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# LOW DOSE-RATE BRACHYTHERAPY TREATMENT FOR PROSTATE CANCER (PERMANENT SEED BRACHYTHERAPY)

Information about your procedure from  
The British Association of Urological Surgeons (BAUS)

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This leaflet contains evidence-based information about your proposed urological procedure. We have consulted specialist surgeons during its preparation, so that it represents best practice in UK urology. You should use it in addition to any advice already given to you.

To view the online version of this leaflet, type the text below into your web browser:

[http://www.baus.org.uk/\\_userfiles/pages/files/Patients/Leaflets/Brachy treatment.pdf](http://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Brachy%20treatment.pdf)

## Key Points

- The aim of this procedure is to treat your prostate cancer by implanting tiny radioactive seeds into your prostate gland
- Low dose-rate brachytherapy is best for men with low or intermediate-risk prostate cancer
- It should not be confused with high dose-rate (temporary) brachytherapy which is used for men with high-risk prostate cancer (this is not widely available in the UK)

## What does this procedure involve?

Insertion of radioactive seeds into your prostate gland using needles passed through the skin behind your scrotum. It may also involve telescopic examination of your bladder.

## What are the alternatives?

- [Active surveillance](#) – this may be an option when your tumour is low volume and the risk of progression is felt to be low
- [External beam radiotherapy](#) – using X-ray beams directed at your prostate gland from outside the body
- [Radical prostatectomy](#) – by open, laparoscopic (keyhole) or robotically-assisted laparoscopic surgery

## What happens on the day of the procedure?

Your urologist and/or oncologist (or a member of their team) will briefly review your history and medications, and will discuss the surgery again with you to confirm your consent.

An anaesthetist will see you to discuss the options of a general anaesthetic or spinal anaesthetic. The anaesthetist will also discuss pain relief after the procedure with you.

We may provide you with a pair of TED stockings to wear, and we may give you a heparin injection to thin your blood. These help to prevent blood clots from developing and passing into your lungs. Your medical team will decide whether you need to continue these after you go home.

## Details of the procedure

- we normally use a full general anaesthetic and you will be asleep throughout the procedure
- you will usually be given an injection of antibiotics before the procedure, after you have been checked for any allergies.
- we pass a catheter into your bladder through your urethra (waterpipe)
- we put an ultrasound probe into your rectum and direct 15 to 30 needles into your prostate, through the skin behind your scrotum
- we then put 60 to 90 radioactive seeds through the needles into your prostate gland (pictured below)

















- we place a compression dressing between your legs to reduce any bleeding or swelling

- we sometimes remove your bladder catheter immediately, although it is usually left until the next day
- most men go home on the same day as their treatment
- the procedure takes approximately 2½ hours

## Are there any after-effects?

The possible after-effects and your risk of getting them are shown below. Some are self-limiting or reversible, but others are not. We have not listed very rare after-effects (occurring in less than 1 in 250 patients) individually. The impact of these after-effects can vary a lot from patient to patient; you should ask your surgeon's advice about the risks and their impact on you as an individual:

After-effect	Risk
Passing bloodstained urine	 Almost all patients
Bruising & discolouration of the perineal skin (behind your scrotum)	 Almost all patients
Most men will be infertile after the treatment	 Almost all patients
Inability to pass urine (retention of urine) requiring insertion of a catheter or the need for intermittent self-catheterisation	 Between 1 in 7 & 1 in 10 patients (10 to 15%)
Erectile dysfunction (impotence) due to unavoidable nerve damage	 Between 1 in 2 & 1 in 5 patients (20 to 40%)
Rectal discomfort with passage of blood or mucus (slime) from your bowel	 Between 1 in 10 & 1 in 50 patients
Temporary incontinence of urine	 Between 1 in 10 & 1 in 50 patients

Infection of the bladder requiring antibiotics		Between 1 in 10 & 1 in 50 patients
The need for surgery to the prostate if you have persistent difficulty passing urine		Between 1 in 10 & 1 in 50 patients
Other treatment (e.g. surgery or hormones) if the tumour does not respond completely		Between 1 in 10 & 1 in 50 patients
Permanent urinary incontinence		Between 1 in 50 & 1 in 250 patients
Damage to the rectum requiring a temporary colostomy		Between 1 in 50 & 1 in 250 patients
Anaesthetic or cardiovascular problems possibly requiring intensive care (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, heart attack and death)		Between 1 in 50 & 1 in 250 patients (your anaesthetist can estimate your individual risk)
A new radiation-induced cancer in the years after treatment (approx. 1% risk for every 10 years after treatment)		Between 1 in 50 & 1 in 250 patients

## What is my risk of a hospital-acquired infection?

Your risk of getting an infection in hospital is approximately 8 in 100 (8%); this includes getting *MRSA* or a *Clostridium difficile* bowel infection. This figure is higher if you are in a “high-risk” group of patients such as patients who have had:

- long-term drainage tubes (e.g. catheters);
- bladder removal;
- long hospital stays; or
- multiple hospital admissions.

## What can I expect when I get home?

- if your catheter was not taken out immediately after the procedure, we will remove it before you go home

- you will be given advice about your recovery at home
- you will be given a copy of your discharge summary and a copy will also be sent to your GP
- you will be prescribed antibiotics, painkillers and tablets to help you pass urine, dispensed by the hospital pharmacy
- if you develop a fever, severe pain on passing urine, inability to pass urine or worsening bleeding, you should contact your GP immediately

## Can radioactivity from the seeds harm other people?

Yes, it can. You should take note of these points:

- children, and women who are (or may be) pregnant should not sit close to you, or on your lap, for three months after seed implantation
- in the first few weeks after seed implantation, you should use condoms during sex
- you should put used condoms in a dustbin, double-wrapped in aluminium foil.
- some men pass some seeds in their urine; if you do, try to retrieve them with a spoon or a pair of tweezers, and dispose of them as above.
- if a man, for any reason, dies within 20 months of having seed implantation, he should **not** be cremated.

If you need specific advice about any aspect of seed implantation, please contact your urologist, oncologist, specialist nurse or brachytherapy co-ordinator.

## General information about surgical procedures

### *Before your procedure*

Please tell a member of the medical team if you have:

- an implanted foreign body (stent, joint replacement, pacemaker, heart valve, blood vessel graft);
- a regular prescription for a blood thinning agent (warfarin, aspirin, clopidogrel, rivaroxaban or dabigatran);
- a present or previous MRSA infection; or
- a high risk of variant-CJD (e.g. if you have had a corneal transplant, a neurosurgical dural transplant or human growth hormone treatment).

### *Questions you may wish to ask*

If you wish to learn more about what will happen, you can find a list of suggested questions called "[Having An Operation](#)" on the website of the

Royal College of Surgeons of England. You may also wish to ask your surgeon for his/her personal results and experience with this procedure.

### ***Before you go home***

We will tell you how the procedure went and you should:

- make sure you understand what has been done;
- ask the surgeon if everything went as planned;
- let the staff know if you have any discomfort;
- ask what you can (and cannot) do at home;
- make sure you know what happens next; and
- ask when you can return to normal activities.

We will give you advice about what to look out for when you get home. Your surgeon or nurse will also give you details of who to contact, and how to contact them, in the event of problems.

### ***Smoking and surgery***

Ideally, we would prefer you to stop smoking before any procedure. Smoking can worsen some urological conditions and makes complications more likely after surgery. For advice on stopping, you can:

- contact your GP;
- access your local [NHS Smoking Help Online](#); or
- ring the free NHS Smoking Helpline on **0800 169 0 169**.

### ***Driving after surgery***

It is your responsibility to make sure you are fit to drive after any surgical procedure. You only need to [contact the DVLA](#) if your ability to drive is likely to be affected for more than three months. If it is, you should check with your insurance company before driving again.

## **What should I do with this information?**

Thank you for taking the trouble to read this information. Please let your urologist (or specialist nurse) know if you would like to have a copy for your own records. If you wish, the medical or nursing staff can also arrange to file a copy in your hospital notes.

## **What sources have we used to prepare this leaflet?**

This leaflet uses information from consensus panels and other evidence-based sources including:

- the [Department of Health \(England\)](#);
- the [Cochrane Collaboration](#); and

- the [National Institute for Health and Care Excellence \(NICE\)](#).

It also follows style guidelines from:

- the [Royal National Institute for Blind People \(RNIB\)](#);
- the [Information Standard](#);
- the [Patient Information Forum](#); and
- the [Plain English Campaign](#).

## **Disclaimer**

We have made every effort to give accurate information but there may still be errors or omissions in this leaflet. BAUS cannot accept responsibility for any loss from action taken (or not taken) as a result of this information.

### **PLEASE NOTE**

The staff at BAUS are not medically trained, and are unable to answer questions about the information provided in this leaflet. If you do have any questions, you should contact your urologist, specialist nurse or GP.