INSERTION OF PENILE PROSTHESES (IMPLANTS) FOR ERECTILE DYSFUNCTION

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

http://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Penile prostheses.pdf

Key Points

- Penile prostheses (implants) are used when all other treatments for erectile dysfunction (impotence) have failed
- They are occasionally used in other medical conditions such as acute ischaemic priapism (prolonged erections causing irreversible penile damage) and Peyronie's disease (penile curvature) when associated with erectile dysfunction
- The procedure involves implantation of a device into the penis to replace the body's own erectile mechanism
- Implantation should be regarded as irreversible
- The implants may be malleable (permanently semi-rigid but "bendy") or inflatable (uses a pump to switch between being fully flaccid or erect)
- The implants can be felt but are not visible outside your body
- You should not have sexual intercourse for at least 6 weeks after your implant surgery

What does this procedure involve?

Penile prostheses (implants) are designed to provide enough rigidity to your penis for penetrative sex when all other medical therapies for erectile dysfunction have failed. The procedure does not affect your desire to have sex (your libido), penile sensation or your sensation of orgasm (climax).

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The implants can be felt but lie completely within your body. They are normally used for erectile dysfunction (impotence) but they are sometimes used for:

- **Priapism** – prolonged erections resulting in death of muscle tissue in the penis, especially when the condition has failed to respond to other measures;
- **Peyronie's disease** – to help straighten severe bending of the penis on erection where simple straightening might result in erectile dysfunction, or where erectile function is poor and has not been helped by drugs (see below); or
- **Incontinence** – to make your penis protrude enough to attach a continence sheath for control of your urinary leakage.

What types of penile implants are available?

Before the procedure, you will have a full counselling session, with your doctor and specialist nurse, regarding the different types of implant, and you will be shown how they look and work. Typically, an implant lasts 10 years, after which it will need to be exchanged for a new one.

There are three basic types of implant:

- **malleable** - two flexible rods that produce permanent rigidity but are "bendy" so they can be concealed. They are quick and easy to insert, rarely develop mechanical problems and are especially useful in men with complex medical problems;
- **three-piece inflatable** - two paired cylinders in the penis, a pump in the scrotum and a fluid-filled reservoir in the abdomen. The pump is activated by hand and most closely mimics a normal erection. Because they have many parts, they take longer to put in and have a higher risk of mechanical problems which may require surgical repair; and
- **two-piece inflatable** - two pre-filled cylinders which require a scrotal pump but have no fluid reservoir. They are useful if you have had pelvic or abdominal surgery which makes reservoir insertion difficult. They do not become as flaccid (floppy) when deflated as three-piece devices.

The procedure should be regarded as "end-stage" irrversible surgery. You should discuss all alternative treatments with your urologist before opting for penile prostheses.

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What are the alternatives?

Patients should already have been tried on at least two different types of oral (tablet) treatment (sildenafil, tadalafil, vardenafil or avanafil), as well as on second-line treatment (alprostadil injections, creams or pellets) before being considered for penile prosthesis surgery.

- **Tablets by mouth** – drugs (e.g. sildenfail, tadalafil, vardenafil or avanafil) remain first-choice treatment for most patients
- **Penile injections** – a prostaglandin preparation injected directly into the side of your penis
- **Vacuum erection assistance devices** – an external appliance that sucks blood into your penis and keeps it rigid with a constriction ring
- **Urethral prostaglandin pellets (MUSE)** – using a small prostaglandin pellet or gel put into your urethra (relatively ineffective with a high risk of side-effects)

In Peyronie's disease, we will consider penile prostheses if there is associated poor erectile function which has not responded to oral treatment (sildenafil, tadalafil, vardenafil, avanafil) or if there is severe curvature where conventional surgery has a high chance of resulting in erectile dysfunction.

In acute ischaemic priapism, we will consider penile prosthese if priapism has been present for more than two or three days and this has failed to respond to other measures (aspiration, medication and shunt surgery).

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 usually provide you with a pair of TED stockings to wear, and 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 operation

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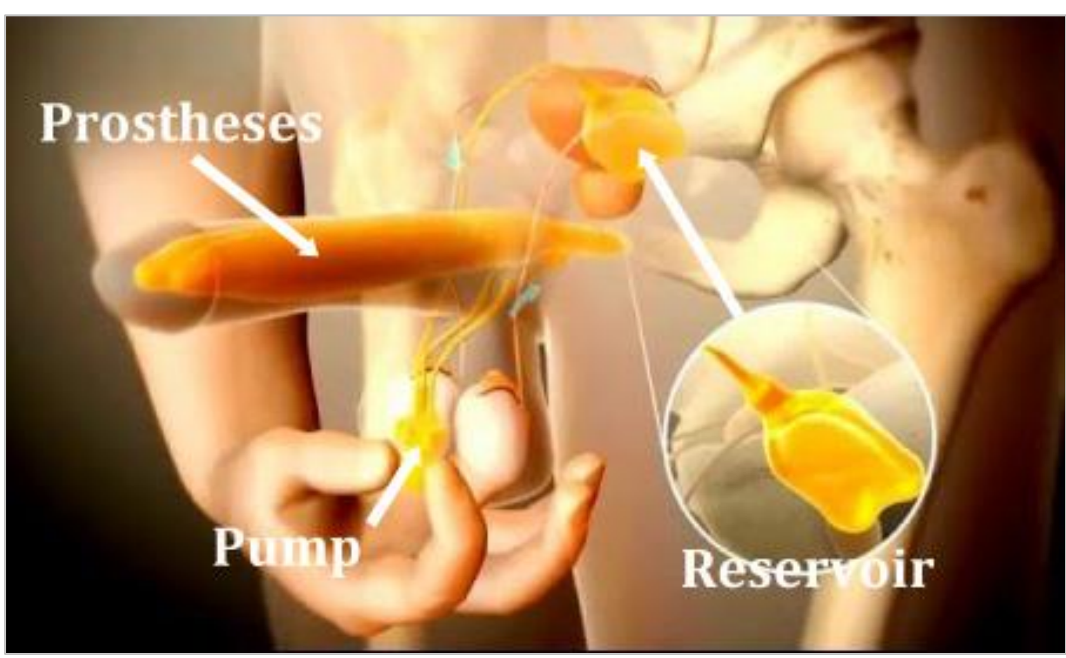
- we will shave and clean the area with antiseptic for five to 10 minutes to minimise the risk of infection
- we usually carry out the procedure under a general anaesthetic or, occasionally, under a spinal anaesthetic (where you are awake or sedated, but unable to feel anything from the waist down)
- we usually give you an injection of antibiotics before the procedure, after you have been checked carefully for any allergies
- we usually make a small cut just below the junction between your penis & scrotum; most of the procedure can be completed through this single incision but, occasionally, a second incision in your abdomen is needed to position the reservoir, if required
- we break down the tissue inside the erectile cylinders of the penis (corpora cavernosa) and measure the space produced so that the largest appropriate size of implant can be put in
- we create a space in the scrotum for the pump (if an inflatable device is being used), usually between your testicles, at the front of the scrotum (so it can be found easily)
- if an abdominal reservoir is needed, we place this alongside the bladder using the same incision or, occasionally, through a separate incision
- the inflatable devices are filled with fluid, air is expelled from the cylinders & connecting tubing, and inflation is tested whilst you are asleep
- you will probably have a small drain left in the wound and a catheter overnight
- we normally wrap the penis in a firm dressing to reduce swelling and bruising



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On the day after your operation, your dressing, catheter and any drain will be removed. If you have an inflatable device, we will deflate this before you go home. You may find the first deflation quite uncomfortable but do not be put off by this.

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
Bruising and swelling of the penis	Almost all patients
Infection of the device when implanted for revision, priapism/fibrosis or where the procedure was complex (see below for infection risk in "first-time" surgery)	Between 1 in 10 & 1 in 16 patients (from 6 to 10%)
Malfunction/mechanical failure of inflatable implants within 10 years (which can result in uncontrolled self-inflation & require further surgery)	1 in 20 patients (5%)
Erosion of the device requiring further surgery	Between 1 in 20 & 1 in 50 patients (less than 5%)
Floppiness or "drooping" of the glans (head of the penis) down towards your legs	Between 1 in 10 & 1 in 50 patients
Infection of the device (following first-time implantation)	Between 1 in 50 & 1 in 100 patients (from 1 to 2%)
Inadvertent injury to your bladder, bowel or adjacent blood vessels, or perforation of	Between 1 in 50 & 1 in 250 patients

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the corpora during insertion (which may prevent implantation)		
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 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?

- you will be given advice about your recovery at home
- you will have some swelling and discomfort for a few days after the procedure
- you will be given a copy of your discharge summary and a copy will also be sent to your GP
- we may give you a course of antibiotics to take home; any other tablets you may need will be arranged & dispensed from the hospital pharmacy
- we will arrange an outpatient appointment for you two to three weeks after the procedure so you can learn how to start bending or inflating the device
- you should avoid all sexual activity until six weeks after your operation

If you have abdominal, groin or perineal surgery at any future time, you MUST tell any surgeon that you have inflatable penile implants. **Failure to do so may put parts of the implant at risk of damage during any later surgery.**

General information about surgical procedures

Before your procedure

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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.

This is a procedure that is carried out by a small number of surgeons in a limited number of centres. BAUS runs a national audit of the procedure so that surgeons can share their experience of this surgery.

Some basic patient data (e.g. name, NHS number and date of birth) are entered and securely stored. This is required so that members of the clinical team providing your care can go back to the record and add follow-up data such as length of stay or post-operative complications. This helps your surgeon to understand the various outcomes of the procedure.

The detailed surgical information is analysed to inform future development. BAUS staff **cannot** access any patient identifiable data when they download the surgical information for analysis.

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.

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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.

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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.

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