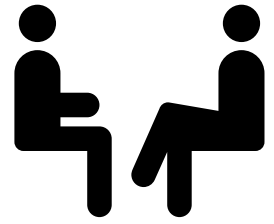


Cryotherapy



In this fact sheet:

- What is cryotherapy?
- Who can have cryotherapy?
- What are the advantages and disadvantages?
- What does cryotherapy involve?
- What happens afterwards?
- What are the side effects?
- Dealing with prostate cancer
- Questions to ask your doctor or nurse
- More information
- About us

This fact sheet is for men who are thinking about having cryotherapy to treat their prostate cancer. Your partner, family or friends might also find it helpful. We describe how cryotherapy treats prostate cancer, and the possible side effects.

Cryotherapy isn't available in all hospitals, and each hospital that offers it will do things slightly differently. Use this fact sheet as a general guide and ask your doctor or nurse for more information. You can also speak to our Specialist Nurses, in confidence, on 0800 074 8383, or chat to them online.

Symbols

These symbols appear in this fact sheet to guide you to more information:



Speak to our Specialist Nurses



Read our publications

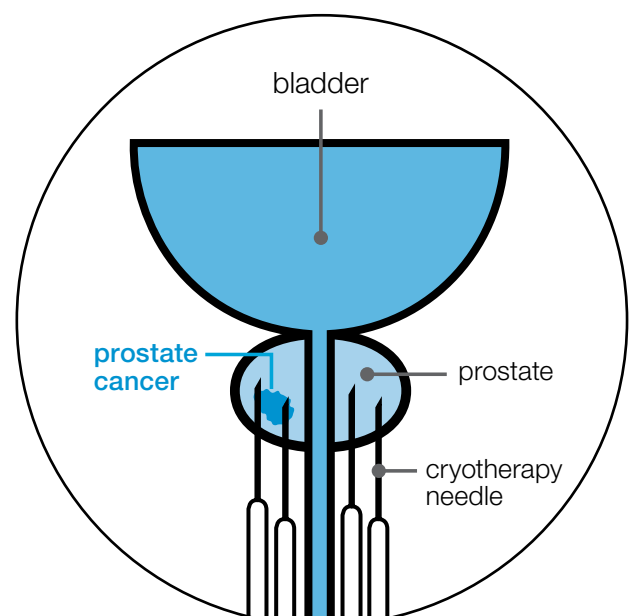
What is cryotherapy?

Cryotherapy uses extreme cold to freeze and destroy cancer cells. You might also hear it called cryosurgery or cryoablation. Thin needles are put into the prostate and a gas is passed down them to freeze the prostate and kill the cancer cells.

There are two types of cryotherapy: whole-prostate cryotherapy, and focal cryotherapy. Ask your doctor or nurse which treatment might be suitable for you.

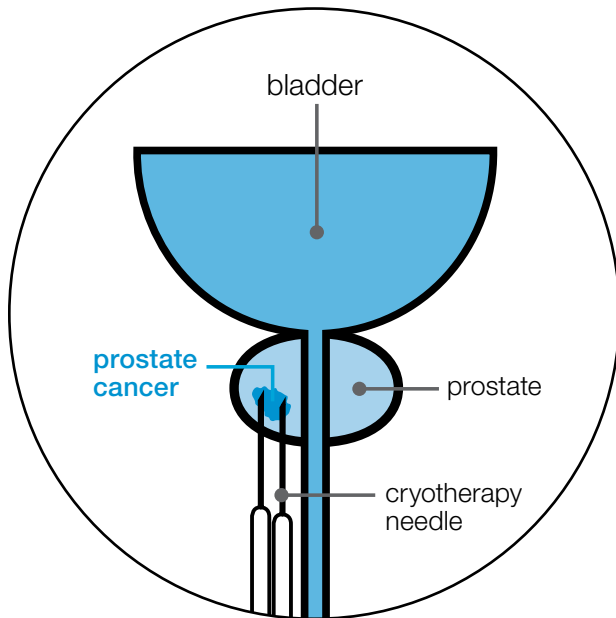
Whole-prostate cryotherapy

This treats the whole prostate, including both the cancer cells and the healthy prostate tissue.



Focal cryotherapy

Focal cryotherapy is done in a similar way to whole-prostate cryotherapy, but it only treats the part of the prostate where the cancer is. It uses fewer needles, which means that less healthy tissue is frozen than in whole-prostate cryotherapy.



Focal cryotherapy isn't suitable for all men and will depend on the size of your cancer, and where it is in your prostate.

Most of the information in this fact sheet is the same for both focal cryotherapy and whole-prostate cryotherapy. We will make it clear where there are differences.

Who can have cryotherapy?

Cryotherapy could be a suitable first treatment if your cancer hasn't spread outside your prostate (localised prostate cancer) and has a low or medium risk of spreading (see blue box).

It's sometimes an option if your cancer has started to break out of the prostate but hasn't spread to the surrounding area. It's not an option if your cancer has spread from the prostate to other parts of your body (advanced prostate cancer).

Cryotherapy can also be used to treat localised prostate cancer that has come back after treatment with either external beam radiotherapy or brachytherapy (recurrent prostate cancer). This is called salvage cryotherapy.

Low and medium risk prostate cancer

Your risk group shows how likely your prostate cancer is to spread outside the prostate or come back after treatment.

Your cancer may be **low risk** if:

- your PSA level is less than 10 ng/ml, **and**
- your Gleason score is 6 or less, **and**
- the stage of your cancer is T1 or T2a.

Your cancer may be **medium risk** if:

- your PSA level is between 10 and 20 ng/ml, **or**
- your Gleason score is 7, **or**
- the stage of your cancer is T2b.

Read more about low and medium risk prostate cancer in our fact sheet,

Localised prostate cancer.



In the UK cryotherapy is only available in specialist centres or as part of a clinical trial. This is because it is newer than some other treatments, so we don't know as much about the risk of side effects or how well it works in the long term. Read more about clinical trials in our fact sheet, **A guide to prostate cancer clinical trials.**



Speak to your doctor about whether cryotherapy is a suitable option for you and whether it's available in your area.

Other treatment options

If you have localised prostate cancer, other treatment options may include:

- active surveillance (a way of closely monitoring localised prostate cancer)
- watchful waiting (a different way of monitoring prostate cancer)
- surgery to remove the prostate (radical prostatectomy)
- external beam radiotherapy (which uses X-ray beams to destroy the cancer cells)
- brachytherapy (a type of internal radiotherapy).

You may also be offered high-intensity focused ultrasound (HIFU), which uses high-frequency ultrasound energy to heat and destroy cancer

cells in the prostate. Like cryotherapy, HIFU is only available in specialist centres or as part of a clinical trial.



Read more about these treatments in our fact sheet, **Localised prostate cancer**.

If you have locally advanced prostate cancer, your treatment options may include:

- external beam radiotherapy with hormone therapy (and sometimes with high dose-rate brachytherapy)
- hormone therapy alone
- watchful waiting
- less commonly, surgery (radical prostatectomy).



Read more in our fact sheet, **Locally advanced prostate cancer**.

If your cancer has returned after radiotherapy, you may be able to have HIFU or hormone therapy. You might also be able to have surgery (radical prostatectomy) but this is rare. Read more in our



booklet, **If your prostate cancer comes back: A guide to treatment and support**.

Unsure about your diagnosis and treatment options?

If you have any questions about your diagnosis at any time, ask your doctor or nurse. They will explain your test results and talk you through your treatment options. Make sure you have all the information you need. We have information about diagnosis and treatments in our fact sheets and booklets, and on our website. Or you can speak to our Specialist Nurses.



What are the advantages and disadvantages?

What may be important for one person might not be important for someone else. If you're thinking about having cryotherapy, speak to your doctor or nurse before deciding whether to have it – they can help you choose the right treatment for you.

Take time to think about whether you want to have cryotherapy. There's a list of questions on page 8 that may help. You can also ask about any other treatments that might be available.

Advantages

- Cryotherapy is less invasive than some other treatments, with little or no bleeding.
- You will only be in hospital for a day or overnight.
- Recovery is usually quick and most men return to their normal activities within a few weeks.
- You may be able to have cryotherapy if your cancer has come back after radiotherapy or brachytherapy.
- You may be able to have cryotherapy again if your cancer comes back after your first cryotherapy treatment. This isn't the case with all treatments.

Disadvantages

- You might get side effects such as erection and urinary problems (see page 5).
- Compared with other treatments, we don't know as much about how well cryotherapy works or the risk of side effects in the long term (after 10 years).
- You will usually need a general anaesthetic, so you'll need to stay at the hospital for a day or overnight.
- Cryotherapy isn't widely available in the UK.

What does cryotherapy involve?

Each hospital will do things slightly differently. We've included some general information about what might happen below. Your doctor or nurse will give you more information about what will happen before, during and after your treatment.

Before your treatment

If your prostate is very large you may have hormone therapy for two to three months before you have cryotherapy. This can make the prostate smaller, and make the cancer easier to treat. As with all treatments, hormone therapy can cause side effects. Read more in our fact sheet, **Hormone therapy**.



Your bowels need to be empty during cryotherapy so that your doctor can take clear scans of your prostate. So you might be given a laxative or an enema to empty your bowels before the treatment. An enema is a liquid that is put inside your back passage (rectum).

You'll also be asked not to eat for about six hours before the treatment, but will still be able to drink water up to four hours before the treatment.

During your treatment

Cryotherapy is usually done under general anaesthetic so that you're asleep and won't feel anything. If you can't have a general anaesthetic for health reasons, you may be able to have a spinal (epidural) anaesthetic, so that you can't feel anything in your lower body.

Your surgeon will pass a tube called a warming catheter up your penis and into your bladder. Warm liquid is passed through the catheter during the treatment so that your urethra (the tube you urinate through) and the wall of your back passage do not freeze.

The surgeon will place an ultrasound probe inside your back passage. This takes images of your prostate and displays them on a screen so your surgeon can see where to put the needles. They will then put several thin treatment needles through the skin between your testicles and back passage (perineum), and into your prostate.

Your surgeon will also put in some other thin needles to monitor the temperature in and around your prostate. This is to make sure the areas being treated reach the correct temperature, while the areas around your prostate, bowel and back passage do not freeze.

Freezing gases are passed down the treatment needles, causing the temperature to drop to about -40°C . This freezes and destroys the prostate tissue. Your prostate is then allowed to warm up, either naturally or by passing a different gas through the needles to warm it. This process of freezing and warming is usually carried out twice. The whole process takes about one to two hours.

The needles and probes are then removed, and the warming catheter is removed about 10 to 20 minutes later.

You'll then have another tube put in to drain urine out of your bladder, either through your penis (urethral catheter) or through a small cut in your abdomen (suprapubic catheter). Some hospitals may put a suprapubic catheter in before treatment. Your catheter will be left in for a week or two (see page 5).

After your treatment

Most people can go home the same day or the following day. It's normal to have some pain or discomfort. Your doctor or nurse will tell you which pain-relieving drugs you can take.

You'll be given antibiotics to take for a few days, to lower your risk of infection. Contact your doctor or nurse if you have any signs of a urine infection, such as:

- a high temperature (fever)
- feeling shivery
- a burning feeling when you urinate (pee)
- dark, cloudy or strong-smelling urine
- needing to urinate more often than usual.

You may be given drugs called alpha-blockers, such as tamsulosin or alfuzosin, to relax the muscle in and around your prostate to help you urinate. You may need to take them for a few weeks, or longer if you still have problems urinating. Alpha-blockers can cause side effects, so ask your doctor or nurse about these if you have any worries.

Cryotherapy usually causes the prostate to swell to begin with, which can make it difficult to urinate. You'll go home with your catheter in

place to drain urine from your bladder until the swelling has improved. Your urine will drain into a bag that you can empty. Or you might be offered a catheter valve instead of a bag. The valve fits on the end of the catheter tube and works like a tap. This means your urine will be stored in your bladder as usual. When you need to urinate, you can open the valve to empty your bladder. Your nurse will show you how to care for your catheter before you leave hospital.

Your catheter will usually be taken out at hospital one to two weeks after your cryotherapy treatment. This may feel uncomfortable. You'll need to stay at the hospital for a few hours afterwards to check that you can urinate properly.

When the catheter is first removed, you may find that you leak urine. It's a good idea to take spare underwear and trousers with you to the appointment. You can wear incontinence pads to absorb the urine – check if your hospital will provide these. If not, you can buy some at a pharmacy and take them with you to the appointment.

You may see some blood in your urine while the catheter is in place, and immediately after it's taken out. This is normal. Drink plenty of fluids to help clear the blood. If you see signs of infection (see page 4) or lots of blood clots in your urine, speak to your doctor or nurse.

You might have some bruising and swelling around your testicles, buttocks and inner thighs for a few days after treatment. This can be worrying but is normal and will pass. It may help to wear tighter underwear for support. Holding an ice pack against the bruised and swollen area for 10 minutes every hour may help to reduce the swelling.

Your doctor or nurse may advise you not to stand for long periods of time for the first few weeks, as this can cause the prostate to swell more. You should be able to go back to your day-to-day activities as soon as you feel able to. But it may take a few weeks or months before you feel back to normal.

What happens afterwards?

You will have check-ups with your doctor or nurse at the hospital, including regular PSA tests. The PSA test is a blood test that measures the amount of a protein called prostate specific antigen (PSA) in your blood. It's a good way to check how well the cryotherapy has worked. You may also have an MRI scan after treatment to check all your cancer has been treated.

How often you have check-ups will depend on your hospital, but you should have a PSA test about every three to six months for at least the first year, and every six months after that. Ask your doctor or nurse how often you'll have PSA tests.

After cryotherapy, your PSA level should fall and then stay low. A continuous rise in your PSA level could be a sign that your cancer has come back. If this happens, your doctor may suggest you have further tests, such as an MRI scan or a biopsy, to find out if it has.

If your cancer has come back, your doctor will talk to you about further treatment options. If cryotherapy was your first treatment, you may be offered more cryotherapy. Or they may offer radiotherapy or surgery. If you had cryotherapy as a second treatment following radiotherapy, you may be offered hormone therapy.



Read more in our booklet, **If your prostate cancer comes back: A guide to treatment and support**, or call our Specialist Nurses.



What are the side effects?

Like all treatments, cryotherapy can cause side effects. These will affect each man differently and you may not get all of them.

The most common side effects of cryotherapy are erection and urinary problems.

Many of the side effects of cryotherapy are caused by healthy tissues being frozen and damaged. Side effects are more likely if you've already had radiotherapy or brachytherapy to

your prostate. This is because these treatments may have already damaged the area around your prostate.


Focal cryotherapy (see page 2) can cause the same side effects as whole-prostate cryotherapy. But some research suggests focal cryotherapy may cause less severe side effects, because a smaller area of the prostate is damaged than with whole-prostate cryotherapy.

Questions about side effects

Ask your doctor or nurse for more information about your risk of side effects. They may be able to show you results of treatments they've carried out and put you in touch with other men who've had cryotherapy.

Erection problems

The most common long-term side effect of cryotherapy is difficulty getting or keeping an erection (erectile dysfunction). More than three quarters of men (over 75 per cent) can't get an erection after whole-prostate cryotherapy. This is because the treatment can damage the nerves that control erections. Studies suggest that more men get their erections back after focal cryotherapy, because less healthy tissue is damaged than with whole-prostate cryotherapy.

Some men find these problems improve with time, but not all men get their erections back. There are treatments that can help with erection problems. Speak to your doctor or nurse about these, or read more in our booklet,  **Prostate cancer and your sex life**. There's also information on managing erection problems in our interactive online guide: prostatecanceruk.org/guides

Urinary problems


Cryotherapy can cause urinary problems such as leaking urine (urinary incontinence) and difficulty urinating. You may also need to urinate more often than usual, including at night. Most men have some urinary problems for the first three to four weeks after cryotherapy. Some men find these problems improve after a few weeks

or months. But other men have problems for longer, and they may never get better.

Both leaking urine and difficulty urinating are more common in men who have cryotherapy as a second treatment.

Cryotherapy can cause your urethra to become narrow. This is called a stricture, and it can make it difficult to empty your bladder (urine retention). Urine retention can lead to urine infections or painful bladder stones. If it's not treated, it can damage your kidneys.

There are treatments that can help with difficulty urinating, including using a catheter, medicines or surgery. There are also ways to manage leaking urine, including using absorbent pads or a catheter.

Speak to your doctor or nurse about ways to manage urinary problems. Read more in our fact sheet,  **Urinary problems after prostate cancer treatment**. You can also find more ideas in our interactive online guide: prostatecanceruk.org/guides

Pain

It's normal to have some pain or discomfort after having cryotherapy, sometimes for a few weeks or a couple of months. This may be in the area in or around your penis, testicles and back passage. You might also find it painful when you urinate.

You're more likely to get pain if you've had another treatment before cryotherapy. Pain usually improves, and pain-relieving drugs can help. Your doctor or nurse can tell you which ones you can take.

Problems having children

Cryotherapy damages the prostate, which makes the fluid that carries sperm. This means you may not be able to have children naturally afterwards. If you're planning to have children, you may be able to store your sperm before cryotherapy. Ask your doctor or nurse about this.

A hole between the back passage and the urethra (rectal fistula)

In very rare cases, cryotherapy may cause a hole between the back passage and the urethra, called a rectal fistula. It's slightly more common if you've already had radiotherapy to treat your prostate cancer, but it's still very unlikely that you will get this.

It can cause urine to leak from your urethra into your back passage, or bowel contents to leak from your bowel into your urethra. Signs include:

- urine coming out of your back passage
- pain in your pelvis or back passage
- bowel contents in your urine
- air bubbles in your urine
- urine infections (see page 4), although these can be caused by other things.

A rectal fistula can develop up to several months after treatment. Talk to your doctor or nurse straight away if you think you may have one. If you do have a fistula you'll need an operation to repair the hole.

Dealing with prostate cancer

Being diagnosed with prostate cancer can change how you feel about life. If you or your loved one is dealing with prostate cancer you may feel scared, stressed or even angry. There is no 'right' way to feel and everyone reacts differently. There are things you can do to help yourself and people who can help.

How can I help myself?

- **Look into your treatment options** – ask your doctor or nurse about any side effects so you know what to expect and how to manage them.
- **Talk to someone** – find someone you can talk to and share your thoughts with. It could be someone close or someone trained to listen, like a counsellor or your medical team. 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 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 learn some techniques to manage stress and to relax, like breathing exercises or listening to music.
- **Eat a healthy and balanced diet** – eating well is good for your general health and may slow down the growth of prostate cancer, or lower the risk of it coming back after treatment.
- **Be as active as you can** – keeping active can improve your physical strength and fitness, and can lift your mood. Some research shows that physical activity can help slow down the growth of prostate cancer. It can also help you stay a healthy weight, which may be important for lowering your risk of advanced prostate cancer. Even if you don't feel able to do a lot of physical activity, a small amount will still help – take things at your own pace and don't overdo it.



You can find more information on diet and exercise in our fact sheet, **Diet and physical activity for men with prostate cancer**.



There are more ideas for dealing with prostate cancer 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.

Trained counsellors

Many hospitals have counsellors or psychologists who specialise in helping people with cancer – ask your doctor or nurse at the hospital.

Local support groups

At local support groups, men get together to share their experiences of living with prostate cancer. Some groups have been set up by local health professionals, others by men themselves.

Prostate Cancer UK services

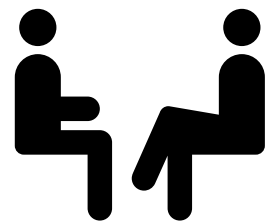
We have a range of services to help you deal with problems caused by prostate cancer or its treatments:

- **our Specialist Nurses**, who can answer your questions in confidence
- **our one-to-one support service**, where you can speak to someone who's been there
- **our online community**, where you can talk about whatever's on your mind.



For information on any of our services, visit prostatecanceruk.org/get-support or call our Specialist Nurses on 0800 074 8383.

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.

Where is this treatment available?

What are my other treatment options?

Will I have focal or whole-prostate cryotherapy?

What are the side effects of cryotherapy and how likely am I to get them?

How much experience do you have in carrying out cryotherapy? Can I see the results of treatments you've carried out?

How often will you check my PSA level after the treatment?

How will we know if the treatment has worked?

How likely is it that I'll need more treatment after cryotherapy?

What treatments are available after cryotherapy?

More information

British Association for Counselling & Psychotherapy

www.bacp.co.uk

Telephone: 01455 883 300

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, including a database of some clinical trials and advice on finding a trial.

Healthtalk.org

www.healthtalk.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, and an online support group.

Penny Brohn UK

www.pennybrohn.org.uk

Telephone: 0303 3000 118

Runs courses and offers physical, emotional and spiritual support for people with cancer and those close to them.

Tell us what you think

If you have any comments about our publications, you can email:

yourfeedback@prostatecanceruk.org

About us

Prostate Cancer UK has a simple ambition: to stop men dying from prostate cancer – by driving improvements in prevention, diagnosis, treatment and support.



This fact sheet is part of the Tool Kit. You can order more 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

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

It was reviewed by:

- Hashim Ahmed, Professor of Urology and Consultant Urological Surgeon, Imperial College Healthcare NHS Trust
- Susan Asterling, Urology Research Nurse, City Hospitals Sunderland NHS Foundation Trust
- Frank Chingwundoh MBE, Consultant Urological Surgeon, Barts Health NHS Trust, London
- Stuart McCracken, Senior Lecturer and Honorary Consultant Urologist, Newcastle University and Sunderland Royal Hospital
- Our Specialist Nurses
- Our Volunteers.



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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 Follow us on Twitter: **@ProstateUK**

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To be reviewed May 2021

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.

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