INSERTION of an ARTIFICIAL URINARY SPHINCTER in MEN

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

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 this leaflet online, scan the QR code (right) or type the short URL below it into your web browser:

http://rb.gy/yg17w

KEY POINTS

- The male artificial sphincter is used to treat urinary incontinence (leakage on activity such as exertion, movement, coughing, laughing or sneezing) most commonly after prostate removal surgery
- We use a three-part device, inserted through two incisions, which is left deactivated for the first four to six weeks
- Approximately 90% of men are satisfied with the outcome of their surgery
- Insertion of an AUS should be performed in specialist referral centres
- Inserting a catheter can be potentially dangerous after AUS insertion, and can cause permanent damage if not done correctly

What does this procedure involve?

The artificial urinary sphincter (AUS) is a device that is put inside your body to help control urinary leakage in men with moderate to severe stress urinary incontinence.

The device is completely concealed, so urinary control is discreet and there are no external parts. The device consists of a cuff that surrounds your

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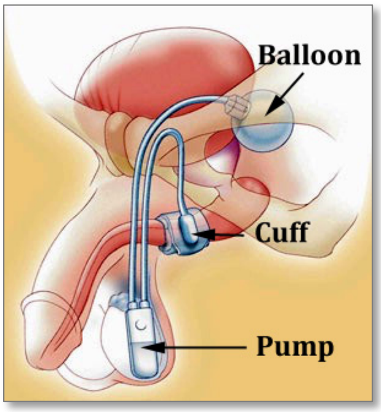
urethra (waterpipe), a pump that sits in the scrotum and a pressure-regulating balloon that sits in your abdomen (pictured below right).



When the cuff is inflated, urine leakage is limited; the pump must be squeezed/pushed to deflate the cuff and allow you to pass urine. The cuff will then re-inflate automatically, within five minutes, to stop any further urine flow.

After the device has been put in, most men are dry with only minor leaks or dribbles of urine during strenuous exercise or exertion. Most men use one pad (or less) each day for safety, to manage these minor leaks.

We usually place the cuff around the bulbar urethra but it sometimes needs to be implanted at the bladder neck.

What are the alternatives?

Non-surgical

- **Pelvic floor exercises** - under supervision from a continence advisor or physiotherapist can improve stress incontinence in 70% of men
- **Weight loss** & **giving up smoking** can also help
- **Incontinence pads** or a **penile sheath** m ay be used if your symptoms are not a bnother to you and you choose to do nothing
- **Penile clamps**

Surgical

Each of the operations for stress incontinence has advantages and disadvantages, and different operations may be better for different people. You should discuss these options with your surgeon before making a decision.

The main alternatives to the artificial sphincter operation are:

- **Insertion of a male sling** - a mesh “sling” implanted to reposition and support your urethra and to restore normal bladder control; requires no patient interaction and is completely undetectable to others
- **Urethral bulking** – injection of a bulking agent into the wall of your urethra; this procedure is NOT currently recommended by NICE

- **Urethral** or **suprapubic catheter** - putting a catheter into your bladder to drain urine directly into a bag.
- **Urostomy** – diverting your urine straight on to the surface of your abdomen (tummy) so that it drains into a bag
- **Other occlusive devices** (with various trade names) e.g. non-circumferential sphincters & balloon devices for which outcome measurements are very few

What happens on the day of the procedure?

Your urologist (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 give you an 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 usually carry out the procedure under a general anaesthetic
- you may be given an injection of antibiotics before the procedure, after you have been checked carefully for any allergies
- we make an incision in your perineum (the area between the back of the scrotum and the anus); if the cuff is being inserted at the bladder neck, the incision will be in your lower abdomen (tummy)
- we mobilise your urethra and position the cuff around your water pipe
- we make a further small incision in the abdomen to implant the balloon and to pass the control pump down into the scrotum
- we connect the components with tubing which is filled with sterile fluid
- we close your skin incisions with dissolvable stitches
- we place a catheter in your bladder during the operation; this may be removed before you wake up or on the following day (before your discharge from hospital)

- we “deactivate” the device at the end of the operation to allow your tissues to heal
- you will be incontinent, and you will leak during this early period so you will need to continue using your pre-operative continence aids until we activate the pump
- you will be discharged with a card giving details of your device which you should have available when attending other hospitals
- we activate the pump (as a simple outpatient procedure) at around four to six weeks after insertion of the AUS

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**
Swelling and bruising of the wound site, perineum and scrotum	🟨 Between 1 in 2 & 1 in 10 patients
Chronic (long-term) discomfort in your lower abdomen, perineum or scrotum	🟨 Between 1 in 2 & 1 in 10 patients
Wound or urinary tract infection requiring antibiotic treatment	🟧 Between 1 in 10 & 1 in 50 patients
Infection or erosion of the device requiring its removal	🟧 Between 1 in 10 & 1 in 50 patients
Erosion of the device into your urethra requiring its removal. Erosion risk is higher if there is history of radiotherapy to the prostate	🟧 Between 1 in 10 & 1 in 50 patients (but 1 in 10 & 3 in 10 after previous radiotherapy

Mechanical failure of the device requiring a further procedure for revision within 10 years	Between 1 in 10 & 1 in 50 patients
Failure to control your continence	Between 1 in 10 & 1 in 50 patients
New onset of urgency incontinence	Between 1 in 10 & 1 in 50 patients
Urethral shrinkage (atrophy) leading to recurrent leakage of urine, requiring further surgery	Between 1 in 10 & 1 in 50 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)

What information will I need to take home?

You should be given documentation, usually in the form of a sphincter card, after implantation showing what device has been implanted. You must show this to any clinician involved in your care, particularly if you need catheterisation later. Inserting a catheter can be potentially dangerous after AUS insertion and can cause permanent damage if not done correctly.

The sphincter can be decompressed or deactivated using the pump in your scrotum. However, unless the clinician is familiar with how to do this, a urologist **must** be called for before any attempt at catheterisation is made.

What is my risk of a hospital-acquired infection?

Your risk of getting an infection in hospital is between 4 & 6%; this includes getting *MRSA* or a *Clostridium difficile* bowel infection. Individual hospitals may have different rates, and the medical staff can tell you the risk for your hospital. You have a higher risk if you have had:

- long-term drainage tubes (e.g. catheters);
- long hospital stays; or

- multiple hospital admissions.

What can I expect when I get home?

- you will be given advice about your recovery at home
- you will be shown how to avoid activating your device and what to do if you cannot pass urine
- you will be given a copy of your discharge summary and a copy will also be sent to your GP
- any antibiotics or other tablets you may need will be arranged & dispensed from the hospital pharmacy
- you will be shown how to "milk" the pump down into your scrotum daily so that it stays there & does not migrate upwards into your groin
- a follow-up appointment will be arranged for device activation

If you have abdominal, groin or perineal surgery at any time in the future, you MUST tell any surgeon that you have an AUS. **Failure to do so may put the device at risk of damage during any later surgery**.

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 (e.g. warfarin, aspirin, clopidogrel, rivaroxaban; 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 Smoke-Free National Helpline on **0300 123 1044**.

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 wish to have a copy for your own records. If you wish, they can also arrange for a copy to be kept in your hospital notes.

What sources were used to prepare this leaflet?

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

Whilst we have made every effort to give accurate information, 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 have any questions, you should contact your Urologist, Specialist Nurse or GP in the first instance.

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