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.

Further, general information about strictures can be found in the leaflet Urethral Stricture Disease.

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 urethroplasty.pdf

**Key Points**

- Repair of the penile urethra (circled below) involves insertion of a graft or flap to widen the urethra
- The commonest method used is a “free graft” of buccal mucosa (the lining inside your cheek)
- Reconstruction may require both a urethral and a suprapubic catheter to be inserted
What does this procedure involve?
We perform penile urethroplasty to treat a stricture anywhere in the penis from the glans (head) to the front part of the scrotum. Many conditions cause penile strictures, for example:

- inflammatory conditions (lichen sclerosus / balanitis xerotica obliterans);
- previous passage of instruments or catheters; or
- sexually transmitted infections (STIs).

Before agreeing to have the procedure, you may be asked to have a urethrogram. This is an X-ray that shows all your urethra and assesses the length of the stricture. It is done by placing a very fine catheter inside the tip of the urethra and injecting contrast medium (a dye that shows up on X-ray) whilst X-rays are taken.

Some centres prefer urethral ultrasound as an alternative way of demonstrating the urethral stricture. Jelly is applied to the penis and you are asked to pass urine so that the urethral anatomy can be clarified. These tests help demonstrate that the problem you have with passing urine is localised to your penis.

What are the alternatives?

- **Observation** - “doing nothing”
- **Optical urethrotomy** – a telescopic operation to cut through the narrowed area internally
- **Dilatation** – repeated stretching using plastic or metal dilators which you may need to continue yourself (intermittent self-dilatation)

Both optical urethrotomy and repeated dilatation carry a high risk of the stricture recurring.

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 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**

- 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 either around your penis (where the head joins the shaft) or in your perineum (between the back of your scrotum and your anus)
- if you have a foreskin, we may advise you to have a circumcision
- we either strip back the skin covering the shaft of the penis to expose its full length, or we pull the penis out through the perineal incision
- we free your urethra from the two erectile cylinders inside the shaft of your penis and open it along the full length of the stricture
- we take a strip of the lining from inside your mouth (buccal mucosa) and sew it on to healthy tissue overlying the erectile cylinders
- we then sew the cut edges of your urethra directly on to the edges of the graft, which widens the urethra
- sometimes we use a skin flap (with its attached blood supply) from the penis itself or from the foreskin as a graft
- we stitch the skin back in place, either around the head of your penis or in your perineum, depending on the site of the initial incision
- your mouth wound (if present) will heal very quickly; some surgeons stitch the mouth defect whilst others leave it to heal on its own
- we close the skin with absorbable stitches which normally disappear within two to three weeks
- we bandage your penis firmly (for 48 hours)
- we put a catheter in your bladder which needs to remain for two to three weeks
- the procedure takes between two and three hours to complete
- you should expect to be in hospital one to two nights

**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:
<table>
<thead>
<tr>
<th>After-effect</th>
<th>Risk</th>
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<tbody>
<tr>
<td>Urinary tract infection requiring treatment with antibiotics</td>
<td>Between 1 in 2 &amp; 1 in 10 patients</td>
</tr>
<tr>
<td>Swelling &amp; bruising of the wound site</td>
<td>Between 1 in 2 &amp; 1 in 10 patients</td>
</tr>
<tr>
<td>Discomfort or numbness in your mouth where the buccal mucosa graft was taken from inside your cheek</td>
<td>Between 1 in 2 &amp; 1 in 10 patients</td>
</tr>
<tr>
<td>Recurrent stricture formation requiring further surgery or other treatment</td>
<td>Between 1 in 2 &amp; 1 in 10 patients</td>
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<tr>
<td>Dribbling after urination due to “bagginess” of the graft or flap</td>
<td>Between 1 in 2 &amp; 1 in 10 patients</td>
</tr>
<tr>
<td>Wound infection requiring treatment with antibiotics</td>
<td>Between 1 in 10 &amp; 1 in 50 patients</td>
</tr>
<tr>
<td>Failure of the urethra to join completely resulting in urine leakage around the stitch line (fistula)</td>
<td>Between 1 in 10 &amp; 1 in 50 patients</td>
</tr>
<tr>
<td>Lost, altered or bent erections as a result of surgical scarring or post-operative infection</td>
<td>Between 1 in 10 &amp; 1 in 50 patients</td>
</tr>
<tr>
<td>Shortening of the penis</td>
<td>Between 1 in 10 &amp; 1 in 50 patients</td>
</tr>
<tr>
<td>Delayed bleeding requiring removal of clots or further surgery</td>
<td>Between 1 in 50 &amp; 1 in 250 patients</td>
</tr>
<tr>
<td>Wound breakdown requiring further surgery</td>
<td>Between 1 in 50 &amp; 1 in 250 patients</td>
</tr>
</tbody>
</table>
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 be shown how to manage your catheter
- arrangements will be made for catheter supplies to be delivered to you, if required
- a date and venue for your catheter removal will be arranged
- you will be given a copy of your discharge summary and a copy will also be sent to your GP
- any antibiotics, tablets or mouthwashes you may need will be arranged & dispensed from the hospital pharmacy
- a follow-up appointment will be arranged

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.

BAUS runs a national audit and collects data from all urologists undertaking this surgery. There are two reasons for this. First, surgeons are required by the Department of Health to look at how well the surgery is being done under their care and, second, to look at national trends for the procedure.

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.

Although BAUS staff can download the surgical data for analysis, they cannot access any patient identifiable data. This information is used to generate reports on individual surgeons and units; these are available for the public to view in the Surgical Outcomes Audit section of the BAUS website.

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](https://www.nhs.uk); 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](https://www.gov.uk/dvla-driving-after-surgery) 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)](https://www.gov.uk);
- the [Cochrane Collaboration](https://www.cochrane.org); and

It also follows style guidelines from:

- the [Royal National Institute for Blind People (RNIB)](https://www.rnib.org.uk);
- the [Information Standard](https://www.infonst.com);
- the [Patient Information Forum](https://www.patientinformationforum.org); and
- the [Plain English Campaign](https://www.plainenglishcampaign.org).
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.