remember you can reach this amount by being active for 10 minutes, three times a day.

It's safe for men with prostate cancer and those having treatment to be physically active. But it might be a good idea to speak to your GP, nurse or hospital doctor before you start any kind of exercise plan. This is particularly important if you have other health problems, such as heart disease or problems with your joints or muscles.

Your GP, nurse or hospital doctor can talk to you about exercising safely. You could also ask to be referred to an exercise programme or a physiotherapist for further advice.

Can I exercise after surgery?

If you're having surgery to remove your prostate, you'll need to take it easy for the first couple of weeks after your operation. After the first couple of weeks, light exercise such as a short walk each day will help improve your fitness. But try to avoid climbing lots of stairs or other heavy exercise for the first eight weeks after your surgery.

If you're having keyhole surgery, you may be able to get back to your usual activities more quickly than after open surgery. Talk to your doctor or nurse about your own situation.

Exercise safely

- Be careful to avoid falls, especially if you're on hormone therapy or your cancer has spread to the bones – both of these can increase your risk of broken bones.
- Wear clothing and trainers that fit properly, and don't exercise on uneven surfaces.
- Make sure you drink enough water.
- Don't exercise if you feel unwell, or have any pain, sickness or other unusual symptoms. Stop if you get any of these while exercising.
- If you're having radiotherapy and have any skin irritation, avoid swimming pools – chlorine can make this worse.

How can a healthy lifestyle help with side effects of treatment?

All treatments for prostate cancer can cause side effects. There are treatments available to help manage these, but diet and physical activity can also help with many side effects. Remember to speak to your doctor or nurse before starting any new exercise. They may be able to refer you to a physiotherapist who can help you plan a suitable exercise programme.

Weight gain

Some men put on weight while they are on hormone therapy, particularly around the waist. Physical activity and a healthy diet can help you stay a healthy weight. If you're finding it difficult to lose weight, ask your doctor to refer you to a dietitian or weight loss programme.

Heart disease and diabetes

Hormone therapy may increase your risk of heart disease and diabetes. A healthy lifestyle, including a healthy diet and regular physical activity, can help reduce your risk of heart disease and diabetes.

Bone thinning

Long-term hormone therapy can cause your bones to gradually get thinner and weaker. Severe bone thinning can lead to a condition called osteoporosis, which increases your risk of broken bones (fractures). A number of lifestyle changes may help to reduce your risk of bone thinning.

Calcium and vitamin D are important for strong bones. See page 7 for more information on calcium. You can get vitamin D from eating oily fish, such as salmon, mackerel and sardines, or foods with added vitamin D. But most of your vitamin D is made inside the body when your skin is exposed to sunlight. You may need to take calcium and vitamin D supplements to help reduce your risk of bone thinning – speak to your doctor about this.

Drinking lots of alcohol can increase your risk of osteoporosis, so try not to drink more than the recommended amount (see page 3). Smoking can also increase the risk of bone thinning. For information about stopping smoking, talk to your doctor or visit the NHS Choices website.

We don't yet know whether exercise can help to prevent bone thinning in men who are on hormone therapy. But regular physical activity may help to keep you strong and prevent falls that could cause broken bones. Studies show that the following types of exercise may be particularly helpful:

- **gentle resistance exercise**, such as lifting light weights or using elastic resistance bands
- **weight-bearing exercise**, such as walking, climbing stairs, tennis and dancing.

Strength and muscle loss

Hormone therapy can cause a decrease in muscle tissue so that you feel less physically strong. Regular, gentle resistance exercise, such as lifting light weights, can help to reduce muscle loss and keep your muscles strong.

Hot flushes

Hot flushes are a common side effect of hormone therapy. Staying a healthy weight may help you manage hot flushes. Try to cut down on spicy foods, alcohol and drinks that contain caffeine, such as tea and coffee.

Some men use herbal remedies, such as sage tea or supplements containing black cohosh, to help manage their hot flushes. But there is no scientific evidence that these are effective and some, including black cohosh, may be harmful. Speak to your doctor before taking any herbal remedies.

Extreme tiredness (fatigue)

Some treatments for prostate cancer, including hormone therapy, radiotherapy and chemotherapy, can cause extreme tiredness. Light to moderate exercise, such as walking or swimming, can make you feel more awake. And doing this type of exercise along with strength training, such as lifting light weights, may be even more effective.

If your treatment is making you feel tired, you may find it difficult to be active. Try to plan activities at times when you usually have more energy. If you feel particularly tired, just do gentle exercise for a short time and take lots of breaks. You can even exercise from your chair or bed – for example, use a resistance band to help you lift and stretch your arms and legs.

You might also want to try our fatigue support service, which can help you make lifestyle changes that should improve your fatigue over time. Visit **www.prostatecanceruk.org/get-support** to find out more.

Anxiety and depression

Many men with prostate cancer feel anxious and worried at times. If your mood is often very low or your sleep pattern or appetite has changed a lot, this could be a sign of depression. Some treatments for prostate cancer, such as hormone therapy and chemotherapy, can also cause depression and mood swings.

Regular physical activity can often help you deal with feelings of anxiety and depression. Learning ways to relax, such as yoga or meditation, might also help.

Bowel problems

If you're having radiotherapy, you may get bowel problems during and after treatment. These might include loose and watery bowel movements (diarrhoea). Eating less fibre for a short time might help with this, although the evidence for this isn't very strong. Low fibre foods include white rice, pasta and bread, potatoes (without the skins), cornmeal, eggs and lean white meat. Make sure you drink lots of water to replace the liquid your body is losing.

If you find you're passing more wind than usual, you may want to avoid beans and pulses, cruciferous vegetables (for example, cabbage, broccoli and cauliflower), fizzy drinks and beer. These foods and drinks may cause wind and bloating. Some people find that adding certain herbs or spices to their cooking, such as ginger, peppermint or dill, can help with wind.

If you've recently had surgery or get pain, you may be given pain-relieving tablets. These tablets can cause constipation (difficulty having a bowel movement). If you get constipation, try to drink lots of water – aim for about two litres (eight glasses) a day. And eat high fibre foods such as wholemeal bread and porridge, as well as fruit such as prunes. Gentle exercise may also help. If your constipation doesn't improve, speak to your doctor. They may give you a medicine called a laxative to help empty your bowels.

Urinary problems

Some treatments for prostate cancer can cause difficulty urinating (peeing). Making some changes to your lifestyle may help. Try to drink plenty of fluids – 1.5 to 2 litres (3 to 4 pints) a day. But cut down on fizzy drinks, alcohol and drinks that contain caffeine (tea, coffee and cola), as these can irritate the bladder. Try to stay a healthy weight and do regular physical activity. And avoid constipation by eating plenty of fibre.

Changes to your sex life

Hormone therapy can cause changes to your sex life, including loss of desire for sex (low libido). Regular exercise may help to increase your desire for sex, improve your self-esteem and give you more energy for sex. For information about treatments and support for erection problems or loss of desire for sex, read our booklet, **Prostate cancer and your sex life**.

For more information on side effects of treatments for prostate cancer, including ways to manage them, read our **Tool Kit** fact sheets. If you're having hormone therapy, read our booklet, **Living with hormone therapy: A guide for men with prostate cancer**.

Questions to ask your doctor or nurse

You may find it helpful to keep a note of any questions you have to take to your next appointment.

Are there any foods or supplements I should avoid during my treatment?

Are there any foods or supplements that might help with my side effects?

Are there any complementary therapies I should avoid with my treatment?

Are there any types of physical activity that would be particularly good for me?

Are there any types of physical activity I should avoid?

Are there any activity groups I can join?

What other support is available?

More information

British Dietetic Association
www.bda.uk.com
Information about a healthy diet and how to find a registered dietitian.

British Nutrition Foundation
www.nutrition.org.uk
Telephone: 020 7557 7930
Information on a healthy diet and how diet may be linked to cancer.

Macmillan Cancer Support
www.macmillan.org.uk
Telephone: 0808 808 00 00
Practical, financial and emotional support for people with cancer, their family and friends. Includes information on diet, recipes and exercise.

Medicines and Healthcare products Regulatory Agency
www.mhra.gov.uk
Telephone: 020 3080 6000
Provides advice about how to use herbal remedies safely. Also runs the Yellow Card Scheme, a system for reporting unusual side effects from any treatment, including herbal remedies.

NHS Choices
www.nhs.uk/livewell
Information and advice, including information about how to eat healthily and exercise.

Penny Brohn Cancer Care
www.pennybrohncancercare.org
Helpline: 0845 123 23 10
Supports people living with cancer through lifestyle information and self-management tools.

World Cancer Research Fund
www.wcrf-uk.org
Telephone: 020 7343 4205
Funds research and provides information on diet and exercise to reduce the risk of cancer.

About us

Prostate Cancer UK fights to help more men survive prostate cancer and enjoy a better life.

This fact sheet is part of the Tool Kit. You can order more Tool Kit fact sheets, including an **A to Z of medical words**, which explains some of the words and phrases used in this fact sheet.

Download and order our fact sheets and booklets from our website at **prostatecanceruk.org/publications** or call us on **0800 074 8383**.

At Prostate Cancer UK, we take great care to provide up-to-date, unbiased and accurate facts about prostate cancer. We hope these will add to the medical advice you have had and help you to make decisions. Our services are not intended to replace advice from your doctor.

References to sources of information used in the production of this fact sheet are available at **prostatecanceruk.org**

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Speak to our Specialist Nurses

0800 074 8383*

prostatecanceruk.org

Donate today – help others like you

Did you find this information useful? Would you like to help others in your situation access the facts they need? Every year, 40,000 men face a prostate cancer diagnosis. Thanks to our generous supporters, we offer information free to all who need it. If you would like to help us continue this service, please consider making a donation. Your gift could fund the following services:

- £10 could buy a Tool Kit – a set of fact sheets, tailored to the needs of each man with vital information on diagnosis, treatment and lifestyle.
- £25 could give a man diagnosed with a prostate problem unlimited time to talk over treatment options with one of our Specialist Nurses.

To make a donation of any amount, please call us on **0800 082 1616**, visit **prostatecanceruk.org/donate** or **text PROSTATE to 70004***. There are many other ways to support us. For more details please visit **prostatecanceruk.org/get-involved**

*You can donate up to £10 via SMS and we will receive 100% of your donation. Texts are charged at your standard rate. For full terms and conditions and more information, please visit prostatecanceruk.org/terms

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Like us on Facebook: **Prostate Cancer UK**

Follow us on Twitter: **@ProstateUK**

To be reviewed June 2017

Call our Specialist Nurses from Mon to Fri 9am - 6pm, Wed 10am - 8pm

*Calls are recorded for training purposes only.
Confidentiality is maintained between callers and Prostate Cancer UK.

3577 DET/AUG15

UK National Screening Committee

Adult screening programme

Prostate Cancer

The prostate is a small gland found in men. It is located in the pelvis between the penis and the bladder. The main function of the prostate is to help in the production of semen. Prostate cancer is the most common cancer in men and usually affects men over the age of 65.

UK NSC screening recommendation Based on the last UK NSC review of this condition that occurred in November 2020.

Screening is not currently recommended for this condition.

Screening for prostate cancer is currently not recommended in the UK. This is because:

The Test

The PSA test is not accurate enough to detect prostate cancer that needs treatment. It can falsely find men who do not have prostate cancer. It can also miss some cancers. This means that many men might have to undergo unnecessary and often unpleasant tests and/or unnecessary treatment.

It is still unclear if other tests such as an MRI scan, with or without PSA, are accurate enough. Research is also currently looking at whether a method for predicting prostate cancer risk using a combination of a blood test and other information about a man could be more accurate. But more studies are necessary to confirm the early results.

The Intervention

At present, there is no single treatment that is definitely better for patients with early-stage prostate cancer, as treatments' effectiveness needs to be weighed up against their side effects.

The screening programme

It is unclear how PSA screening impacts deaths due to prostate cancer.

A PSA-based screening programme could harm men as some of them would be diagnosed with a cancer that would not have caused them problems during their life. This would lead to additional tests and treatments which can also have harmful side effects.

Supporting documents from the 2020 review

UK NSC Rapid Review Screening Prostate Cancer Final February 2021
This document provides the evidence on which the current UK NSC recommendation is based.

Screening for prostate cancer Coversheet Redacted
This document summarises the review process including the public consultation comments.

Review cycle

Date previous review completed: 2020

Next review estimated to be completed: 2023 to 2024.

To see previous evidence reviews, visit the UK NSC archive.

Organisations interested in Prostate cancer

These organisations have expressed interest in this recommendation and may submit responses to evidence reviews.

List of organisations

- **Cancer Black Care**
- **Cancer Research & Genetics UK**
- **Cancer Research UK**
- **CHAPS**
- **Chestnut Appeal**
- **Everyman**
- **Faculty of Public Health**
- **Macmillan**
- **Northern Ireland Cancer Network**
- **Orchid**
- **Primary Care Urology Society**
- **Prostate Cancer UK**
- **Prostate Scotland**
- **Royal College of General Practitioners**
- **Royal College of Nursing**
- **Royal College of Pathologists**
- **Royal College of Physicians**
- **Royal College of Physicians and Surgeons of Glasgow**
- **Royal College of Physicians of Edinburgh**
- **Royal College of Radiologists**
- **Royal College of Surgeons**
- **Royal College of Surgeons of Edinburgh**
- **Society and College of Radiographers**
- **Tackle Prostate Cancer**
- **Tenovus**
- **The British Association for Cancer Research**
- **The British Association of Urological Surgeons**
- **Yorkshire Cancer Research**
  (If you think your organisation should be added, please contact us).

PROSTATE CANCER UK

Dave Joyce
Communication Workers Union

Dear Mr Joyce,

Thank you for the letters you sent to Laura Kerby and Prof Jonathan Waxman last week regarding the motion on prostate cancer and PSA screening that will be delivered at your annual conference. My name is Jonathan Kay, I am the Health Information Service Lead at Prostate Cancer UK and Laura has asked me to reply on her behalf. I am more than happy to help answer your questions.

In terms of a national screening for prostate cancer, I can confirm you are right, the PSA test is not a suitable screening tool due to its low specificity and sensitivity. A man's PSA can be high when he does not have cancer (false positive), conversely he can have a low PSA when he has clinically significant cancer (false negative). The PSA test can't differentiate between low-risk cancer that may never cause any harm, and aggressive disease that requires immediate treatment.

Although, clinical trials have shown us that using the PSA test to identify prostate cancer within a population can save lives, screening using PSA also increases overdiagnosis and overtreatment. If we were to consider the PSA test as a national scale screening tool, it would identify many cancers early enough to save lives, but far more men would be diagnosed with cancers which wouldn't impact their life, this is called overdiagnosis. Over diagnosed men potentially go on to experience worry, they might have unnecessary biopsies and treatments which cause more harm than the prostate cancer would. This is why, even though PSA-based screening has been tested and shown to save lives, it hasn't been approved by the UK's National Screening Committee, because the harms still outweigh the benefits.

That's why we help men understand the risk factors for prostate cancer, understand the pros and cons of the PSA test and support them to make an informed choice about whether they want a PSA test or not. The charity's current position, which is aligned to Prostate Cancer Risk Management Programme recommendations, is that every man has the right to a free PSA test from their GP once they have been counselled on the pros and cons of the PSA test and are able to make an informed choice. We encourage men, especially those at high risk (over 50, Black ethnicity or have a family history of prostate cancer) to talk to their GP about the pros and cons of the PSA test in the first instance.

With reference to the following points in the letter:

- Campaigning to have prostate cancer screening introduced for all men over 50 and those who fall within higher risk categories in all NHS administrations in the UK.

As per the explanations above, and as you have pointed out, the National Screening Committee do not recommend screening for prostate cancer at this time. The NSC will not recommend screening until a suitable screening test is found and the benefits of screening outweigh the harms. We have seen multiple questions on this issue put to Governments and the standard response is that the NSC do not recommend screening.

- Lobby all Governments to mandate the PSA test for men in certain risk categories.

There have been recent shifts in NHS policy in whereby Primary Care Networks are required to focus on prostate cancer, particularly identifying men in their population most at risk. GPs in Primary Care will be asked to work with the local Cancer Alliance and, informed by data, increase the proactive and opportunistic assessment of patients for a potential cancer diagnosis in population cohorts where referral rates have not recovered to their pre-pandemic baseline. That activity should be supported by risk awareness campaigns and direct messaging of prostate cancer information to men in higher risk groups.

I hope that this has answered your questions but please feel free to get in touch again if you would like any more information.

Jonathan Kay

Health Information team Service Lead

Prostate Cancer UK

April 2022

Know your prostate

A guide to common prostate problems

PROSTATE CANCER UK

About this booklet

This booklet is a guide to a man's prostate – what it is, what it does and what can go wrong with it. Your partner or family might also find it helpful.

We explain about the prostate and the three most common prostate problems – an enlarged prostate, prostatitis and prostate cancer. We also explain what changes to look out for, what to do if you think you have a prostate problem and what might happen at the GP surgery.

If you think you might have a problem with your prostate, talk to your GP. You can also speak to our Specialist Nurses, in confidence, on 0800 074 8383.

The following symbols appear throughout the booklet to guide you to sources of further information:

 Prostate Cancer UK Specialist Nurse

 Prostate Cancer UK publications

 Sections for you to fill in

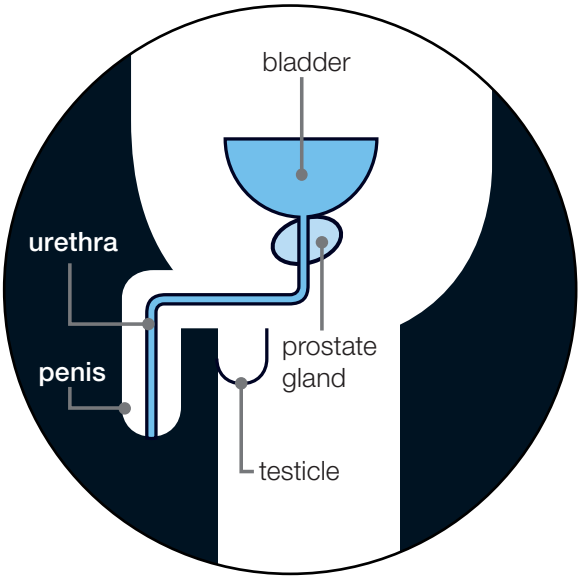
Contents

What is the prostate?

Only men have a prostate gland. The prostate is usually the size and shape of a walnut and grows bigger as you get older. It sits underneath the bladder and surrounds the urethra, which is the tube men urinate and ejaculate through.

Its main job is to help make semen – the fluid that carries sperm.

Where is the prostate gland?



What can go wrong?

The most common prostate problems are:

- an enlarged prostate – this is the most common prostate problem
- prostatitis – an inflammation or infection in the prostate
- prostate cancer.

We explain more about these conditions in the following pages.

What changes should I look out for?

If you notice any changes when you urinate or have trouble controlling your bladder (urinary problems) – this could be a sign of a problem in your prostate.

Urinary problems are common in older men and are not always a sign of a prostate problem. They can be caused by a urine infection or another health problem, such as diabetes, or by some medicines.

Your lifestyle can also trigger changes in the way you urinate – for example, drinking too much will make you urinate more often, while alcohol, caffeine and fizzy drinks can irritate the bladder.

Urinating: what is normal?
As with many things in life, everyone is different. Most people urinate four to seven times each day, depending on how much they drink. And your bladder should be able to hold up to three-quarters of a pint (about 430ml).

You should know when your bladder is full and have enough time to find a toilet and empty it completely every time you urinate. If your bladder is working normally, you shouldn't leak urine.

Most people can sleep six to eight hours without having to urinate. This will be affected by how recently you had a drink before going to sleep. As you get older, you will probably need to urinate more often. You may wake up to urinate once in the early morning – this is common in older men.

Changes to look out for include:

- ☐ needing to urinate more often than usual, including at night – for example if you often need to go again after two hours
- ☐ difficulty starting to urinate
- ☐ straining or taking a long time to finish urinating
- ☐ a weak flow when you urinate
- ☐ a feeling that you're not emptying your bladder fully
- ☐ needing to rush to urinate – sometimes leaking before you get there
- ☐ dribbling urine after you finish.

Less common symptoms include:

- ☐ pain when urinating
- ☐ pain when ejaculating
- ☐ blood in your urine or semen*
- ☐ problems getting or keeping an erection – this isn't a common symptom of a prostate problem and is more often linked to other health conditions such as diabetes or heart problems.

*Blood in your urine or semen can be caused by other health problems. Talk to your doctor if you see any blood in your urine or semen.

If you notice any of the changes we talk about here, it's a good idea to visit your GP. Or you can talk to our Specialist Nurses.

☑ You might find it helpful to tick any problems you have and take this booklet with you when you visit your GP.

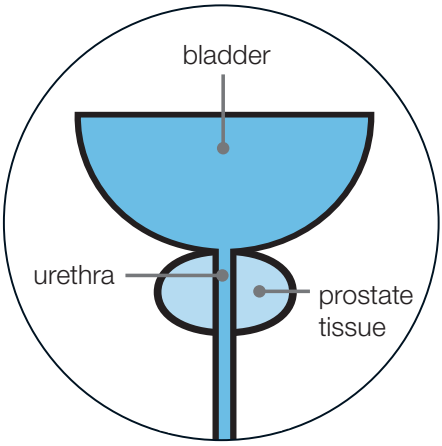
What is an enlarged prostate?

The prostate gets bigger as you get older. This is called an enlarged prostate. It is common in men over 50. It is sometimes called benign prostatic hyperplasia (BPH) or benign prostatic enlargement (BPE). It is not cancer and there are ways to treat it.

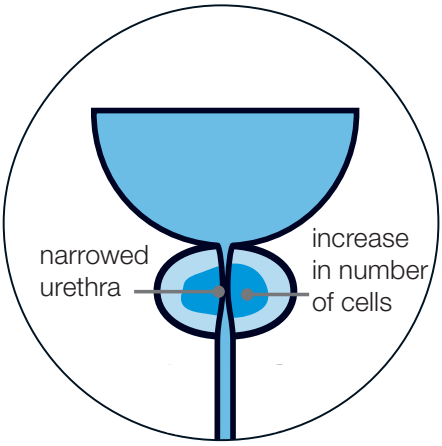
An enlarged prostate is the most common cause of urinary problems in men as they get older. As the prostate grows, it can press on the tube you urinate through (urethra) and slow down or stop the flow of urine.

About 4 in every 10 men (40 per cent) over the age of 50 have urinary symptoms that are caused by an enlarged prostate.

A normal prostate gland



An enlarged prostate gland



Having an enlarged prostate is **not** the same as having cancer.

Having an enlarged prostate doesn't increase your risk of getting prostate cancer. But men can have an enlarged prostate and prostate cancer at the same time.

What can help?

Having an enlarged prostate affects men in different ways. Some men are able to cope with their symptoms well. Simple changes to your lifestyle can often help with mild problems – these include drinking less alcohol and caffeine. If these changes don't help, your doctor may prescribe medicines or suggest surgery.

Find out more in our booklet, **Enlarged prostate: A guide to diagnosis and treatment**.

What is prostatitis?

Prostatitis is the name given to a set of symptoms which are thought to be caused by an infection or inflammation of the prostate. It is not cancer.

It can cause a wide range of symptoms, which vary from man to man. Symptoms can include the urinary problems we talk about on page 7, aching in the area between your testicles and back passage or pain in the lower part of your stomach area, groin or lower back. In severe cases it can cause fever and sweating, and needs treating in hospital.

Prostatitis is a common condition which can affect men of any age, but it's most common in men aged between 30 and 50.

There are different types of prostatitis and we don't know very much about some types. This can make it difficult for doctors to know what causes it and how best to treat it. It can take some time to get a diagnosis, and you might need a number of tests.

What can help?

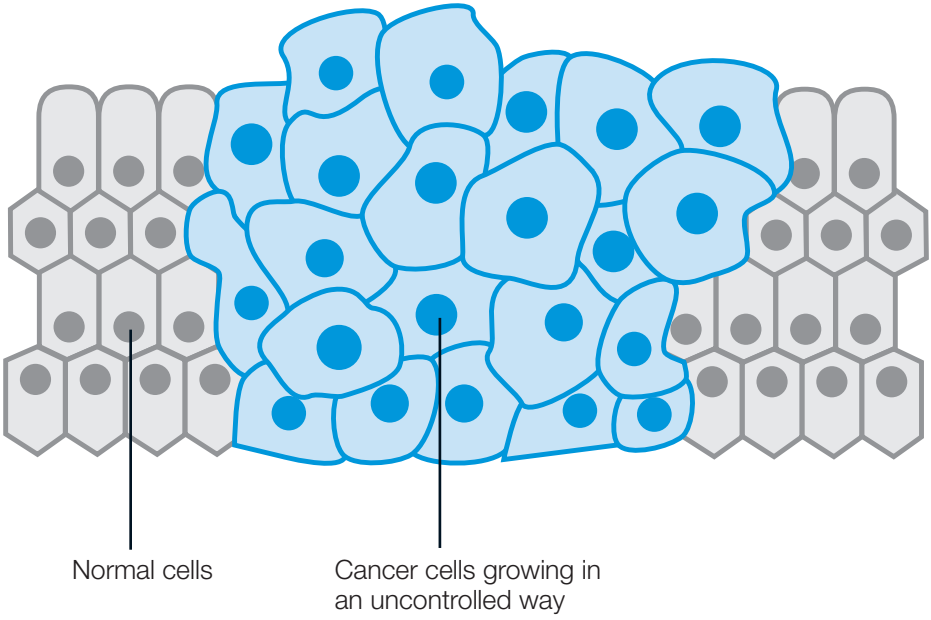
There are things you can do to help yourself and different treatments to try. These include antibiotics, pain-relieving drugs and medicines called alpha-blockers.

Find out more in our booklet, **Prostatitis: A guide to infection and inflammation of the prostate**.

What is prostate cancer?

Normally the growth of all cells is carefully controlled in the body. As cells die, they are replaced in an orderly fashion. Cancer can develop when cells start to grow in an uncontrolled way. If this happens in the prostate, you get prostate cancer.

How cancer develops



What is my risk of prostate cancer?

Prostate cancer is the most common cancer in men in the UK. About 1 in 8 men will get it at some point in their lives.

There are several things that may mean you're more likely to get prostate cancer.

Age

- Prostate cancer mainly affects men over 50, and your risk increases with age.
- The average age for men to be diagnosed with prostate cancer is between 65 and 69 years.
- If you are under 50, your risk of getting prostate cancer is very low. Men under 50 can get it, but it isn't common.

Family history and genes

Inside every cell of our body is a set of instructions called genes. These are inherited from our parents. Genes control how the body grows, works and what it looks like. If something goes wrong with one or more genes (known as a fault or mutation) it can sometimes cause cancer.

- You are two and a half times more likely to get prostate cancer if your father or brother has had it, compared to a man who has no relatives with prostate cancer.
- Your chance of getting prostate cancer may be even greater if your father or brother was under 60 when he was diagnosed, or if you have more than one close relative with prostate cancer.
- You may have a higher risk of prostate cancer if your mother or sister has had breast cancer, particularly if they were diagnosed under the age of 60 and had faults in genes called BRCA1 or BRCA2.

If you have relatives with prostate cancer or breast cancer and are worried about your risk, speak to your GP. Although your risk of prostate cancer may be higher, it doesn't mean you will get it.

Ethnicity

Black men are more likely to get prostate cancer than other men. We don't know why, but it might be linked to genes. In the UK, about 1 in 4 Black men will get prostate cancer at some point in their lives.

Body weight

No one knows how to prevent prostate cancer, but staying a healthy weight may be important.

Research shows that being overweight or obese increases your risk of getting cancer that's more likely to spread (called aggressive) or advanced prostate cancer (cancer that has spread outside the prostate).

Read more in our leaflet, **Diet, activity and your risk of prostate cancer**.

What are the symptoms of prostate cancer?

Prostate cancer that's contained inside the prostate (called localised prostate cancer) doesn't usually cause any symptoms. But some men may have some of the urinary problems we talk about on page 7. These may be mild and happen over many years.

For some men the first symptoms of prostate cancer might be new pain in the back, hips or pelvis. This can be caused by cancer that's spread to the bones. These symptoms are often caused by other problems such as general aches or arthritis. But it's still a good idea to get them checked out by your GP.

Most men with early prostate cancer don't have any symptoms.

What treatments are there for prostate cancer?

There are several treatments available for prostate cancer. Some treatments aim to get rid of the cancer completely, others to control the cancer. The stage of cancer (how far it has spread), how quickly it might grow and your personal preference will all affect which treatment you have.

Many men have a slow-growing cancer that is not likely to cause any problems in their lifetime. They might never need any treatment. They might be able to have their cancer monitored with regular check-ups instead. If there are signs the cancer may be growing, they will be offered treatment that aims to cure it. But some men will have prostate cancer that is more likely to spread and this needs treating.

For more information about prostate cancer and its treatment, read our free publications (see page 24 for details).

What should I do next?

If you notice any of the changes we talk about in this booklet or you're worried about your risk of prostate cancer, visit your GP. You can also call our Specialist Nurses, in confidence, on 0800 074 8383.

Urinary problems will often be caused by something else rather than cancer and there are treatments that can help.

What if I am not registered with a GP?

If you're not registered with a GP you can find one near you on your regional NHS website (see page 25 for details). You can also ask family or friends who live near you which GP surgery they go to.

What if I don't have time to see a GP?

Some GP surgeries are now open in the evenings or weekends, so you should be able to see the GP at a time that is right for you. There might also be an NHS walk-in centre nearby. Use your regional NHS website to find one in your area.

I visited my GP after watching a television programme about prostate cancer and thought I could be at risk.

A personal experience

What will happen at the GP surgery?

If you have symptoms, your GP will ask you about them, how long you have had them, whether they are getting worse over time, and how they are affecting your life. They might ask you to fill out a questionnaire about your symptoms and medical history.

If you are not sure how to explain your symptoms or concerns to your GP, take this booklet with you.

Your GP will check whether your symptoms could be caused by other health problems, such as diabetes, or by any medicines you're taking. They will also check whether your symptoms could be caused by your lifestyle.

Diary

Your GP may ask you to keep a diary for a few days to measure how much fluid you are drinking, what type of drinks you are having, how much urine you pass, and how often. The diary may highlight what could be causing your symptoms and may help your doctor find the best treatment for you.

Urine test

Your GP may ask you for a urine sample to check for blood or infection that could be causing your symptoms. You may need to give more than one sample. If you have an infection your GP will give you a course of antibiotics.

PSA test

You may be offered a blood test called a prostate specific antigen (PSA) test. PSA is a protein produced by cells in the prostate. Your PSA level rises as you get older. A raised PSA may show that you have a problem with your prostate. A PSA test alone cannot tell you exactly what the problem is. Your GP will need to look at your PSA level together with other test results, like a digital rectal examination.

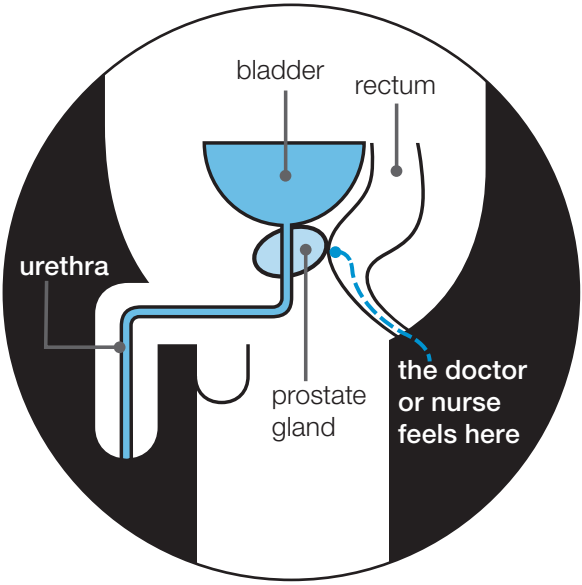
You have the right to a PSA test if you're over 50 and you've talked through the pros and cons with your GP. If you're over 45 but have a higher risk of prostate cancer – because you have a family history of it or you're Black – you might want to talk to your GP about having a PSA test.

Read more in our leaflet, **The PSA test and prostate cancer: A quick guide**.

Digital rectal examination

Your GP may examine your abdomen and penis and may also feel your prostate through the wall of the back passage (rectum). This is called a digital rectal examination (DRE). If you have a DRE, the doctor will ask you to lie on your side, on an examination table, with your knees brought up towards your chest. Your doctor will slide a finger gently into your back passage. They will wear gloves and put some gel onto their finger to make it more comfortable. Some men may find this embarrassing or uncomfortable, but it shouldn't be painful.

Digital rectal examination



If the prostate feels larger than expected for your age, this could be a sign of an enlarged prostate. A prostate with hard bumpy areas might suggest prostate cancer.

If your DRE shows anything unusual, you might be referred to a hospital specialist.

If you have a DRE, your doctor or nurse might suggest waiting a week before having a PSA test, or they might ask you to have a PSA test before they do a DRE. This is because having a DRE just before a PSA test could very slightly raise your PSA level.

Worried about going to the GP?
It is natural to feel worried or embarrassed about having tests and check-ups. But don't let that stop you going to your GP. Remember, the tests give your GP the best idea about whether you have a problem that needs treating. If you want to see a male GP, ask for one when you make the appointment.

You can also talk things through with our Specialist Nurses, in confidence, on 0800 074 8383.

Having someone examine you from the rear isn't great but it's only a few seconds of discomfort.

A personal experience

What will the test results tell me?

It can take one or two weeks to get your test results. If your test results suggest you have a prostate problem, your doctor will discuss treatment options with you or refer you to a specialist at the hospital for more tests.

What tests might I have at the hospital?

At the hospital your doctor or nurse may repeat some of the tests you had at the GP surgery. You may also have other tests including the following.

Symptom questionnaire

You may be asked to fill in a questionnaire about your symptoms. This is called the International Prostate Symptom Score (IPSS) and is used to see how bad your symptoms are. The questionnaire takes about five minutes to fill in.

Urine flow test

This involves urinating into a machine that measures the speed of your urine flow. If you are urinating slowly, it may mean that your prostate is pressing on the urethra. You'll need a full bladder for the test. Your doctor or nurse will tell you how much you need to drink beforehand. They may also ask you not to go to the toilet for two to three hours before the test.

Ultrasound scan

An ultrasound scan can show if your bladder is emptying properly. You may have the scan after the urine flow test. The scan will show how much urine is left in the bladder. You may also have an ultrasound scan to look at your kidneys.

Cystoscopy

A thin tube with a light and camera on the tip is put inside your urethra so your doctor can look inside your urethra and bladder. You may have this test if you have severe urinary symptoms or if you keep getting urine infections, or have blood in your urine or get pain when urinating.

Prostate biopsy

This involves using thin needles to take small samples of prostate tissue to be looked at under a microscope to check for cancer. Read more in our Tool kit fact sheet, **How prostate cancer is diagnosed**.

Magnetic resonance imaging (MRI) scan

A scan that uses magnets to create a detailed picture of your prostate and the surrounding tissues. You may be offered an MRI scan to look closely at the prostate before or after a prostate biopsy.

Questions to ask your doctor or nurse

What is causing my urinary symptoms – is it a prostate problem?

Am I at risk of prostate cancer?

What tests are you going to do and why?

How soon will I get the results?

Will I need any other tests?

More information from us

Leaflets and booklets

We have a range of other leaflets and booklets about prostate cancer and other prostate problems.

To order publications:

All our publications are free and available to order or download online. To order them:

- call us on **0800 074 8383**
- visit our website at **prostatecanceruk.org/publications**

Call our Specialist Nurses

If you want to talk about prostate cancer or other prostate problems, call our Specialist Nurses in confidence. You can also email the nurses using the contact form on our website. Visit **prostatecanceruk.org** and click on 'We can help'.

Speak to our Specialist Nurses
0800 074 8383*
prostatecanceruk.org

* Calls are recorded for training purposes only. Confidentiality is maintained between callers and Prostate Cancer UK.

Other useful organisations

NHS 24

111

www.nhs24.com

Health information and self care advice for people in Scotland. Lists local NHS services including GPs and dentists.

NHS Choices

www.nhs.uk

Information about conditions, treatments and lifestyle, and a directory of health services in England. Provides information about making a complaint about your GP.

NHS Direct Wales

www.nhsdirect.wales.nhs.uk

Telephone: 0845 46 47

Provides health advice 24 hours a day, and lists local health services in Wales, including GPs and dentists.

nidirect

www.nidirect.gov.uk

Information about government services in Northern Ireland, including GP services.

Patient UK

www.patient.co.uk

Information that is often used by GPs to help explain health conditions to patients. Also has a directory of UK health websites.

About Prostate Cancer UK

Prostate Cancer UK fights to help more men survive prostate cancer and enjoy a better life. We do this through Men United, our movement for everyone who believes men are worth fighting for. You can join Men United at **prostatecanceruk.org/menunited**

At Prostate Cancer UK, we take great care to provide up-to-date, unbiased and accurate facts about prostate diseases. We hope these will add to the medical advice you have had and help you to make decisions. Our services are not intended to replace advice from your doctor.

References to sources of information used in the production of this booklet are available at **prostatecanceruk.org**

This publication was written and edited by
our Health Information team.

It was reviewed by:

- Ben Challacombe, Consultant Urological Surgeon and Honorary Senior Lecturer, Guy's and St Thomas' Hospitals NHS Foundation Trust and Kings College London, London
- Jonathan Rees, GP with special interest in Urology and Men's Health, Backwell and Nailsea Medical Group, North Somerset
- Paul Litchfield, Cancer Information and Support Services Manager, Cancer Centre, University Hospitals Birmingham NHS Foundation Trust, Birmingham
- John McLoughlin, Consultant Urological Surgeon, West Suffolk Hospital, Bury St Edmunds
- Prostate Cancer UK Volunteers
- Prostate Cancer UK Specialist Nurses.

Donate today – help others like you

Did you find this information useful? Would you like to help others in your situation access the facts they need? Every year, 40,000 men face a prostate cancer diagnosis. Thanks to our generous supporters, we offer information free to all who need it. If you would like to help us continue this service, please consider making a donation. Your gift could fund the following services:

- £10 could buy a Tool Kit – a set of fact sheets, tailored to the needs of each man with vital information on diagnosis, treatment and lifestyle.
- £25 could give a man diagnosed with prostate cancer unlimited time to talk over treatment options with one of our specialist nurses.

To make a donation of any amount, please call us on **0800 082 1616**, visit **prostatecanceruk.org/donate** or **text PROSTATE to 70004***. There are many other ways to support us. For more details please visit **prostatecanceruk.org/get-involved**

*You can donate up to £10 via SMS and we will receive 100% of your donation. Texts are charged at your standard rate. For full terms and conditions and more information, please visit prostatecanceruk.org/terms

FRSB give with confidence

Tell us what you think

If you have any comments about our publications, you can email: **literature@prostatecanceruk.org**

Speak to our Specialist Nurses

0800 074 8383*

prostatecanceruk.org

Health & care information you can trust

The Information Standard Certified Member

Like us on Facebook: **Prostate Cancer UK**

Follow us on Twitter: **@ProstateUK**

To be reviewed January 2017

Call our Specialist Nurses from Monday to Friday 9am - 6pm, Wednesday 10am - 8pm

* Calls are recorded for training purposes only.
Confidentiality is maintained between callers and Prostate Cancer UK.

Prostate Cancer UK is a registered charity in England and Wales (1005541) and in Scotland (SC039332). Registered company number 02653887.

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FSC www.fsc.org MIX Paper from responsible sources FSC® C023802

NICE National Institute for Health and Care Excellence

Stockholm3 for prostate cancer screening

Medtech innovation briefing [MIB303] Published: 09 August 2022

Advice

NICE has developed a medtech innovation briefing (MIB) on Stockholm3 for prostate cancer screening.

Medtech innovation briefings

Please note, from April 2023 NICE will no longer produce Medtech Innovation Briefings (MIBs) on behalf of NHS England.

MIBs were commissioned by NHS England and produced in support of the NHS 5-Year Forward View (2014), as one of a number of steps to accelerate innovation in new treatments and diagnostics.

MIBs are NICE advice designed to support NHS and social care commissioners and staff when considering using new medical devices and other medical or diagnostic technologies.

The information provided in a briefing includes:

- a description of the technology
- how the technology is used
- the potential role in the treatment pathway
- a review of relevant published evidence
- the likely costs of using the technology.

View medtech innovation briefings

What we are doing

The landscape over the last few years has changed, with well-established programmes and organisations supporting the innovation environment for the NHS and Life Sciences.

NICE will focus on expanding our Health Technology Guidance production and, after the successful pilots, introducing new approaches to evaluating the most promising health technologies that meet the needs of the NHS and patients (previously known as early value assessment). This will enable us to provide a 'conditional recommendation' for use while evidence is generated, where appropriate. This will ensure we get technology into the hands of clinicians and people faster for the benefit of patient care.

NICE identifies the priorities of the health and care system and gathers information on potential topics by proactively engaging with:

- national policy teams
- clinical leaders
- patient groups
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Summary

- The **technology** described in this briefing is Stockholm3. It is used to help predict risk of prostate cancer in people aged 45 to 74 years with prostate-specific antigen (PSA) of at least 1.5 nanograms per ml and no previous diagnosis of prostate cancer.
- The **innovative aspects** are that Stockholm3 combines protein biomarkers, genetic markers and clinical data with an algorithm to help identify prostate cancer.
- The intended **place in therapy** would be as an addition to standard care for people with a PSA level of at least 1.5 nanograms per ml. The technology could be used in primary care or secondary care settings to test for prostate cancer.
- The **main points from the evidence** summarised in this briefing are from 7 diagnostic accuracy studies, using mixed methods, including a total of 460,503 people for prostate cancer screening in primary care and secondary care. The evidence suggests that Stockholm3 is more effective at predicting risk of prostate cancer than PSA testing alone for people aged 45 to 74.
- **Key uncertainties** around the evidence or technology are that there is currently no evidence assessing the effect of the test on clinical decision making and long-term clinical outcomes in the NHS. Data about Black, Asian, and minority ethnic populations is currently limited.
- **Experts** agreed that the technology has the potential to improve diagnostic accuracy leading to a reduction in unnecessary MRI and biopsies. The technology is not yet used in the NHS and the main barrier to adoption is the lack of current initiatives or programmes for prostate cancer screening in primary care, and the additional financial cost to the NHS. Experts had mixed views on the most appropriate care setting and treatment pathway, with several options possible in both primary and secondary care. A patient organisation commented its concerns with adopting the device are that there is no defined place in the pathway for it to be rolled out and it questioned whether there is sufficient infrastructure and workforce in place within pathology for nationwide adoption.
- The **cost** of Stockholm3 is £350 per unit (excluding VAT) less applicable volume discounts. This includes the analysis of the blood test. There are additional costs such as for phlebotomy, and collection and transport of the samples to the reference laboratory. Some costs may already be captured in standard care costs depending on the care setting and proposed pathway.

The technology

Stockholm3 (A3P Biomedical AB) is a blood-based diagnostic test that is to be used alongside prostate-specific antigen (PSA) testing to predict risk of prostate cancer in people aged 45 to 74 years with no previous prostate cancer diagnosis. The technology uses an algorithm that combines plasma protein biomarkers, genetic markers, and clinical data and would be used in people with a PSA of at least 1.5 nanograms per ml. It uses 5 plasma protein markers (human glandular kallikrein 2 [hK2], microseminoprotein beta [MSMB], microphage inhibitory cytokine-1 [MIC1], total PSA and free PSA). The genetic markers include 101 single nucleotide polymorphisms. The clinical data captured in the algorithm includes age, family history and previous prostate biopsy. Stockholm3 gives a score that indicates the risk of prostate cancer. A Stockholm3 risk score of at least 11% is considered an indicator of prostate cancer risk, and if it is used in primary care, these people would be referred to a hospital for an MRI.

Innovations

The company claims that using Stockholm3 may improve diagnostic accuracy and reduce unnecessary MRIs and biopsies. The technology can predict the risk of prostate cancer in people with low PSA levels (at least 1.5 nanograms per ml) and increase the sensitivity to identify prostate cancer compared with age-specific PSA levels.

Current care pathway

The UK National Screening Committee does not currently recommend screening for prostate cancer. This is because the PSA test is not accurate enough to detect prostate cancer that needs treatment, there is a lack of treatment that is definitely better for people with early-stage prostate cancer, and the potential harm from PSA-based screening programmes.

PSA testing in the UK is only recommended in people suspected of having prostate cancer. Possible symptoms of prostate cancer include any lower urinary tract symptoms (nocturia, urinary frequency, hesitancy, urgency or retention) or erectile dysfunction. People with suspected prostate cancer based on the above symptoms are offered a blood test to check PSA levels and digital rectal exam (DRE). This is 1 of the points in the pathway where Stockholm3 is proposed by the company to be used, alongside the PSA test.

After the PSA tests and DRE (if done), some people may be referred to a urologist in secondary care where NICE's guideline on prostate cancer: diagnosis and management recommends offering multi-parametric MRI, with results reported using 1 of the 5-point scales (Prostate Imaging Reporting and Data System [PI-RADS] or the Likert scale). The company say Stockholm3 could be used as the first stage of testing in secondary care instead of MRI, meaning some people could avoid the need for MRI or biopsy. Urologists will currently consider if a biopsy is appropriate depending on the results of the MRI. People whose MRI score is 1 or 2 may opt in or out for a systematic prostate biopsy after discussing the risk-benefit ratio of the procedure with a healthcare professional. Individuals with a score of 3 or more should be offered a prostate biopsy. The prostate biopsy is done by a urologist. The tissue specimen from the biopsy is evaluated by a pathologist and scored according to the Gleason grading system. If it is Gleason grade 2 or more, the person is said to have clinically significant prostate cancer.

The NHS rapid diagnostic and research pathways handbook for implementing a timed prostate cancer diagnostic pathway set out that, if appropriate, a prostate biopsy should be done within 9 days from GP referral and a target of 5 days turnaround for reported pathology should be agreed as a minimum standard. This is a 14-day turnaround from GP referral to prostate biopsy result. Many services adhere to The Royal College of Pathology's (RCP) key assurance indicators for laboratories. According to Prostate Cancer UK's best practice pathway, the diagnostic pathway can take up to 28 days before a definitive

diagnosis is made. There is an acknowledged capacity challenge in the area with an increasing complexity and volume of pathology requests but with a lack of pathologists (see The Royal College of Pathologists report, Meeting pathology demand – Histopathology workforce census 2017/18).

The following publications have been identified as relevant to this care pathway:

- NICE's guideline on prostate cancer: diagnosis and management
- NICE's guideline on suspected cancer: recognition and referral
- NHS England's handbook on implementing a timed prostate cancer diagnostic pathway.

Population, setting and intended user

According to the company, the technology is intended to help diagnose prostate cancer in people aged 45 to 74 years with no previous prostate cancer diagnosis and PSA of at least 1.5 nanograms per ml. Stockholm3 is intended to be used in addition to current methods of assessing PSA levels when testing for prostate cancer in primary care, where the same blood sample would be used if the PSA level is at least 1.5 nanograms per ml. It could alternatively be done by a urologist in a secondary care setting for people who would otherwise have an MRI. A clinical report is generated and sent to the doctor. The report includes a risk score that provides a recommendation on managing the condition for example, 'low risk of prostate cancer, new test recommended in 6 years' or 'increased risk for prostate cancer, referral to urologist is recommended'. A biopsy is recommended if prostate volume is less than 56 cubic centimetres or prostate DRE is abnormal. Otherwise, follow-up testing is recommended within 2 years.

Costs

Technology costs

The company states that the list price of Stockholm3 is £350 and that volume discounts are applicable. The company notes that their technology is more expensive than the PSA test alone, but claims it saves costs by reducing unnecessary MRIs and biopsies. The cost of £350 includes the analysis of the blood test. The total costs of delivering and implementing Stockholm3 will vary depending on the care setting and treatment pathway. Some additional costs such as for phlebotomy (£4; DAPS08), and collection and transport of the samples to the reference laboratory may already be captured in standard care costs.

Costs of standard care

Based on the Personal Social Services Research Unit (PSSRU) 2021, the cost of a DRE is £40 (GP appointment), and PSA testing in primary care is £27.75 (PSA test kit £8.75 plus nurse appointment £19). According to the national schedule of NHS reference costs 2019/20, a transrectal ultrasound-guided biopsy of prostate (LB76Z) costs £489 and a transperineal template biopsy of prostate (LB77Z) costs £1,477. A prostate multi-parametric MRI costs £273 (RD03Z). Cost of staff time and equipment needed to collect a blood sample is £4 (DAPS08, phlebotomy).

Resource consequences

The technology is currently not used in the NHS. It would be an addition to standard of care in the primary and secondary care setting. It would typically cost more than standard care but may result in improved outcomes because of improved sensitivity and specificity. This may result in earlier or more accurate diagnosis. The company claims that more accurate diagnosis may reduce overall patient mortality and would improve disease management or coordination of care and improve efficiencies within the NHS. The company states that adopting Stockholm3 for diagnosing prostate cancer could avoid unnecessary biopsies

and reduce travel time. Summarised cost-utility evidence reports cost reductions of 17% and 23% to 28% because of reduced unnecessary MRIs, sepsis, and biopsies.

Regulatory information

Stockholm3 is CE-marked. The company intends to file for UKCA marking in July 2022.

Equality considerations

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others.

The technology is not suitable for people younger than 45 years or older than 74 years, or for people with a previous diagnosis of prostate cancer. The technology is suitable for transgender people.

People with an African family background have a high risk of prostate cancer (lifetime risk of approximately 1 in 4). The technology has been evaluated in Scandinavian populations (predominantly Caucasian). The summarised evidence showed limited data for Black, Asian and minority ethnic groups. The company submitted that this will be addressed by an ongoing clinical trial (ClinicalTrial.gov Identifier: NCT04583072).

Clinical and technical evidence

A literature search was carried out for this briefing in accordance with the interim process and methods statement for medtech innovation briefings. This briefing includes the most relevant or best available published evidence relating to the clinical effectiveness of the technology. Further information about how the evidence for this briefing was selected is available on request by contacting mibs@nice.org.uk.

Published evidence

There are 7 studies summarised in this briefing including 460,503 people having prostate cancer screening in primary care.

The clinical evidence and its strengths and limitations is summarised in the overall assessment of the evidence.

Overall assessment of the evidence

Overall, the quantity of evidence for the performance of Stockholm3 in prostate cancer screening is adequate and of good methodological quality. All studies summarised here were peer-reviewed. None of the studies are based in the UK and performance may vary across different populations owing to diverse clinical practice. More prospective comparative studies are needed to evaluate the performance of Stockholm3 within the NHS setting.

Nordström et al. (2021)

Study size, design and location

Prospective randomised open-label non-inferiority trial of Stockholm3 plus MRI targeted biopsy versus PSA testing plus systemic biopsy in 12,750 men aged 50 to 74 years for a population-based prostate cancer screening strategy in Stockholm.

Intervention and comparator(s)

Stockholm3 plus MRI-targeted biopsy was the main intervention compared with prostate-specific antigen (PSA) test and systematic prostate biopsy. Two analyses were used in the study:

- Stockholm3 (using scores of 0.11 and 0.15 as cut-offs) versus PSA in the experimental group to enable assessment of performance when an MRI-based strategy is used for cancer detection (paired analyses)
- PSA plus standard biopsy versus Stockholm3 plus MRI-targeted and systematic biopsy (unpaired, randomised analyses).

Key outcomes

The area under the receiver-operating characteristic curve for detection of clinically significant prostate cancer was higher for Stockholm3 (0.76; 95% confidence interval [CI] 0.72 to 0.80) compared with PSA (0.60; 95% CI 0.54 to 0.65). In the experimental group, a Stockholm3 of 0.11 or higher was non-inferior to a PSA level of 3 nanograms per ml or higher for detection of clinically significant prostate cancer (227 versus 192; relative proportion [RP] 1.18 [95% CI 1.09 to 1.28], p<0.0001 for non-inferiority), detected a similar number of low-grade prostate cancers (50 versus 41; 1.22 [95% CI: 0.96 to 1.55], p=0.053 for superiority), and was associated with more MRIs and biopsies.

Compared with a PSA level of 3 nanograms per ml or higher, a Stockholm3 of 0.15 or higher provided identical sensitivity to detect clinically significant cancer and led to fewer MRI procedures (545 versus 846; 0.64 [95% CI: 0.55 to 0.82]) and fewer biopsy procedures (311 versus 338; 0.92 [95% CI: 0.86 to 1.03]). Compared with screening using PSA and systematic biopsies, a Stockholm3 of 0.11 or higher combined with MRI-targeted and systematic biopsies was associated with higher detection of clinically significant cancers (227 [3.0%] people tested versus 106 [2.1%] people tested; RP 1.44 [95% CI 1.15 to 1.81]), lower detection of low-grade cancers (50 [0.7%] versus 73 [1.4%]; 0.46 [95% CI: 0.32 to 0.66]), and led to fewer biopsy procedures. People randomly assigned to the experimental group had a lower incidence of being prescribed antibiotics for infection (25 [1.8%] of 1,372 versus 41 [4.4%] of 921; p=0.0002) and a lower incidence of admission to hospital (16 [1.2%] versus 31 [3.4%]; p=0.0003) than those in the standard group.

This study concluded that the Stockholm3 with MRI-targeted biopsy approach for prostate cancer screening decreases over-detection without losing the ability to detect clinically significant cancer.

Strengths and limitations

Randomisation and appropriate choice of the comparator accounted for some of the strengths of this study. Another strength was the large number of people enrolled in the study. One of the limitations was non-blinding of the urologists, clinicians and urologists who do biopsies. However, the block randomisation of people included minimised allocation bias. The study was done outside the NHS. This limits the applicability of these findings in the NHS.

Karlsson et al. (2021)

Study size, design and location

A model-based cost-effectiveness analysis of prostate cancer screening in 10,000 men using Stockholm3 in Sweden taking a societal perspective.

Intervention and comparator(s)

Stockholm3 was the primary intervention. Stockholm3 together with 3 PSA level cut-offs was compared with no screening, and with Quadrennial screening with PSA test alone. The 3 Stockholm3/PSA combinations were:

- PSA test and reflex Stockholm3 test for PSA levels of between 1 and 1.5 nanograms per ml
- PSA test and reflex Stockholm3 test for PSA levels of between 1.5 and 2 nanograms per ml
- PSA test and reflex Stockholm3 test for PSA levels of at least 2 nanograms per ml.

Key outcomes

At a PSA level threshold of 2 nanograms per ml, Stockholm3 was more effective than PSA test alone, reduced lifetime biopsies by 30%, and increased societal costs by 0.4%. Relative to the PSA test alone, the Stockholm3 with reflex thresholds of 1, 1.5 and 2 nanograms per ml, PSA levels had incremental cost-effectiveness ratio of 170,000, 60,000 and 6,000 € per quality-adjusted life year, respectively. The technology was cost effective.

Strengths and limitations

Using a lifetime horizon was 1 of the strengths of the study. The study is based on the Swedish healthcare system which limits translation of findings to the NHS setting.

Viste et al. (2020)

Study size, design and location

A longitudinal observation study (n=4784) comparing prostate cancer screening outcomes before and after introduction of Stockholm3 in Stavanger, Norway.

Intervention and comparator

Stockholm3 compared with PSA testing

Key outcomes

After 12 months of introducing Stockholm3 in Stavanger, 97% (94 out of 97) of GP clinics did prostate cancer screening using Stockholm3. Out of the 4,787 people tested, 995 (20.8%) had a positive Stockholm3 risk score (Stockholm3 risk score=11% or more), while 1,387 (29.0%) had a positive PSA test result (PSA of 3 nanograms per ml or more). There was a 28% relative decrease in the number of tested people referred for further workup. Up to 520 out of 4,784 (11%) people who tested had a positive PSA but negative Stockholm3, and 128 out of 4,784 (3%) had negative PSA but positive Stockholm3 test. The proportion of biopsies positive for cancer that showed clinically significant prostate cancer increased from 42.1% (98/223) before implementation to 64.9% (185/285) after implementation of Stockholm3 in the Stavanger region. Correspondingly, both the number and the rate of clinically non-significant cancer decreased from 135 (57.9%) before implementation to 100 (35.1%) after implementation of Stockholm3. The cost saving of

implementing Stockholm3 was estimated to be between 23% and 28% because of reduced number of unnecessary MRIs, sepsis and biopsies.

Strengths and limitations

One of the strengths of this study is the choice of outcomes which are relevant to the UK. This study showed a high acceptability among GPs in Norway. There is potential for differences in clinical practice between Norway and the UK. This potentially limits generalisation of these findings to the NHS.

Grönberg et al. (2018)

Study size, design and location

Prospective multicentre, paired diagnostic study assessing the performance of Stockholm3 and MRI in 532 men aged 45 to 74 years referred for prostate cancer workout in Stockholm (Sweden) and Oslo (Norway).

Intervention and comparator(s)

Combined Stockholm3 and MRI compared with MRI alone and systematic biopsy.

Key outcomes

The study showed that Stockholm3 reduced biopsies, decreased detection of Gleason grade 1 tumours, and maintained the detection of Gleason grade 2 or more tumours. Stockholm3 combined with MRI and systematic biopsy had an acceptable sensitivity (0.94; 95% CI 0.90 to 0.97) in detecting clinically significant prostate cancer with a Gleason grade score of 2 or more when compared with systematic biopsy in all people. Stockholm3 also reduced detection of Gleason grade 1 tumours by 30% and saved 38% of biopsies from being done. When Stockholm3 was combined with MRI or targeted biopsy and systematic biopsy, it improved detection of clinically significant prostate cancer by 10% compared with systematic biopsy alone. The combined strategy of only doing MRI or targeted biopsy in people with positive Stockholm3 showed similar sensitivity to detecting clinically significant prostate cancer compared with systematic biopsy alone, but decreased detection of clinically non-significant prostate with Gleason grade 1 score. Negative predictive value for Stockholm3 was 99% when both systematic and targeted biopsy were negative.

Strengths and limitations

This study explored different clinical scenarios of using Stockholm3 and the appropriate choice of outcomes which are also relevant to the UK. One limitation is that the study was not from the UK.

Bergman et al. (2018)

Study size, design and location

A study assessing the diagnostic precision of Stockholm3 compared to PSA testing in 547 men in Sweden.

Intervention and comparator(s)

Stockholm3 and PSA

Key outcomes

Biopsy was recommended in 62% of people who were referred for MRI after a positive Stockholm3 test. Of those having a biopsy, 58% had high grade cancer while only 6% had low-grade cancer. A health economic

analysis reported Stockholm3 with MRI followed by targeted and systematic biopsies had the lowest costs when compared with 1) PSA then systemic biopsy if PSA level is elevated (PSA level of more than 3 nanograms per ml), 2) PSA then MRI if PSA level is raised, then systemic biopsy if positive MRI results. The study showed the effectiveness of using a reflex testing model. Using nurses in the screening reduces visits to the urologists for patients that do not need a biopsy. The cost savings of implementing Stockholm3 was estimated to 17% because of reduced number of unnecessary MRIs, biopsies, and treatments.

Strengths and limitations

Some of the strengths for the study included study design, comparison of 3 strategies and including up to 10 primary care sites. One of the limitations is that the study was done outside the NHS. The study did not provide study design details.

Ström et al. (2017)

Study size, design and location

Prospective population-based diagnostic trial comparing Stockholm3 to PSA 3 nanograms per ml or more as indications for prostate biopsy in Stockholm, Sweden.

Intervention and comparator

Stockholm3 compared with PSA testing.

Key outcomes

The study looked at updating the Stockholm3 algorithm to improve its performance in prostate cancer diagnosis. When used as a reflex test for people with PSA levels of at least 3 nanograms per ml, Stockholm3 reduced the number of biopsies needed by 34% compared with using PSA levels alone, with equal sensitivity.

Strengths and limitations

One limitation was that the population was ethnically homogenous. This limits generalisation of the performance in other ethnic groups.

Grönberg et al. (2015)

Study size, design and location

Prospective, population-based, paired diagnostic trial of men aged 50 to 69 years for prostate cancer screening in Stockholm, Sweden.

Intervention and comparator

Stockholm3 compared with PSA testing.

Key outcomes

The Stockholm3 model performed better than PSA testing alone in detecting high grade cancers with a Gleason score of at least 7. Stockholm3 was also reported to reduce the number of biopsies by 32% and avoided up to 44% of benign biopsies.

Strengths and limitations

One limitation was that the population was ethnically homogenous. This limits generalisation of the performance in other ethnic groups.

Sustainability

The company claims the Stockholm3 may help reduce the environmental impact by decreasing energy use and travel. There is no published evidence to support these claims.

Recent and ongoing studies

- From PSA to Stockholm3, a Naturalistic Effectiveness Multipart Research Program: Study Part 1. ClinicalTrials.gov Identifier: NCT03381105. Status: recruiting. Indication: prostate cancer. Devices: PSA and Stockholm3. Estimated completion date: 31 December 2030. Country: Norway.
- Validation of the Prostate Cancer Biomarker Stockholm3 for Improved Disease Detection and Classification in the Swiss Population. ClinicalTrials.gov Identifier: NCT05294627. Status: recruiting. Indication: prostate cancer. Devices: Stockholm3. Estimated completion date: 1 October 2022. Country: Switzerland.
- SEPTA Trial: Stockholm3 Validation Study in a Multi-Ethnic Cohort for ProsTAte Cancer. ClinicalTrials.gov Identifier: NCT04583072. Status: recruiting. Indication: prostate cancer. Devices: Stockholm3. Estimated completion date: 15 December 2022. Country: US.
- STHLM3 AS NorDCaP - a Follow-up Study of Men on Active Surveillance of Prostate Cancer. ClinicalTrials.gov Identifier: NCT04627948. Status: recruiting. Indication: prostate cancer. Devices: Stockholm3. Estimated completion date: 1 May 2023. Country: Sweden.

Expert comments

- Intended setting
- Level of innovation
- Potential patient impact
- Potential system impact
- Safety
- Evidence

Comments on this technology were invited from clinical experts working in the field and relevant patient organisations. The comments received are individual opinions and do not represent NICE's view.

Four experts contributed to the development of this briefing. None of the experts had used the technology and only 2 were familiar with the technology. All experts noted that the technology is not currently used in the NHS. Two of the experts have done bibliographic research on the technology.

Intended setting

Views from experts varied around the most appropriate setting for Stockholm3. One expert stated that, considering the tests will be done in a reference laboratory, the test is best done by a urologist in a secondary care setting after the referral. In this case, they noted that about 50% of people who have a prostate-specific antigen (PSA) test would likely have a significantly raised PSA level and would go on to need the Stockholm3 blood test. Other experts stated the most appropriate point of introducing the technology would be at primary care at the outset of referral, recognising that it could be a useful screening tool but this would depend on initiative towards prostate cancer screening in the UK. One expert

stated in addition to being used upfront in primary care, it could equally or perhaps more beneficially be used to follow up of people having investigations for suspected prostate cancer and being discharged back to primary care with normal MRI or negative biopsies. The expert stated that the technology can then help to find an optimal point for people to be re-referred to secondary care for further investigations. Another expert stated they did not think it would gain use in primary care, but it would be used in secondary care in helping decision making for whether to biopsy after MRI for risk scores of 3 or below. This expert considered it unlikely to replace MRI as the primary screening tool.

Level of innovation

Two experts noted that there are a couple of blood-test tumour markers that have been published which include: the 4Kscore test; a prebiopsy test that incorporates 4 prostate proteins along with clinical information and the Prostate Health Index (PHI); a formula that combines all 3 forms of PSA. Prostate cancer antigen 3 (PCA3) is another urinary test that measures the concentration of PCA3 molecules in urine. Another expert noted that the PCA3, free or total PSA has been tried before but not routinely used.

Potential patient impact

Three experts said that the main patient benefit would be a possible reduction in unnecessary MRIs and biopsies in people with suspected prostate cancer. Avoiding the unnecessary invasive tests subsequently avoids the accompanying complications. One expert highlighted that the technology would mainly benefit all those aged above 50, particularly people over 70 and people with a family history of prostate cancer. Another expert said the technology is likely to benefit 2 groups of people who are normally disadvantaged by PSA testing alone. One of the groups in the 15% that present with normal PSA levels but may have prostate cancer, and a second group in the 2% that present with normal PSA levels but may have a fast-growing cancer. The other expert mentioned that younger people with smaller prostates who have harder to interpret MRIs were likely to benefit from the technology.

Potential system impact

One expert said the technology would lead to a small reduction in biopsies but would be unlikely to replace the use of MRIs. Another expert said the cost of the new technology would likely balance out against reduced diagnostic and treatment interventions, hospital visits, capacity and staffing in the NHS. Furthermore, the expert said the technology would likely be cheaper and beneficial in the long run. Another expert suggested the resource impact of adopting the technology would likely be less or the same as the current standard of care. Several experts commented that there will be additional financial costs to providing equipment, staff and potential training for doing the Stockholm3 blood test which will be borne by the reference laboratory. One expert said that there would need to be a reference laboratory (United Kingdom Accreditation Service [UKAS] and International Organisation for Standardisation [ISO] accredited) with all the appropriate CE accredited tests both plasma proteins and molecular testing. Another expert said there would be no change in facilities except for additional logistics to get test and results communicated.

Safety

One expert said there was no potential harm of using the technology while another expert said that potential harms of the technology are similar to the harms of using PSA testing which would be underdiagnosis or overdiagnosis of prostate cancer.

Evidence

All experts recommended some additional research. One expert felt that there was a need for long term (over 15 years) longitudinal follow-up data in people who had testing with the technology and who did not have an MRI or biopsy. Another expert noted the need for research to see how the technology works in Black, Asian and minority ethnic populations. The expert also acknowledged there is an ongoing study in the US which might address this issue. One other expert recommended that additional research in the UK setting was needed and stated that the issue which would prevent adoption of the technology would be the additional expense and unclear benefits in the NHS setting. One expert mentioned the need for more clarity on cut-off levels.

Patient organisation comments

A representative from 1 patient organisation, Prostate Cancer UK, gave the following comments on Stockholm3.

The benefits of Stockholm3 are that it is convenient and results in quick or accurate care provision. Stockholm3 prevents harm from unnecessary biopsies. For people who are concerned about their prostate cancer risk, this technology could rule out any unnecessary worry of being referred into secondary care for an exploratory MRI scan or biopsy. Stockholm3 test should be used in monitoring for those people who have a raised prostate-specific antigen (PSA) level but have had a negative biopsy.

Three subgroups who would benefit from the technology included people at higher risk but who have a lower PSA level than is currently needed for secondary care referral, those currently on active surveillance or those who have had a negative MRI or biopsy and who are referred back to primary care, and those referred for a biopsy with low risk and low-grade cancer.

The potential disadvantages of the technology might include possible side effects and practical difficulties, for users or carers. Patients getting a high-risk percentage score might experience a degree of stress with this outcome before moving into secondary care for an MRI. We would favour a strong education and support system being in place alongside Stockholm3 testing for those people who end up with a higher score and therefore are referred to secondary care. People with communication difficulties, learning difficulties and mental health problems using Stockholm3 need special consideration compared with the general patient population.

Regular use of this technology within the NHS could create delays within pathology which could delay a person's diagnosis.

NICE guidance on Stockholm3 would improve equal access to the technology for all people who might benefit from its use, throughout England.

At £350 per test cost price the health economics surrounding the test would not hold up for mass use within the NHS. The concerns with adopting the device are that there is no defined place in the pathway for this diagnostic to be rolled out and whether there is the infrastructure and workforce in place within pathology for a new test to be rolled out nationwide.

Expert commentators

The following clinicians contributed to this briefing:

- Dr John Bolodeoku, consultant chemical pathologist, JB consulting MDP Limited. Declared no conflicts of interest.
- Mr Aniruddha Chakravarti, consultant urological surgeon, The Royal Wolverhampton Hospitals NHS Trust. Declared no conflicts of interest.
- Mr Freddie Banks, consultant urologist, West Herts Teaching Hospitals Trust. Declared no conflicts of interest.
- Prof Sanjeev Madaan, consultant urological surgeon, Dartford and Gravesham NHS Trust. Declared no conflicts of interest.

Representatives from the following patient organisations contributed to this briefing:

- Prostate Cancer UK.

Development of this briefing

This briefing was developed by NICE. The interim process and methods statement for medtech innovation briefings sets out the process NICE uses to select topics, and how the briefings are developed, quality-assured and approved for publication.

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NCITA

National Cancer Imaging Translational Accelerator

We are a network of medical imaging experts and scientists building a unified infrastructure to accelerate the development and translation of imaging biomarkers into clinical trials and the NHS.

LIMIT Study

Luminal Index MRI Identification of ProstaTe Cancer (LIMIT Study)
Supported by Cancer Research UK

What is the purpose of this study?

We have developed a new MRI technique that can allow prostate cancer to be detected using a 5-minute scan as opposed to the current 35–40-minute MRI scan. As this novel scan is simple, cheap and has good performance, it can be delivered within the community setting even using an MRI scanner located in a travelling van. We believe that providing scans in the community setting could allow men, who would otherwise not be scanned, the opportunity to have their cancer detected earlier.

Why is this research being done?

MRI is the best available test for the detection of prostate cancer, but at present this can only be provided in a hospital setting. Whilst MRI is being used, there are still many men (about 16%) that are being diagnosed with late-stage disease and almost 12,000 men dying per year from prostate cancer in the UK. Clearly, these men are not being scanned early enough in the time-course of their disease for treatment to make a difference. If we can detect their cancer earlier, we think we might be able to reduce deaths from prostate cancer.

In this study, leading doctors and scientists from both hospital and GP settings are collaborating to establish the best pathway to deliver a community-based MRI scan. The community-based approach has been selected specially to attract and engage black men, to have the opportunity to have their prostate cancer detected early.

We will collect feasibility data and determine how acceptable a short MRI-based prostate cancer screening process is for participants, GPs, urologists and commissioners. We will explore screening invitations sent by GPs and within the community (via leaflets, social media, transport for London, barber shops, influencers to name a few), hoping to attract more participants at risk due to their ethnicity. This first step will inform us whether a large national trial of our detection strategy using our new MRI technique is feasible. Should it be feasible, the results of this study will allow us to plan the national trial.

What are the benefits of taking part in the study?

The study uses a short 5-minute MRI scan, based in the community, to detect men with prostate cancer, who would otherwise not be scanned. The information we gather on how acceptable a short MRI-based prostate cancer screening process will provide the first step to a larger national trial using this new MRI technique to allow earlier detection of prostate cancer in men (~16%) that present with late stage metastatic disease.

Who is being included in the study?

We plan to recruit a total of 800 men from hospitals in London, Cambridge and Manchester, we will also have community site in London. This is the feasibility phase of a screening study.

What is the status of the study?

The LIMIT study is currently recruiting patients.

Who is carrying out the study?

The study is being conducted by University College London, who is the sponsor of the LIMIT Study. The study is funded by Cancer Research UK's International Alliance for Cancer Early Detection partnership.

https://ncita.org.uk/contact/

MRI scans improve prostate cancer diagnosis in screening trial – 'The REIMAGINE study'

22 August 2023

Using MRI as a screening test alongside PSA density allowed detection of cancers that would have been missed by the blood test alone, according to new research from UCL, UCLH and King's College London.

The REIMAGINE study, published in BMJ Oncology is the first study to use MRI scans with prostate specific antigen (PSA) density to assess the need for further standard NHS tests. Of the 29 participants found to have serious prostate cancer, 15 had a 'low' PSA score that would have meant they were not referred for further investigation under the current system.

Currently, men over 50 in the UK can ask for a PSA test if they are experiencing symptoms or are concerned about prostate cancer. Previous screening studies have used a PSA level of 3ng/ml or above as the benchmark for performing additional tests to look for prostate cancer, such as a biopsy.

Though previous research found that the combination of a PSA test and/or digital rectal examination, followed by a biopsy if disease is suspected, helped to reduce prostate cancer mortality by 20% after 16 years, this approach has also been linked to overdiagnosis and overtreatment of lower risk cancers.

In recent years, the introduction of MRI as a first step in investigating men at higher risk of prostate cancer has spared one in four men from an unnecessary biopsy, which is invasive and can lead to complications.

It is hoped that using MRI as a screening tool that is offered to men without them needing to ask for it could further reduce prostate cancer mortality and overtreatment.

For this study, researchers invited men aged 50 to 75 to have a screening MRI and PSA test. Of the 303 men who completed both tests, 48 (16%) had a positive screening MRI that indicated there might be cancer, despite only having a median PSA density result of 1.2 ng/ml. 32 of these men had lower PSA levels than the current screening benchmark of 3ng/ml, meaning they would not have been referred for further investigation by the PSA test currently in use.

After NHS assessment, 29 men (9.6%) were diagnosed with cancer that required treatment, 15 of whom had serious cancer and a PSA of less than 3ng/ml. Three men (1%) were diagnosed with low-risk cancer that did not require treatment.

Professor Caroline Moore (UCL Surgical & Interventional Science and consultant surgeon at UCLH), chief investigator of the study and NIHR Research Professor, said: "The thought that over half the men with clinically significant cancer had a PSA less than 3 ng/ml and would have been reassured that they didn't have cancer by a PSA test alone is a sobering one and reiterates the need to consider a new approach to prostate cancer screening. Our results give an early indication that MRI could offer a more reliable method of detecting potentially serious cancers early, with the added benefit that less than one per cent of participants were 'over-diagnosed' with low-risk disease. More studies in larger groups are needed to assess this further."

Recruitment for the trial also indicated that black men responded to the screening invitation at one fifth the rate of white men, something the authors say will need to be addressed in future research.

Saran Green, an author of the study from King's College London, said: "One in four black men will get prostate cancer during their lifetime, which is double the number of men from other ethnicities. Given this elevated risk, and the fact that black men were five times less likely to sign up for the REIMAGINE trial than white men, it will be crucial that any national screening programme includes strategies to reach black men and encourage more of them to come forward for testing."

The next step towards a national prostate cancer screening programme is already underway, with the LIMIT trial being conducted with a much larger number of participants. The trial will also attempt to recruit more black men, including through mobile 'scan in a van' initiatives designed to visit communities less likely to come forward for testing in response to a GP invitation.

If LIMIT is successful, a national-level trial would also be required before prostate cancer screening becomes standard clinical practice.

Professor Mark Emberton (UCL Surgical & Interventional Science and consultant urologist at UCLH), senior author of the study, said: "The UK prostate cancer mortality rate is twice as high as in countries like the US or Spain because our levels of testing are much lower than other countries. Given how treatable prostate cancer is when caught early, I'm confident that a national screening programme will reduce the UK's prostate cancer mortality rate significantly. There is a lot of work to be done to get us to that point, but I believe this will be possible within the next five to ten years."

This research was supported by the National Institute for Health and Care Research UCLH Biomedical Research Centre, the Medical Research Council (MRC) and Cancer Research UK (CRUK).

Prostate cancer

A guide for men who've just been diagnosed

PROSTATE CANCER UK

About this booklet

This booklet is for men who've recently been diagnosed with prostate cancer. Your partner, family or friends might also find it helpful. We explain what prostate cancer is, the tests you may have to diagnose it, and the treatment options available. There's also information about where you can get support if you need it.

You can use this booklet as your personal guide and write down any information that might be helpful to you in the blue shaded areas towards the back.

Each hospital will do things slightly differently. Use this booklet as a general guide to what to expect and ask your doctor or nurse for more details about your care and the support available to you. You can also speak to our Specialist Nurses, in confidence, on 0800 074 8383 or chat to them online.

This booklet is also available in large print.

The following symbols appear throughout the booklet:

Our Specialist Nurses

Our publications

Sections for you to fill in

Watch online at **prostatecanceruk.org**

Contents

If you've just been diagnosed with prostate cancer

If you've just been diagnosed with prostate cancer, you might feel scared, worried, stressed or even angry. There's no right way that you're supposed to feel and everyone reacts in their own way.

When you're told you have cancer, it can be a shock and you might find it difficult to take everything in. You may have lots of questions about your cancer and treatment.

You may feel anxious about the future and how having prostate cancer will affect your life and your loved ones. It can also be difficult and stressful trying to think about treatment.

There are people who are there to support you and there are also things you can do to help yourself. Families can also find this a difficult time and they may need support too.

You might find it helpful to read about prostate cancer and treatment options. And you can read more about getting support on page 41. Or you can call our Specialist Nurses.

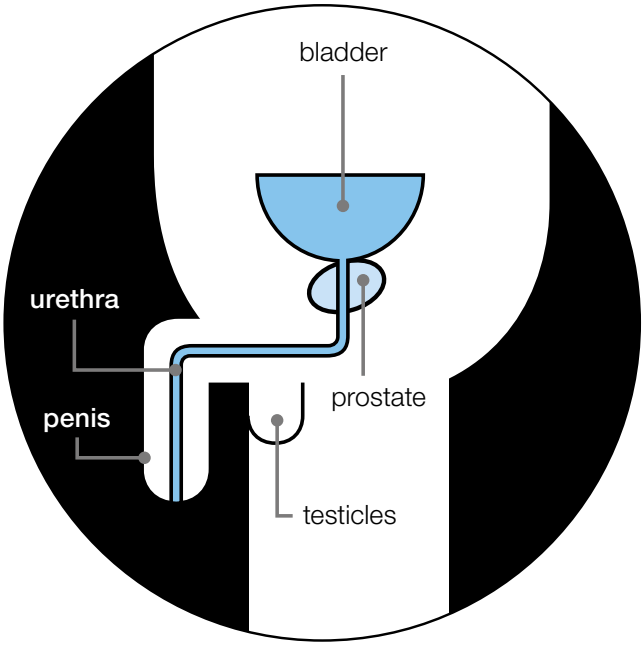
The Specialist Nurses were there for me on the day I was diagnosed. They talked me through the scenarios and possible treatments.

A personal experience

What is the prostate?

Only men have a prostate. The prostate is usually the size and shape of a walnut. It sits underneath the bladder and surrounds the urethra, which is the tube men urinate (pee) and ejaculate through.

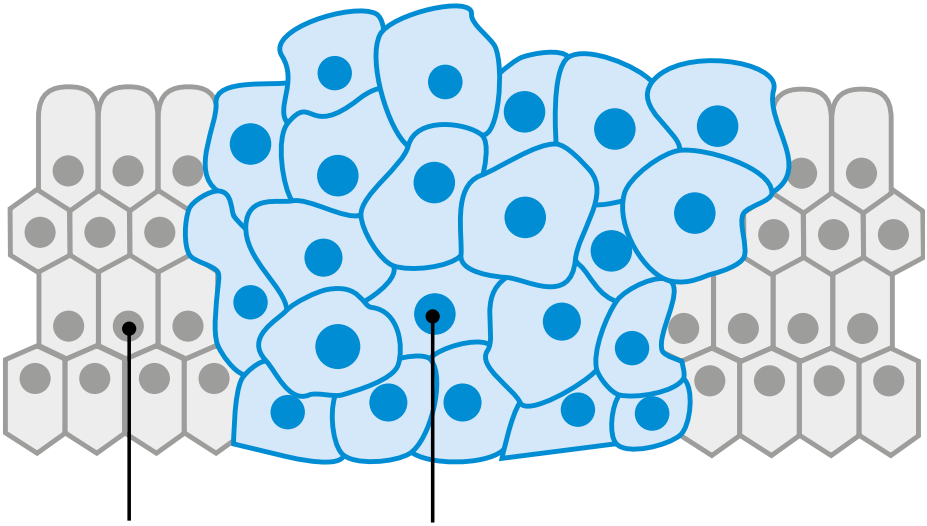
The prostate is a gland. Its main job is to help make semen – the fluid that carries sperm.



What is prostate cancer?

Normally the growth of all cells is carefully controlled in the body. As cells grow old and die, new cells take their place. Cancer can develop when cells start to grow in an uncontrolled way. If this happens in your prostate, you have prostate cancer.

How cancer develops



Prostate cancer is the most common cancer in men in the UK.

Most prostate cancer grows slowly or doesn't grow at all. It may never cause any problems or shorten a man's life. But some prostate cancer grows quickly and is more likely to spread to other parts of the body and cause problems. This needs treatment to help prevent it spreading outside the prostate.

Most men with early prostate cancer don't have any symptoms. Some men have had tests for prostate cancer because they had urinary problems. But urinary problems are usually caused by other things that aren't cancer.

In the UK, about 1 in 8 men will be diagnosed with prostate cancer at some point in their lives. And you're more likely to get prostate cancer if you're aged 50 or over, you are Black, or your father or brother has had it.

Find out more about prostate cancer by watching our online video, **Understanding your prostate cancer** at **prostatecanceruk.org/just-diagnosed-video**

How is prostate cancer diagnosed?

Prostate cancer is diagnosed using a number of tests, which we describe on the following pages. You might have already had some of these, but you may need further tests to find out whether the cancer has spread and how aggressive it is. You may not need to have all of these tests, and you might not have them in this order.

Read more about these tests in our fact sheet, **How prostate cancer is diagnosed**.

PSA test

This is a blood test that measures the amount of prostate specific antigen (PSA) in your blood. PSA is a protein produced by normal cells in your prostate and also by prostate cancer cells. It's normal to have a small amount of PSA in your blood, and the amount rises as you get older.

Read more in our booklet, **Understanding the PSA test: A guide for men concerned about prostate cancer**.

Digital rectal examination (DRE)

This is where the doctor or nurse feels your prostate through the wall of the back passage (rectum). They'll wear gloves and put some gel onto their finger to make it more comfortable. They'll feel your prostate for any hard or lumpy areas and to get an idea of its size.

Prostate biopsy

This involves using thin needles to take small pieces of tissue from the prostate. The tissue is then looked at under a microscope to check for cancer.

There are two main types of biopsy.

- A trans-rectal ultrasound (TRUS) guided biopsy is where the needle goes through the wall of the back passage. You will have a local anaesthetic, which numbs the area around your prostate.
- A template (transperineal) biopsy is where the needle goes through the skin between the testicles and the back passage. You will have a general anaesthetic, so you will be asleep and won't feel anything.

MRI scan

An MRI (magnetic resonance imaging) scan uses magnets to create a detailed picture of your prostate and the surrounding tissues. You might have an MRI scan to find out if the cancer has spread. In some hospitals you might have an MRI scan before a biopsy. This can help your doctor see if there is any cancer in your prostate and where it might be.

CT scan

A CT (computerised tomography) scan can also show whether the cancer has spread outside the prostate, for instance to the lymph nodes or nearby bones. Lymph nodes are part of your immune system and are found throughout your body.

Bone scan

A bone scan can show whether any cancer cells have spread to your bones. A small amount of a safe radioactive dye is injected into a vein in your arm before you have the scan. If there is any cancer in the bones, the dye will collect in these areas and show up on the scan.

PET scan

At some hospitals, you may be offered a PET (positron emission tomography) scan. This shows how well different parts of your body are working. It can be used to check if cancer has spread outside the prostate. It is normally used to see if your cancer has come back after treatment.

What do my test results mean?

Your doctor will use the results of all your tests to find out if the cancer has spread outside the prostate and how quickly it is growing. Ask your doctor or nurse to explain your test results if you don't understand them.

PSA level

It's normal to have a small amount of PSA in your blood, and the amount rises as you get older. Prostate cancer can raise your PSA level. But other things can raise your PSA level too – including a urine infection, an enlarged prostate and vigorous exercise, especially cycling. And some men with a normal PSA level can have prostate cancer.

You may have had a PSA test that showed your PSA was raised, and then had other tests to diagnose your prostate cancer.

Biopsy results

Your biopsy samples will be looked at under a microscope to check for any cancer cells. Your doctor will be sent a report, called a pathology report, with the results. The results will show:

- whether any cancer was found
- how many biopsy samples contained cancer
- how much cancer was present.

You might be sent a copy of the pathology report. And you can ask to see copies of letters between the hospital and your GP. If you have trouble understanding any of the information, ask your doctor to explain it. Or you could call our Specialist Nurses.

Your biopsy results will show how aggressive the cancer is – in other words, how likely it is to grow and spread outside the prostate. You might hear this called your Gleason grade, Gleason score or grade group.

Gleason grade

When cells are seen under the microscope, they have different patterns, depending on how quickly they're likely to grow. The pattern is given a grade from 1 to 5 – this is called the Gleason grade. Grades 1 and 2 are not cancer, and grades 3, 4 and 5 are cancer. If you have cancer, the higher your grade, the more likely the cancer is to grow and spread outside the prostate.

Gleason score

There may be more than one grade of cancer in your biopsy samples. Your Gleason score is worked out by adding together two Gleason grades.

The first is the most common grade in all the samples. The second is the highest grade of what's left. When these two grades are added together, the total is called the Gleason score.

Gleason score = the most common grade + the highest other grade in the samples

For example, if the biopsy samples show that:
- most of the cancer seen is grade 3, and
- the highest grade of any other cancer seen is grade 4, then
- the Gleason score will be 7 (3 + 4).

Your Gleason score will be between 6 (3 + 3) and 10 (5 + 5).

Some men will only be told their total Gleason score and not their Gleason grades.

Grade group

Your doctor might also talk about your 'grade group'. This is a newer system for showing how aggressive your prostate cancer is likely to be. Your grade group will be a number between 1 and 5. Ask your doctor or nurse for more information about your grade group, or speak to our Specialist Nurses.

What does the Gleason score or grade group mean?

The higher the Gleason score or grade group, the more aggressive the cancer and the more likely it is to spread. The table on page 14 describes the different Gleason scores and grade groups that can be given after a prostate biopsy. This is just a guide. Your doctor or nurse will talk you through what your results mean.

Gleason score	Description	Grade group
6 (3 + 3)	All of the cancer cells found in the biopsy look likely to grow slowly.	1
7 (3 + 4)	Most of the cancer cells found in the biopsy look likely to grow slowly. There are some cancer cells that look likely to grow at a moderate rate.	2
7 (4 + 3)	Most of the cancer cells found in the biopsy look likely to grow at a moderate rate. There are some cancer cells that look likely to grow slowly.	3
8 (3 + 5)	Most of the cancer cells found in the biopsy look likely to grow slowly. There are some cancer cells that look likely to grow quickly.	4
8 (4 + 4)	All of the cancer cells found in the biopsy look likely to grow at a moderate rate.	
8 (5 + 3)	Most of the cancer cells found in the biopsy look likely to grow quickly. There are some cancer cells that look likely to grow slowly.	
9 (4 + 5)	Most of the cancer cells found in the biopsy look likely to grow at a moderate rate. There are some cancer cells that are likely to grow quickly.	5
9 (5 + 4)	Most of the cancer cells found in the biopsy look likely to grow quickly. There are some cancer cells that look likely to grow at a moderate rate.	
10 (5 + 5)	All of the cancer cells found in the biopsy look likely to grow quickly.	

What stage is my cancer?

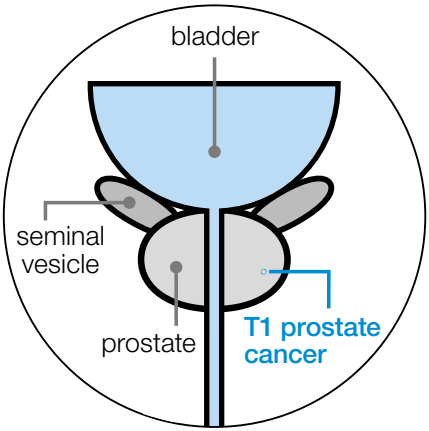
You might need scans to find out the stage of your cancer – in other words, how far it has spread. You might have an MRI, CT or bone scan. The results should help you and your doctor decide which treatments might be suitable for you.

You might not need a CT or bone scan if your PSA is low and your biopsy results suggest that the cancer is unlikely to have spread.

The most common way to record the stage of your cancer is the TNM (Tumour-Nodes-Metastases) system.

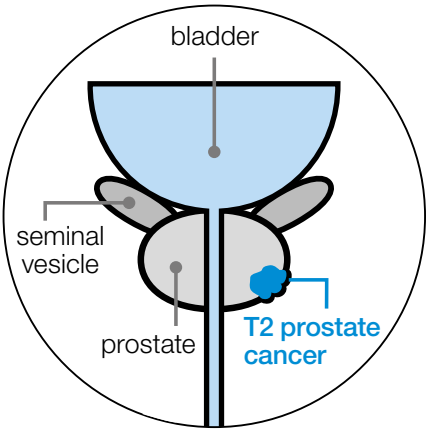
T stage

The T stage shows how far the cancer has spread in and around the prostate. A digital rectal examination (DRE) or MRI scan is usually used to find out the T stage, and sometimes a CT scan.

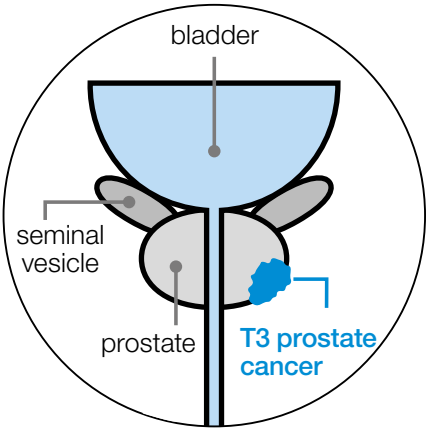


T1

The cancer can't be felt during a DRE or seen on scans, and can only be seen under a microscope.



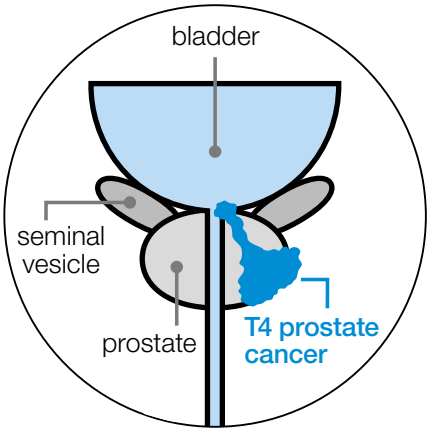
T2
The cancer can be felt during a DRE or seen on scans, but is still contained inside the prostate.



T3
The cancer can be felt during a DRE or seen breaking through the outer layer (capsule) of the prostate.

T3a
The cancer has broken through the outer layer of the prostate, but has not spread to the seminal vesicles (which produce some of the fluid in semen).

T3b
The cancer has spread to the seminal vesicles.



T4
The cancer has spread to nearby organs, such as the bladder, back passage, pelvic wall or lymph nodes.

N stage

The N stage shows whether the cancer has spread to the lymph nodes near the prostate. Lymph nodes are part of your immune system and are found throughout your body. The lymph nodes near your prostate are a common place for prostate cancer to spread to. An MRI or CT scan is used to find out your N stage

The possible N stages are:

NX The lymph nodes were not looked at, or the scans were unclear.

N0 No cancer can be seen in the lymph nodes.

N1 The lymph nodes contain cancer.

M stage

The M stage shows whether the cancer has spread (metastasised) to other parts of the body, such as the bones. A bone scan is usually used to find out your M stage. Your doctor may offer you a bone scan if they think your cancer may have spread. Cancer that has spread to other parts of the body is called advanced prostate cancer.

The possible M stages are:

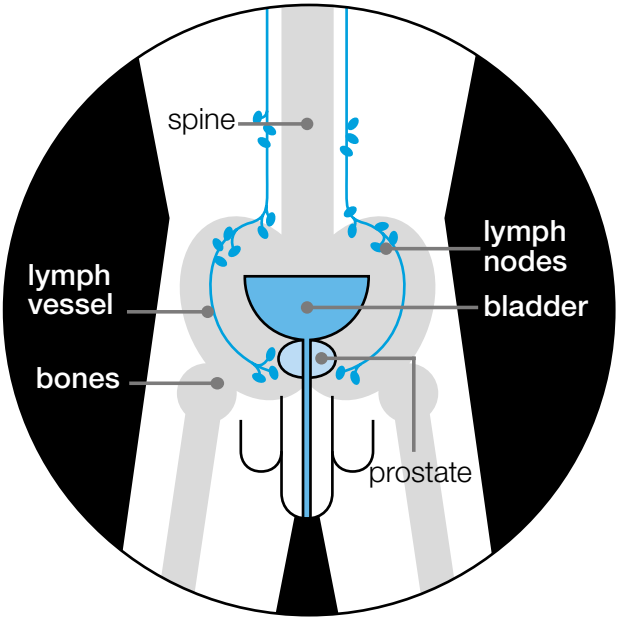
MX The spread of the cancer wasn't looked at, or the scans were unclear.

M0 The cancer hasn't spread to other parts of the body.

M1 The cancer has spread to other parts of the body.

How prostate cancer spreads

Prostate cancer cells can move from the prostate to other parts of the body through the blood stream. Or they can spread to the lymph nodes near the prostate and then travel through the lymph vessels to other parts of your body. Lymph nodes and lymph vessels are part of your lymphatic system, and are found throughout your body.



What does my stage mean?

Your TNM stage is used to work out if your cancer is localised, locally advanced or advanced.

Stage	Description	T stage	N stage	M stage
Localised	Cancer that's contained inside the prostate.	T1 or T2	N0 or NX	M0 or MX
Locally advanced	Cancer that's started to break out of the prostate, or has spread to the area just outside it.	T1 or T2	N1	M0
		T3 or T4	N0 or N1	M0
Advanced	Cancer that's spread from the prostate to other parts of the body. Also known as metastatic prostate cancer.	Any T stage	Any N stage	M1

Localised prostate cancer

Localised prostate cancer is cancer that's contained inside the prostate. You may also hear it called early prostate cancer. Many localised cancers are not aggressive and grow slowly or not at all. They may not cause any problems or shorten your life. Slow-growing localised prostate cancer may not need to be treated and can often be monitored instead. But some localised cancers may grow more quickly and spread to other parts of the body. These cancers are more likely to cause problems and need to be treated. Treatments for localised prostate cancer usually aim to get rid of the cancer. There are a number of treatments for localised prostate cancer (see page 23). Read more in our fact sheet, **Localised prostate cancer**.

Locally advanced prostate cancer

Locally advanced prostate cancer is cancer that's started to break out of the prostate, or has spread to the area just outside it. It can spread to the seminal vesicles, the bladder, back passage, pelvic wall or lymph nodes near your prostate. You might have treatment to get rid of the cancer or to keep it under control. Your treatment options will depend on how far the cancer has spread. Read more in our fact sheet, **Locally advanced prostate cancer**.

Advanced prostate cancer

Advanced prostate cancer is cancer that has spread from the prostate to other parts of the body. It's also called metastatic prostate cancer. Prostate cancer can spread to any part of the body, but it most commonly spreads to the bones and lymph nodes.

It's not possible to cure advanced prostate cancer, but treatments can keep it under control, sometimes for several years.

Advanced prostate cancer can cause symptoms, such as fatigue (extreme tiredness), pain in the back, hips or pelvis, and problems urinating. There are treatments available to help manage these symptoms. Read more in our fact sheet, **Advanced prostate cancer**.

What are my treatment options?

Your treatment options will depend on whether your prostate cancer is localised, locally advanced or advanced (see page 20). We've included a summary of the main treatments for prostate cancer below. Some of these treatments may not be suitable for you, so talk to your doctor or nurse about your own situation. There's more information about choosing a treatment on page 34.

I'm pretty sure that I would have had this treatment anyway, but I think I would have benefited from learning more about the options available.

A personal experience

Ask your doctor or nurse to mark which treatments might be suitable for you. Read more about all of the available treatments on the following pages.

Treatment options

Localised prostate cancer

- ☐ Active surveillance
- ☐ Watchful waiting
- ☐ Surgery (radical prostatectomy)
- ☐ External beam radiotherapy
- ☐ Brachytherapy (either permanent seed or high dose-rate)
- ☐ High-intensity focused ultrasound
- ☐ Cryotherapy

Locally advanced prostate cancer

- ☐ External beam radiotherapy with hormone therapy (and sometimes with high dose-rate brachytherapy)
- ☐ Hormone therapy
- ☐ Watchful waiting
- ☐ Less commonly, surgery (radical prostatectomy) with hormone therapy and/or external beam radiotherapy
- ☐ Less commonly, high-intensity focused ultrasound
- ☐ Less commonly, cryotherapy

Advanced prostate cancer

- ☐ Hormone therapy (sometimes with chemotherapy)
- ☐ Chemotherapy
- ☐ Further treatments to control advanced prostate cancer
- ☐ Treatments to manage the symptoms of advanced prostate cancer

Active surveillance

Active surveillance is a way of monitoring slow-growing prostate cancer. The aim is to avoid or delay unnecessary treatment in men who have localised prostate cancer that is unlikely to spread. This means you can avoid or delay the side effects of treatment.

Active surveillance involves monitoring your cancer with regular tests, rather than treating it straight away. You might have PSA tests, biopsies and scans (see page 8). Ask your doctor or nurse what to expect. The tests aim to find any changes that suggest the cancer is growing. If any changes are found, you will be offered treatment that aims to get rid of the cancer completely, such as surgery (radical prostatectomy), external beam radiotherapy or brachytherapy.

Read more in our fact sheet, **Active surveillance**.

Watchful waiting

Watchful waiting is a different way of monitoring prostate cancer that isn't causing any problems. The aim is to monitor the cancer over the long term. This means you can avoid or delay treatment and its side effects.

If your cancer starts to grow more quickly than expected and you start to get symptoms, such as problems urinating or bone pain, you'll be offered hormone therapy to control the cancer and help manage your symptoms, rather than treatment to get rid of the cancer.

Watchful waiting involves having tests less regularly than active surveillance. And you might have fewer tests. Ask your doctor or nurse what to expect. It's generally suitable for men with other health problems who are not fit enough for treatments such as

surgery or radiotherapy. It might also be suitable if your prostate cancer isn't likely to cause problems during your lifetime.

Read more in our fact sheet, **Watchful waiting**.

Monitoring your cancer
If you're offered active surveillance or watchful waiting, make sure you know which one your doctor is talking about. There are key differences between them. These terms aren't always used in the same way, and some doctors use different terms such as 'active monitoring' and 'wait and see'. Ask your doctor to explain exactly what they mean.

Surgery (radical prostatectomy)

This is an operation to remove the prostate and the cancer inside it. Your surgeon will also remove the seminal vessels – two glands that lie behind the prostate and produce some of the fluid in semen. Your surgeon may also remove nearby lymph nodes if there is a risk that the cancer has spread there.

There are several types of operation:
- keyhole (laparoscopic) surgery
- robot-assisted keyhole surgery
- open surgery.

Surgery is usually only suitable for men with localised prostate cancer who are generally fit and healthy. It may also be an option for some men with locally advanced prostate cancer if your surgeon thinks it's possible to remove all the cancer that has spread outside the prostate. If this happens, you may also need to have external beam radiotherapy after your surgery.

Side effects can include leaking urine and erection problems. Side effects may improve over time but some men have side effects for longer. There are treatments available to help manage them.

After surgery, you won't be able to ejaculate any semen. But you can still feel the sensation of orgasm. Surgery will affect your ability to have children (fertility). If you're planning on having children, you may be able to store your sperm before the operation for use in fertility treatment.

Read more about surgery, including the side effects, in our fact sheet, **Surgery: radical prostatectomy**.

External beam radiotherapy

This uses high-energy X-ray beams to destroy the cancer cells from outside the body. These beams damage the cells and stop them from dividing and growing. External beam radiotherapy treats the whole prostate, and sometimes the area around it.

Radiotherapy is suitable for men with localised prostate cancer, who will often have it with hormone therapy. Radiotherapy with hormone therapy is also the standard treatment for men with locally advanced prostate cancer.

Side effects can include problems urinating, bowel problems such as passing loose or watery bowel movements (diarrhoea), erection problems, and extreme tiredness (fatigue). Side effects can develop during treatment and may get better with time. But for some men they can be long-term. And some men may develop side effects several months or years after having radiotherapy. There are treatments available to help manage side effects.

Read more about external beam radiotherapy, including the side effects, in our fact sheet, **External beam radiotherapy**.

Once I'd found out about the different treatments, and then experienced the wonderful care of my medical team, things did not look nearly so bad.

A personal experience

Brachytherapy

This is a type of internal radiotherapy. There are two types of brachytherapy – permanent seed brachytherapy and high dose-rate brachytherapy.

- Permanent seed brachytherapy, also called low dose-rate brachytherapy, involves putting tiny radioactive seeds into the prostate. The seeds release radiation for 8 to 10 months but stay in the prostate forever. This may be an option for men with localised prostate cancer that is unlikely to have spread outside the prostate.
- High dose-rate brachytherapy, also called temporary brachytherapy, is where a source of radiation is put into the prostate for a few minutes at a time and then removed. It can be used to treat localised prostate cancer that is likely to grow quickly, and sometimes locally advanced prostate cancer.

Brachytherapy can be used together with external beam radiotherapy to give higher doses of radiation to the whole prostate, as well as the area just outside it.

You might have hormone therapy to shrink the prostate for a few months before starting brachytherapy.

Side effects can include problems urinating, erection problems, and extreme tiredness (fatigue). Men who have permanent seed brachytherapy may also get bowel problems, although these tend to be mild. There are treatments available to help manage these side effects.

Read more about brachytherapy, including the side effects, in our fact sheets, **Permanent seed brachytherapy** and **High dose-rate brachytherapy**.

High-intensity focused ultrasound (HIFU)

HIFU uses high-frequency ultrasound energy to heat and destroy cancer cells in the prostate. It is newer than some of the other treatments for prostate cancer, so we don't know as much about the risk of side effects or how well it works in the long term (after 10 years). Because of this, it's only available in specialist centres in the UK or as part of a clinical trial.

HIFU can be used to treat localised prostate cancer, and less commonly locally advanced prostate cancer. It can also be used to treat cancer that has come back after external beam radiotherapy.

Side effects can include urinary problems and erection problems. These side effects may improve over time, and there are ways to manage them.

Read more about HIFU, including the side effects, in our fact sheet, **High-intensity focused ultrasound (HIFU)**.

Cryotherapy

Cryotherapy uses extreme cold to freeze and destroy cancer cells. It's newer than some of the other treatments for prostate cancer, so we don't know as much about the risk of side effects and how well it works in the long term. Because of this, it's only available in specialist centres in the UK or as part of a clinical trial.

Cryotherapy is usually used to treat prostate cancer that has come back after treatment with external beam radiotherapy or brachytherapy.

Cryotherapy can also be used to treat localised prostate cancer, and less commonly locally advanced prostate cancer.

Side effects can include urinary problems and erection problems. These side effects may improve over time, and there are ways to manage them.

Read more about cryotherapy, including the side effects, in our fact sheet, **Cryotherapy**.

Hormone therapy

Prostate cancer needs the male hormone testosterone to grow. Hormone therapy works by either stopping your body from making testosterone, or by stopping testosterone from reaching the cancer cells.

It will treat all prostate cancer cells, wherever they are in the body. Hormone therapy won't get rid of your prostate cancer, but it can keep the cancer under control, sometimes for several years.

Hormone therapy is often used with external beam radiotherapy to treat localised prostate cancer. It can also be used with external beam radiotherapy to treat locally advanced prostate cancer. Hormone therapy is the standard treatment for advanced prostate cancer. If you have advanced prostate cancer, you may be offered chemotherapy at the same time as your hormone therapy.

There are three main ways to have hormone therapy for prostate cancer:

- injections or implants to stop your testicles making testosterone
- tablets to block the effects of testosterone
- surgery to remove the testicles or the parts of the testicles that make testosterone (orchidectomy).

The side effects of hormone therapy are usually caused by low testosterone levels. They can include:

- hot flushes
- loss of desire for sex
- problems getting or keeping an erection
- extreme tiredness (fatigue)
- breast swelling or tenderness (gynaecomastia)
- weight gain.

The chances of getting each side effect depend on the type of hormone therapy you're having and how long you have it for. There are ways to manage side effects.

Read more about hormone therapy, including the side effects, in our publications, **Hormone therapy** and **Living with hormone therapy: A guide for men with prostate cancer**.

Chemotherapy

Chemotherapy uses anti-cancer drugs to kill prostate cancer cells, wherever they are in the body. It doesn't get rid of prostate cancer, but it aims to shrink it and slow down its growth.

Chemotherapy is usually only used to treat advanced prostate cancer. It can be used at the same time as hormone therapy in men who have just been diagnosed with advanced prostate cancer. It can also be given to men whose cancer has stopped responding to hormone therapy (see page 29).

You need to be quite fit to have chemotherapy because the side effects can be harder to deal with if you have other health problems.

Side effects include extreme tiredness (fatigue), feeling and being sick, loss of appetite, hair loss, bowel problems, a sore mouth, and being less able to fight off infections. These side effects usually gradually improve after you finish treatment.

Read more about chemotherapy, including the side effects, in our fact sheet, **Chemotherapy**.

Treatments to control advanced prostate cancer

Hormone therapy, sometimes alongside chemotherapy, is the standard first treatment for advanced prostate cancer. Over time, it may become less effective, but there are other treatments available that can help control the cancer and help men live longer.

- **More hormone therapy** can help control your cancer. You might be offered new treatments called abiraterone (Zytiga®) or enzalutamide (Xtandi®).
- **More chemotherapy** might be an option if your hormone therapy is no longer working so well.
- **Radium-223 (Xofigo®)** is a new type of internal radiotherapy that helps some men live longer. It can also delay some symptoms, such as bone pain and bone fractures.
- **Steroids** can stop the body from producing as much testosterone. They may also help improve your appetite and energy levels, and can treat pain.

Read more in our fact sheet, **Treatment options after your first hormone therapy**.

Treatments to manage the symptoms of advanced prostate cancer

If you've been diagnosed with advanced prostate cancer and have symptoms such as bone pain, there are treatments to manage these.

- **Pain-relieving drugs** can help manage any pain.
- **Radiotherapy** can slow down the growth of the cancer and control symptoms.

- **Drugs called bisphosphonates** can strengthen the bones and help to prevent broken bones in men whose cancer has caused bone thinning. Bisphosphonates can also be used to treat pain caused by cancer that has spread to the bones.

Read more about these in our fact sheets, **Managing pain in advanced prostate cancer**, **Radiotherapy for advanced prostate cancer** and **Bisphosphonates for advanced prostate cancer**.

Clinical trials

A clinical trial is a type of medical research. Clinical trials aim to find new and improved ways of preventing, diagnosing, treating and managing illnesses. You can ask your doctor or nurse if there are any clinical trials you could take part in, or speak to our Specialist Nurses. You can also find details of some clinical trials happening now in the UK in Cancer Research UK's database at www.cancerresearchuk.org/trials

Read more in our fact sheet, **A guide to prostate cancer clinical trials**.

Choosing a treatment

Your treatment options and which treatment you choose may depend on several things, including:

- how far your cancer has spread (its stage)
- how quickly your cancer may be growing
- the advantages and disadvantages of each treatment
- what each treatment involves
- the possible side effects of each treatment
- practical things, such as how often you would need to go to hospital, or how far away your nearest hospital is
- your own thoughts about different treatments

- how the treatment you choose now could affect your treatment options later if your cancer comes back or spreads (see page 35)
- your general health
- how long you're expected to live for.

Side effects from treatments affect each man differently, and you might not get all the possible side effects. It's important to think about the side effects and how you would cope with them when deciding on a treatment.

The different treatment options can be a lot to take in, especially when you've just been diagnosed with prostate cancer. Make sure you have all the information you need, and give yourself time to think about which treatment is right for you.

It can be a good idea to write down any questions you might want to ask at your next appointment. And you might find it useful to have someone with you at the appointment, or to make notes to help you remember what is said.

If you need further treatment

If your cancer comes back after treatment that aimed to get rid of it, the first treatment you have had may affect which treatments you can have in the future.

Some of these treatments may not be suitable for you, so speak to your doctor or nurse about your own situation.

The table on the next page shows you which treatments may be possible after your first treatment.

First treatment for prostate cancer	Second-line treatments that may be available
Surgery (radical prostatectomy)	• Radiotherapy to the prostate bed (with or without hormone therapy) • Hormone therapy alone
External beam radiotherapy	• High-intensity focused ultrasound (HIFU) • Cryotherapy • Hormone therapy • Brachytherapy • Surgery
Permanent seed brachytherapy or high dose-rate (HDR) brachytherapy	• Cryotherapy • Hormone therapy • Rarely, HIFU • Surgery
High-intensity focused ultrasound (HIFU)	• More HIFU • External beam radiotherapy • Cryotherapy • Hormone therapy • Rarely, surgery
Cryotherapy	• More cryotherapy • External beam radiotherapy • Hormone therapy • Very rarely, surgery

Read more about this in our booklet, **If your prostate cancer comes back: A guide to treatment and support**.

I think the most confusing bit was being given a choice of treatments. You sort of expect to be told what the treatment will be, not have to decide yourself. It's a lot to take in.

A personal experience.

Dealing with prostate cancer

Some men say being diagnosed with prostate cancer changes the way they think and feel about life. If you've just been diagnosed with prostate cancer you might feel scared, worried, stressed, helpless or even angry.

At times, lots of men with prostate cancer get these kinds of thoughts and feelings. But there's no 'right' way that you're supposed to feel and everyone reacts in their own way.

There are things you can do to help yourself and people who can help. Families can also find this a difficult time and they may need support too. This section might also be helpful for them.

Everyone's experience of cancer, whether you are the patient or the carer, is very, very unique and I don't think anybody can tell you how you should behave.

A personal experience

Am I going to die?

You might want to know how prostate cancer will affect you and whether you are likely to die from prostate cancer. This is sometimes called your outlook or prognosis. Most prostate cancer grows slowly and may never cause any problems or shorten a man's life. So having prostate cancer doesn't necessarily mean that you'll die from it.

No one can tell you exactly what will happen. How prostate cancer affects you will depend on many things.

- **Your stage.** If you are diagnosed with localised prostate cancer, you may not need treatment or you will have treatment that aims to get rid of the cancer. If you are diagnosed with locally advanced prostate cancer, you may have treatment that aims to get rid of the cancer or keep it under control. If you are diagnosed with advanced prostate cancer, the treatment won't cure your cancer but it can help to keep it under control.
- **Your Gleason score or grade group.** The higher your Gleason score or grade group, the more aggressive the cancer, and the more likely it is to spread (see page 12).
- **Your PSA level.** After you've been diagnosed, PSA tests are a good way of monitoring your prostate cancer and seeing how you're responding to treatment.
- **Your treatment options.** You may be able to have treatment aimed at getting rid of the cancer. Or you may be able to have treatment to keep the cancer under control.
- **How successful your treatment is.** Your treatment may be successful at getting rid of your cancer or keeping it under control. But for some men, treatment may not work as well as expected.
- **Your health.** If you have other health problems, you may have fewer treatment options. And other health conditions may cause more problems than your prostate cancer.

For more information about the outlook for men with prostate cancer, visit the Cancer Research UK website. The figures they provide are a general guide and they cannot tell you exactly what will happen to you. Speak to your doctor or nurse about your own situation.

Talking to your family

You might be worried about telling your friends and family that you have cancer. You might be concerned about how they'll react or if you'll upset them.

It can be difficult to know how to start a conversation. Try to find a quiet place and explain to them that you have prostate cancer. You might find it helpful to show them this booklet.

Ask them if they have any questions. If you don't know the answers, you could write down their questions and ask your doctor or nurse at your next appointment.

If you don't feel able to tell your friends and family, you could ask someone you trust to tell people for you.

Macmillan Cancer Support produce information that can help you figure out where to start and make these conversations a bit easier. It includes information about talking to children.

If you have brothers or sons, you might want to talk to them about their own risk of prostate cancer. This is because men are two and a half times more likely to get prostate cancer if their father or brother has had it, compared to someone who doesn't have any relatives who have been diagnosed with prostate cancer. They might want to talk to their doctor or nurse about their situation, particularly if they are 45 or over. Read more about this in our booklet, **Know your prostate: A guide to common prostate problems**.

How can I help myself?

Everyone has their own way of dealing with prostate cancer, but you may find some of the following suggestions helpful.

Look into your treatment options

Find out about the different treatments that are available to you. Bring a list of questions to your doctor or nurse. And ask about any side effects so you know what to expect and how to manage them. This will help you decide what's right for you.

Talk to someone

Share what you're thinking – find someone you can talk to. It could be someone close or someone trained to listen, like a counsellor or your doctor or nurse. Your GP, nurse or other health professionals involved in your care should be able to answer any questions or concerns you might have.

Set yourself some goals

Set yourself goals and things to look forward to – even if they're just for the next few weeks or months.

Look after yourself

Take time out to look after yourself. When you feel up to it, learn some techniques to manage stress and to relax – like breathing exercises or listening to music.

Eat a healthy, balanced diet

Eating well is good for your general health. There is some evidence that certain foods may help slow down the growth of prostate cancer or lower the risk of it coming back after treatment. Eating a healthy diet can also help with some side effects of treatment.

For more information, read our fact sheet, **Diet and physical activity for men with prostate cancer**.

Be as active as you can

Keeping active can improve your physical strength and fitness, and can lift your mood. Some research suggests that physical activity may help slow down the growth of prostate cancer. It can also help you stay a healthy weight, which may help to lower your risk of advanced prostate cancer. Physical activity can also help with some side effects of treatment, such as anxiety, depression and extreme tiredness (fatigue). Even a small amount of physical activity can help. Take things at your own pace. For more information, read our fact sheet, **Diet and physical activity for men with prostate cancer**.

Get more ideas about how to look after yourself from Macmillan Cancer Support, Maggie's Centres, Penny Brohn Cancer Care or your nearest cancer support centre. You can also find more ideas in our booklet, **Living with and after prostate cancer: A guide to physical, emotional and practical issues**.

Who else can help?

Your medical team

It could be useful to speak to your nurse, doctor, GP or someone else in your medical team. They can explain your diagnosis, treatment and side effects, listen to your concerns, and put you in touch with others who can help.

Our Specialist Nurses

Our Specialist Nurses can answer your questions and explain your diagnosis and treatment options. They've got time to listen, in confidence, to any concerns you or those close to you have.

I found talking on the phone to an experienced Prostate Cancer UK nurse very helpful.

A personal experience.

Trained counsellors

Counsellors are trained to listen and can help you find your own ways to deal with things. Many hospitals have counsellors or psychologists who specialise in helping people with cancer – ask your doctor or nurse at the hospital if this is available. Your GP may also be able to refer you to a counsellor, or you can see a private counsellor. To find out more, contact the British Association for Counselling & Psychotherapy.

Our one-to-one support service

Our one-to-one support service is a chance to speak to someone who's been there and understands what you're going through. They can share their experiences and listen to yours. You can discuss whatever's important to you. Our Specialist Nurses will try to match you with a someone with similar experiences.

There is nothing like talking to someone who has been there.

A personal experience

Our online community

Our free online community is a place to talk about whatever's on your mind – your questions, your ups and your downs. Anyone can ask a question or share an experience.

I wish I had known about the online community when my other half was diagnosed. Until you start using it you don't appreciate its worth.

A personal experience.

Local support groups

At local support groups, men get together to share their experiences of living with prostate cancer. You can ask questions, share worries and know that someone understands what you're going through. Some groups have been set up by local health professionals, others by men themselves. Many also welcome partners, friends and relatives.

Our fatigue support service

Our fatigue support service is a 10-week telephone service delivered by our Specialist Nurses. It can help if you have problems with extreme tiredness (fatigue), which is a common symptom of prostate cancer. Fatigue can also be a side effect of some treatments for prostate cancer. The fatigue support service can help you make positive changes to your behaviour and lifestyle, which can improve your fatigue over time.

To find out more about any of these services, visit **prostatecanceruk.org/get-support** or call our Specialist Nurses on 0800 074 8383.

Spiritual support

You might begin to think more about spiritual beliefs as a result of having prostate cancer. It's important that you get spiritual support if you need it. This could be from your friends or family, or from your religious leader or faith community.

Practical issues

You might need to make decisions about things like work and money. Read more about this in our booklet, **Living with and after prostate cancer: A guide to physical, emotional and practical issues**.

If you live in England and are having treatment for cancer, including treatments for symptoms or side effects, you are entitled to free prescriptions. You'll need to apply for a medical exemption certificate. Ask your doctor for a FP92A form. Once you have filled out the form, your doctor will need to sign it, and the certificate will be sent to you. You can find out more about free prescriptions from NHS Choices. Anyone over 60 in England also gets free prescriptions.

If you live in Scotland, Wales or Northern Ireland, all prescriptions are free.

List of medical words

Our fact sheet, **A to Z of medical words**, explains more words that you may hear or read when you are finding out about prostate cancer.

Gleason grade

When cells are seen under the microscope, they have different patterns, depending on how quickly they're likely to grow. The pattern is given a grade from 1 to 5 – this is called the Gleason grade. Grades 1 and 2 are not cancer, and grades 3, 4 and 5 are cancer (see page 12).

Gleason score

Your Gleason score is worked out by adding together two Gleason grades. The first is the most common grade in all the samples. The second is the highest grade of what's left. If you have cancer, the higher the Gleason score, the more likely the cancer is to grow and spread outside the prostate (see page 12).

Lymph nodes

These are part of your immune system and are found throughout your body. Lymph nodes are sometimes called lymph glands. The lymph nodes near the prostate are a common place for prostate cancer to spread to.

Metastasis

Metastasis is the spread of prostate cancer cells from the prostate to other parts of the body. Cancers that have spread may be called advanced cancer, metastases, mets, secondary cancers, or secondaries. A cancer that has spread is said to have metastasised.

Oncology department

The hospital department that deals with the diagnosis and treatment of cancer. An oncologist is a doctor who specialises in cancer treatments other than surgery, such as radiotherapy or chemotherapy. There will usually be an oncologist in your team of health professionals.

Prostate specific antigen (PSA)

A protein produced by normal cells in the prostate, and also by prostate cancer cells. It's normal for all men to have a small amount of PSA in their blood. A raised PSA level can be caused by a number of things including age, a urine infection, an enlarged prostate and prostate cancer.

Seminal vesicles

Two glands located behind the prostate and bladder that produce some of the fluid in semen.

Urology department

The hospital department that deals with the diagnosis and treatment of diseases of the urinary system, including prostate cancer. Urologists are surgeons who operate on the prostate. There will usually be a urologist in your team of health professionals.

Uro-oncology

The diagnosis and treatment of cancers of the urinary system, including prostate cancer.

What are my test results?

You can use this section with your doctor or nurse to write down your test results and appointment dates.

PSA level at diagnosis:

Number of biopsy samples taken:

Number of biopsy samples affected:

Gleason score:

Grade group:

T stage at diagnosis (if known):

N stage at diagnosis (if known):

M stage at diagnosis (if known):

Date of MRI scan (if needed):

Results of MRI scan:

Date of CT scan (if needed):

Results of CT scan:

Date of bone scan (if needed):

Results of bone scan:

The cancer is (please tick):

- ☐ **localised** – contained inside the prostate
- ☐ **locally advanced** – starting to break out of the prostate or spread to the area just outside it
- ☐ **advanced** – spread from the prostate to other parts of the body.

Treatment plan:

My next appointments are with my (tick those that apply):

- ☐ urologist
- ☐ specialist nurse
- ☐ oncologist
- ☐ other.

You can write down details of future appointments on page 52.

Contact your doctor or nurse at any time if you have any questions or concerns. There will usually be one person who is your main contact – you might hear them called your key worker.
You can also speak to our Specialist Nurses.

Who are my team members?

You can use this space to write down the names and contact details of the health professionals who will be involved in your care. You may hear them called your multi-disciplinary team (MDT). They will discuss your individual diagnosis and agree on which treatment options would be suitable for you.

We've listed the health professionals who are likely to be most involved in your care, but you might not see all of them. You're likely to meet more of them later on when you begin treatment or have check-ups.

Specialist nurse

You may have a urology, uro-oncology or prostate cancer specialist nurse. They can answer any questions you may have, and might carry out some of your tests, treatments and follow-up care.

Name:

Job title:

Telephone:

Notes:

Main contact (key worker)

Your main point of contact might be called your key worker. This could be your specialist nurse or another health professional. They will help to co-ordinate your care, guide you to the appropriate team member and help you get information.

Name:

Job title:

Telephone:

Notes:

Consultant urologist

This type of doctor specialises in the urinary and reproductive systems. Urologists are surgeons.

Name:

Job title:

Telephone:

Notes:

Consultant oncologist

This type of doctor specialises in cancer treatments other than surgery, such as radiotherapy.

Name:

Job title:

Telephone:

Notes:

Other health professionals

You can write down contact details of other health professionals in the space below.

General practitioner (GP):

Practice nurse:

Other health professionals:

Our Specialist Nurses: 0800 074 8383

Your nearest local support group:

You can find out about your nearest local support group from your nurse or on our website.

When I was first diagnosed I found it extremely helpful to fill in the details of the diagnosis. It also helped me to ask the right questions.

A personal experience

Appointment diary

You can fill in this diary before and after your appointments, to help you get the most out of them. You might want to photocopy these pages so you have enough copies to last you for a while.

Date of appointment

Fill in before your appointment

How I've been feeling – you can include physical things (for example, side effects of treatment) as well as emotional things.

Things I want to talk about at my appointment:

- ☐ urinary problems
- ☐ sexual problems
- ☐ bowel problems
- ☐ fatigue problems
- ☐ emotional or mood problems
- ☐ diet
- ☐ physical activity
- ☐ work and finances

Your doctor or nurse may not have time to talk about all of these things, so think about what is most important to you. You can also call our Specialist Nurses in confidence.

Fill in during or after your appointment

My questions or concerns:

Answers to my questions or concerns:

Advice from my doctor or nurse:

PSA level:

Date and time of next appointment:

More information from us

The Tool Kit

The Tool Kit information pack contains fact sheets that explain how prostate cancer is diagnosed, how it's treated and how it may affect your lifestyle. Each treatment fact sheet also includes a list of suggested questions to ask your doctor. Call our Specialist Nurses for a personally tailored pack.

Leaflets and booklets

We have a range of other leaflets and booklets about prostate cancer and other prostate problems.

To order publications:

All our publications are free and available to order or download online. To order them:

- call us on **0800 074 8383**
- visit our website at **prostatecanceruk.org/publications**

Call our Specialist Nurses

If you want to talk about prostate cancer or other prostate problems, call our Specialist Nurses in confidence. You can also text NURSE to 70004, or you can email or chat online with our nurses on our website. Visit **prostatecanceruk.org/get-support**

Speak to our Specialist Nurses
0800 074 8383*
prostatecanceruk.org

*Calls are recorded for training purposes only. Confidentiality is maintained between callers and Prostate Cancer UK.

Other useful organisations

British Association for Counselling & Psychotherapy

www.itsgoodtotalk.org.uk
Telephone: 01455 88 33 00
Information about counselling and details of therapists in your area.

Cancer Research UK

www.cancerresearchuk.org
Telephone: 0808 800 4040
Patient information from Cancer Research UK.

Carers UK

www.carersuk.org
Telephone: 0808 808 7777
Information and advice for carers, and details of local support groups.

Citizens Advice

www.citizensadvice.org.uk
Telephone: 08444 77 20 20 (Wales) 03444 111 444 (England)
Advice on a wide range of issues including financial and legal matters. Find your nearest Citizens Advice Bureau in the phonebook or online.

Healthtalk.org

www.healthtalkonline.org
Watch, listen to and read personal experiences of men with prostate cancer and other health problems.

Macmillan Cancer Support

www.macmillan.org.uk
Telephone: 0808 808 0000
Practical, financial and emotional support for people with cancer, their family and friends.

Maggie's Centres

www.maggiescentres.org
Telephone: 0300 123 1801
Drop-in centres for cancer information and support. Includes an online support group.

National Institute for Health and Care Excellence (NICE)

www.nice.org.uk
Telephone: 0845 003 7780
Guidelines for care and for the use of treatments and procedures on the NHS in England and Wales.

NHS Choices

www.nhs.uk
Information about conditions, treatments and lifestyle. Support for carers and a directory of health services in England.

NHS Direct Wales

www.nhsdirect.wales.nhs.uk
Telephone: 0845 46 47
Provides health advice 24 hours a day, and lists local health services in Wales.

NHS Inform

www.nhsinform.co.uk
Telephone: 0800 22 44 88
Health information and details of NHS and other support services in Scotland.

nidirect

www.nidirect.gov.uk
Information about government services in Northern Ireland, including health services.

Penny Brohn Cancer Care

www.pennybrohncancercare.org
Telephone: 0845 123 23 10
Runs courses and offers physical, emotional and spiritual support for people affected with cancer and those close to them.

Samaritans

www.samaritans.org
Telephone: 08457 90 90 90
Confidential, judgement-free emotional support, 24 hours a day, by telephone, email, letter or face-to-face.

About Prostate Cancer UK

Prostate Cancer UK fights to help more men survive prostate cancer and enjoy a better life. We do this through Men United, our movement for everyone who believes men are worth fighting for. You can join Men United at **prostatecanceruk.org/menunited**

At Prostate Cancer UK, we take great care to provide up-to-date, unbiased and accurate facts about prostate diseases. We hope these will add to the medical advice you have had and help you to make decisions. Our services are not intended to replace advice from your doctor.

References to sources of information used in the production of this booklet are available at **prostatecanceruk.org**

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- Chris Parker, Clinical Oncologist, The Royal Marsden NHS Foundation Trust, London
- Nona Toothill, Urology Clinical Nurse Specialist, Airedale NHS Foundation Trust, West Yorkshire
- Our Volunteers
- Our Specialist Nurses.

Donate today – help others like you

Did you find this information useful? Would you like to help others in your situation access the facts they need? Every year, 40,000 men face a prostate cancer diagnosis. Thanks to our generous supporters, we offer information free to all who need it. If you would like to help us continue this service, please consider making a donation. Your gift could fund the following services:

- £10 could buy a Tool Kit – a set of fact sheets, tailored to the needs of each man with vital information on diagnosis, treatment and lifestyle.
- £25 could give a man diagnosed with prostate cancer unlimited time to talk over treatment options with one of our specialist nurses.

To make a donation of any amount, please call us on **0800 082 1616**, visit **prostatecanceruk.org/donate** or **text PROSTATE to 70004**[†]. There are many other ways to support us. For more details please visit **prostatecanceruk.org/get-involved**

[†] You can donate up to £10 via SMS and we will receive 100% of your donation. Texts are charged at your standard rate. For full terms and conditions and more information, please visit prostatecanceruk.org/terms

FRSB give with confidence

Speak to our Specialist Nurses

0800 074 8383*

prostatecanceruk.org

Health & care information you can trust

The Information Standard Certified Member

Like us on Facebook: **Prostate Cancer UK**

Follow us on Twitter: **@ProstateUK**

To be reviewed July 2018

Call our Specialist Nurses from Monday to Friday 9am - 6pm, Wednesday 10am - 8pm

* Calls are recorded for training purposes only.
Confidentiality is maintained between callers and Prostate Cancer UK.

Prostate Cancer UK is a registered charity in England and Wales (1005541) and in Scotland (SC039332). Registered company number 02653887.

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Prostate test screening bid

NATIONAL screening for prostate cancer should be brought in, experts said.

They warned current prostate-specific antigen testing by request can drive health inequality.

But it is feared screening could include harmful side effects from biopsies.

Prof James Catto, of the University of Sheffield, said there have been high rates of PSA tests among over-70s who are "prone to overdiagnosis but do not benefit from screening".

The Department of Health said the UK National Screening Committee is weighing up prostate cancer screening.

What is my risk of prostate cancer?

1 in 8

In the UK, about one in eight men will get prostate cancer at some point in their lives.

Prostate cancer is the most common cancer in men in the UK.

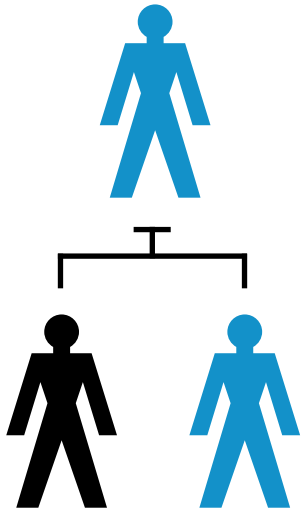
Over 50 years old

Prostate cancer mainly affects men over 50 and **your risk increases with age**.

The average age for men to be diagnosed with prostate cancer is between 65 and 69 years.

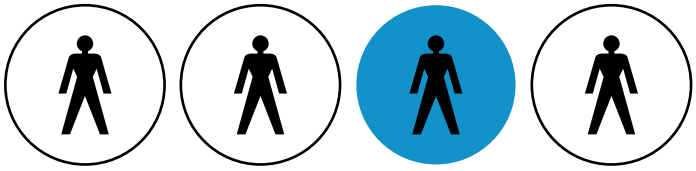
Family history and genetics

You are two and a half times more likely to get prostate cancer if **your father or brother** has been diagnosed with it, compared with a man who has no affected relatives.



Your risk of prostate cancer might be higher if **your mother or sister** has had breast cancer, particularly if it was linked to faults in the genes BRCA1 or BRCA2.

Ethnicity



Black men are more likely to get prostate cancer than other men. In the UK, about 1 in 4 Black men will get prostate cancer at some point in their lives.

PROSTATE CANCER UK

Speak to our Specialist Nurses

0800 074 8383

prostatecanceruk.org