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# SURGERY FOR HYPOSPADIAS

## Family information leaflet

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## Hypospadias surgery

This leaflet explains about hypospadias surgery, and what to expect when your child comes to Bristol Children's Hospital for treatment.

### What is hypospadias?

Hypospadias is a common condition, affecting ONE in 250 boys. In hypospadias, the urethral (urinary tract) opening is not at the tip of the penis. The opening may come out anywhere along the underside of the shaft of the penis, and in more severe cases, may even be as far back as the base of the scrotum. The foreskin is usually incomplete on the underneath ("hooded") and there may also be an associated downward bend in the penis (known as "chordee"). If your child is noted to have hypospadias, it is important to avoid a circumcision, as the foreskin may be needed during surgical correction of the hypospadias

### Why does it occur?

The penis begins to develop in the womb at around 8 weeks. During its development, two urethral folds on the sides come together in the midline to form the urethra. Hypospadias occurs if these folds don't meet correctly. The cause of hypospadias is not completely understood. The following factors may be important:

**GENETIC:** Research has shown that there is a genetic predisposition to hypospadias, as hypospadias can run in families. In addition, if you already have one child with hypospadias, then the chance of having another boy with hypospadias increases to around ONE in 20.

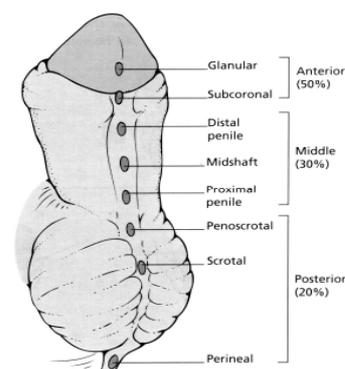
**ENDOCRINE:** Hypospadias can be seen in some rare conditions where androgens (sex hormones affecting development of the reproductive organs) are either produced in low levels, or don't work correctly.

**ENVIRONMENTAL:** Oestrogens may have an effect on penile development. Oestrogens are contained in various environmental substances such as pesticides on fruit and vegetables, and this may explain why hypospadias is more common in mothers with an exclusively vegetarian diet.

### What types of hypospadias are there?

Hypospadias can be described according to the position of the urethral opening e.g. glanular / subcoronal / penile / penoscrotal or anterior / middle / posterior [see diagram].

The severity of the hypospadias will determine whether it will be possible to perform a one-stage operation or if a two-stage operation will be needed.



### Why is surgery necessary?

If the hypospadias is mild, then it is unlikely to cause a problem in the future, either with urination or sex, and surgery is NOT essential. You will need to decide if you are sufficiently concerned about the cosmetic appearances to want to go ahead with surgery, remembering that surgery can have complications.

If the hypospadias is more severe, boys may find it difficult to pass urine standing up. In addition, if there is a significant bend, then this may make it difficult for them to have sex in the future. In those situations, your paediatric urologist will recommend surgery.

## Hypospadias surgery

### What does the surgery involve?

Surgery usually takes place at 10-18 months of age, with a 2<sup>nd</sup> operation being performed 6 months after the 1<sup>st</sup> if required. If your child is referred later, then surgery can take place at any point, although the "terrible two's" are generally avoided. The paediatric urologists at Bristol Children's Hospital tend to use two different operations, named after the surgeons who invented them: the "Snodgrass" repair, which involves one-stage, or the "Bracka" repair, which involves two-stages. Your child's foreskin may be reconstructed ["zipped up"] during the surgery, or it may be removed [circumcision], depending on the severity of the hypospadias and your own preferences.

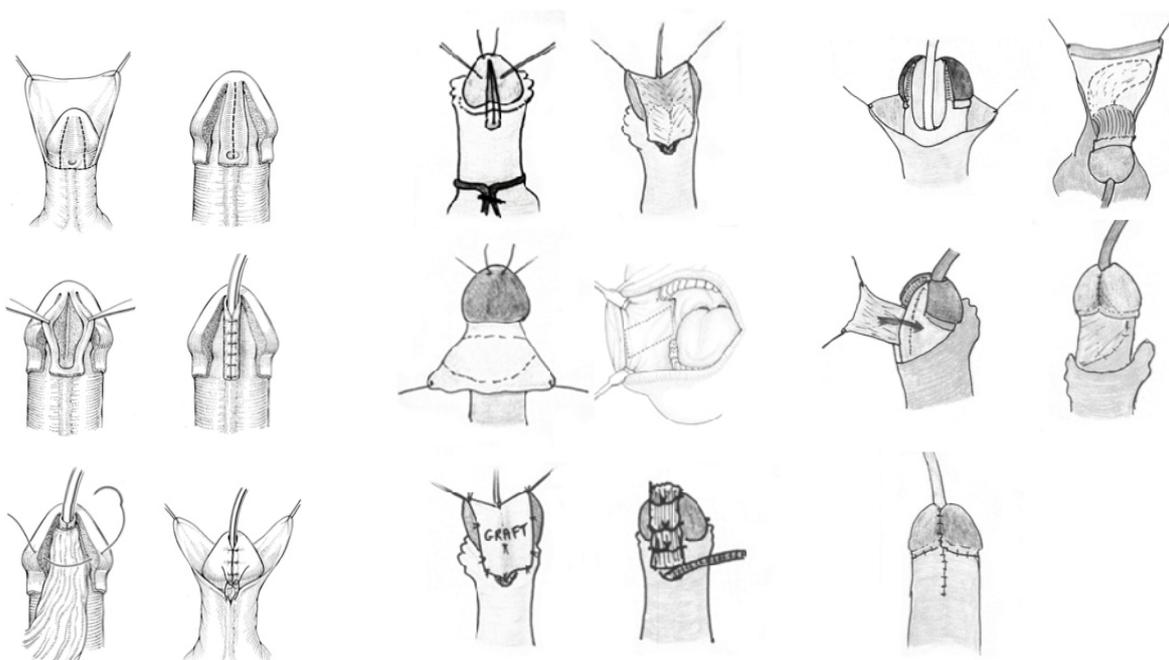
Surgery takes around 90mins, and is usually done as a day-case [no need for an overnight stay in hospital]. Your child will return from theatre with a special DRESSING covering the repair. If your child is in nappies, then he will also have a type of catheter tube called a STENT which will simply drip urine into his nappy. If your child is toilet-trained, then a different catheter tube will be left that drains into a bag. The dressing will be kept in place for ONE week after the operation. You will then be seen by your surgeon in the outpatient clinic around THREE months after the operation.

### One-stage surgery ['Snodgrass']

### Two-stage surgery ['Bracka']

1st operation [around 1yr]

2nd operation [6 months later]



The Snodgrass repair is most commonly used with less severe forms of hypospadias without much bend, and it is often possible to reconstruct the foreskin during this type of repair. The Bracka repair is generally used for more severe hypospadias, particularly if there is a significant amount of bend. The 1<sup>st</sup> stage involves removing tissue on the underneath to allow the penis to be straight, and then replacing the gap in the skin with a skin graft usually taken from the inner foreskin or occasionally from the cheek. The dressing left after the 1<sup>st</sup> stage will be removed after ONE week, and this may involve a general anaesthetic. During the 2<sup>nd</sup> stage 6 months later, the skin graft is made into a tube to create a new urethra, and a circumcision will be performed. The 2<sup>nd</sup> dressing will again be removed after ONE week but this time it will not involve an anaesthetic.

## Hypospadias surgery

### What happens before the operation?

On the day of admission to hospital, the surgeon will visit you to explain about the operation in more detail, discuss any worries and ask you to sign a consent form giving your permission for the operation. Another doctor will also visit you to explain about the anaesthetic and options for pain relief after the operation. A member of the nursing team will talk to you about the after care, and in particular the plans for nappies.

If your child has any medical problems, particularly allergies and constipation, please tell the doctors about these. Please also bring in any medicines your child is currently taking.

### Are there any risks?

**General risks:** All treatments carry an element of risk, but this must be balanced against the quality of life without treatment. All surgery carries a risk of bleeding during or after the operation. Every anaesthetic carries a risk of complications, but this is very small. Your child's anaesthetist is a very experienced doctor who is trained to deal with any complications. After an anaesthetic, your child may feel sick and vomit. He may have a headache, sore throat or feel dizzy. These side effects are usually short-lived and not severe.

**Specific risks:** The following complications can occur in between 5% and 20% of boys, depending of the severity of the hypospadias, with a leak or fistula being the most common problem.

**BLEEDING:** a small amount of bleeding around the dressing is common. More severe bleeding is very unusual, but if this were to occur then your child may need to go back to theatre [<<1% of boys].

**LEAK or FISTULA:** if the stitching doesn't heal perfectly, then your child may develop a leak of urine from the newly formed urethra. When he passes urine, most of the urine will appear from the new urethral opening, but a small amount may appear on the underneath at a single point along the repair. If the leak didn't close spontaneously, then a 2<sup>nd</sup> operation would be required to correct it 6 months after the initial repair.

**NARROWING or STRICTURE:** the new urethra can narrow anywhere along its length, but this occurs most commonly at the opening on the head. If this happens, then a 2<sup>nd</sup> operation may be required to stretch it. If the narrowing is severe, then it may be necessary to repeat the stretch as your son grows.

**REPAIR COMES 'UNZIPPED':** if the repair becomes infected, then the stitching may not heal, and the repair will come undone. This is a very rare complication [<1%], and a repeat operation would be required 6 months after the 1<sup>st</sup> repair.

**RECURRENT BEND or CHORDEE:** if your child's penis is significantly bent, then the surgeon will try to straighten it as much as possible at the time of surgery. However, as the penis will grow a lot through puberty, then there is a small risk of it bending again, and if this was a concern for the child, then further surgery may be necessary.

### What happens afterwards?

Once your son's operation is completed, he will return to the ward when awake. He will be able to drink straight away and eat shortly after although children can often feel groggy, sick or be upset after a general anaesthetic. He will be monitored for a short time after by nursing staff on the ward, usually around 2-3h. Most procedures are done as a day case. When the nursing staff are happy that your son has recovered, and you are happy with the after care, you will be allowed home. If you are to stay overnight, one parent will be allowed to stay.

Before discharge, arrangements will also be made for you to return after ONE WEEK for the dressing and catheter or stent to be removed. Finally you will be seen by your surgeon in the outpatient clinic around THREE MONTHS after the surgery.

# SURGERY FOR HYPOSPADIAS

## Nursing information

## Hypospadias surgery

### Care for your son with a dressing and a stent

If your son is in nappies, we use a 'double nappy' technique to ensure that the stent and dressing are correctly looked after. You will need:

1x nappy of the normal size

1x nappy 1 or 2 sizes bigger

A pair of sharp scissors

Suitable tape e.g. elastoplast (provided by the ward)

In the smaller nappy (your son's normal size) cut out a circular hole in the centre of the front half. This will usually need to be around 5cm in diameter. Then, using small lengths of the tape, tape up around the cut out hole. You must ensure that it is a complete circle of tape from inside to outside to prevent any of the gel beads from within the nappy getting into the stent.

Next, lay your son onto the nappy with the hole at the front. Carefully position the stent and dressing through the hole and secure the nappy at the sides as normal.

Now lay your son on the larger sized nappy and secure this at the sides as normal. Here you must ensure that the stent is pointing downwards into the nappy and is not bent or kinked, as this could block the stent and prevent it from draining correctly.

The top/outer nappy should be changed regularly or when wet as you normally would. The bottom/inner nappy need only be changed daily or with every bowel motion.

Dressing



Inner nappy



Inner nappy over dressing



Outer nappy on top



### Care for your son with a dressing and a catheter bag

If your son is out of nappies, a catheter bag will be used. There are 2 types of bags: a leg bag and a night bag. You will be shown how to empty and change both types of bags on the ward and then be sent home with a supply. If necessary, you will also receive a delivery of extra night bags at home. To prevent infection, it is important to wash your hands before and after any contact with the catheter and bags.

**Leg Bag:** this is a smaller bag that can be strapped around your son's leg using velcro straps, which usually sit just above and below the knee. Urine will drain constantly into the bag, which will need regular emptying. This can be done by undoing the lower strap of the bag and placing the tap over the toilet.

**Night Bag:** Overnight, a night bag should be used as it has a larger capacity. This bag should be attached directly to the bottom of the leg bag. Once the night bag had been attached, open the tap of the leg bag to allow free drainage of the urine from the leg bag into the night bag. You must use a clean night bag every night to help prevent infection

## Hypospadias surgery

### Medication and pain relief

We will prescribe the following medications:

1. TRIMETHOPRIM (an antibiotic) - given TWICE daily to help prevent infection
2. OXYBUTYNIN (to treat bladder spasm) - given as needed up to TWICE daily. Some boys experience intermittent pain as a result of 'bladder spasm', which occurs when the empty bladder squeezes on the catheter or stent.

You should make sure you also have a supply of PARACETAMOL and IBUPROFEN at home to give regularly for the 1<sup>st</sup> few days.

### When you get home

Ideally the dressing should remain clean and relatively dry, although this can be difficult. If it gets particularly dirty, then it can be washed with a damp sponge, although the dressing shouldn't be soaked.

It is important to regularly check that your son's stent or catheter is draining, either when you change his nappy or by checking the leg bag.

Ideally your son should have TWO weeks off from school or nursery - one week while the dressing is in place, and one week after it has been removed. During this time, try to ensure he avoids boisterous play, climbing or cycling/riding on toys/trikes. For the next FOUR weeks [to a total of six weeks after surgery], the repair will still be healing, so try to limit boisterous play. Swimming should be avoided for the whole SIX weeks.

### Removal of dressing

Arrangements will be made for the dressing to be removed after one week. This will usually take place on the Clinical Investigations Unit (CIU). If your surgeon is planning to remove the dressing themselves [only after the 1<sup>st</sup> operation of a two-stage repair], then you will be advised of the arrangements for this.

Give your son paracetamol one hour before his appointment on CIU

Give your son a bath the night before removal, allowing him to soak in the bath to loosen the dressing slightly

On CIU, the stent or catheter and dressing will be removed and the repair will be assessed for healing

PLEASE NOTE: the repair can look very bruised - DO NOT BE ALARMED by the appearances at this stage

After removal of the dressing, you will need to wait until your son passes urine, so there may be a wait.

Drinks will be provided but you may want to bring your own if your son has a particular favourite.

Finally, you will be seen by your surgeon in the outpatient clinic around THREE MONTHS after the surgery.

### Trouble shooting

#### What if ...

The stent or catheter stops draining

#### Action

Ensure the stent or catheter is not kinked.

Give your son an additional drink.

If this doesn't help, phone for advice

Your son is in pain intermittently

He may have bladder spasm so give him the OXYBUTYNIN

If this doesn't help, phone for advice

You notice blood around the dressing,  
or in your son's urine

A small amount of blood is normal

If the bleeding is continuous, phone for advice

## Hypospadias surgery

### Contact information:

For advice 8am – 6pm:	Ward 36 Nursing staff	0117-342-8336
For advice 6pm – 8am:	Ward 31 Nursing staff	0117-342-8331
	or: On call surgical registrar	0117-927-6998
For dressing removal:	Clinical investigations unit	0117-342-8249
For follow up queries:	Consultant Urologists' sec	0117-342-8840

<b>STAFF/PARENT checklist:</b>	<b>Tick:</b>
Double nappies competent	<input type="checkbox"/>
TTA's given and explained	<input checked="" type="checkbox"/>
Pain relief available at home	<input type="checkbox"/>
Ward telephone numbers given	<input checked="" type="checkbox"/>
Follow up appointment booked with CIU	<input type="checkbox"/>
ICE discharge letter given [eDis]	<input checked="" type="checkbox"/>
Sticker in notes signed by parents and nurse	<input type="checkbox"/>