

SUPRA-PUBIC CATHETER

HOME CARE GUIDELINE[®]

INTRODUCTION

Supra-pubic catheters (SPC) are used to assist people in managing their bladder function. They may be used to allow time for the urethra to heal following surgery, injury or disease, and can also be used for people who have bladder dysfunction from conditions for example spinal cord pathology to help them manage their urinary incontinence.

A supra-pubic catheter is a silicone tube inserted into a surgically-created fistula (hole) in the abdomen that joins to the bladder. The end of the catheter sits within the bladder, held in place by a small inflatable water-filled balloon and is used to empty the bladder of urine. If used appropriately it may help relieve pressure on the kidneys thus assisting the kidneys to remain healthy and also help manage incontinence.

The supra-pubic catheter must be attached to a flip-flow valve, leg bag or overnight drainage bag at all times. Ensuring there is a closed circuit that reduces the incidence of any germs entering the bladder. The catheter and/or attached bag, must be emptied at regular times throughout the day. This is to prevent overfilling of the bladder, and to prevent urine sitting within the bladder, catheter or bag for long periods. Failure to empty the catheter or bag regularly can result in growth of bacteria that may lead to urinary tract infections.

When a supra-pubic catheter is in place it is important to have good bowel routine in place to prevent constipation. Constipation can trigger irritable bladder symptoms including reduced capacity to hold urine, urinary urgency and increased risk of infection.

Supra-pubic catheters are most often used as a short term solution for managing bladder function due to the risks associated with long term use, however your clinical team will advise you regarding these risks and ways to minimise these.

CARE OF THE SUPRA-PUBIC CATHETER

The supra-pubic catheter is a silicone tube that is inserted into a surgically created fistula (hole) in the lower abdomen. The end of the catheter sits in the bladder and has small balloon that is inflated with water to keep the catheter in place and prevents it from falling out.

Supra-Pubic Catheter Site Care

It is important that the catheter insertion site on the abdomen remains as clean as possible at all times. Initially, you may need to have an absorbent dressing over the site in the weeks following surgery whilst the fistula heals. Commonly there is some clear watery discharge that may contain small blood streaks that may leak from the insertion site. This is completely normal. Change this dressing regularly as needed throughout the day and as long as there is no skin redness, swelling, bad smells or pain, then continue with the prescribed cleaning technique.

Sometimes the fistula may develop some pink fleshy 'granulation' tissue due to the body's reaction to the catheter. These are skin cells that have overgrown at the insertion site. They are very vascular and can easily bleed when traumatised. Most occurrences are without significant problems but if you are concerned seek advice from your nurse or surgeon as it may need some topical medication to apply to it to shrink it.

In the days following the surgery your child may have an absorbent dressing over the newly created fistula. This dressing is to stay in place until the surgeon or nurse advises you that you can remove it. Once removed you will need to complete this dressing once daily for the first weeks to keep the site clean and dry.

Equipment for Supra-Pubic Site Care in the Weeks Following Surgery

To change the dressing you will need the following supplies:

- Non-sterile gloves x 2 sets
- Dressing pack containing gauze squares and paper drape
- Normal saline 0.9% to clean the wound
- Absorbent 'split gauze' dressing for replacement around the wound

Procedure for Site Care in the Weeks Following Surgery

1. Wash your hands and dry them well.
2. Clean trolley (or table) with hospital grade disinfectant wipes and gather equipment.
3. Open dressing pack carefully open the 0.9% saline ampoule. Squeeze saline onto the two of the sterile gauze without touching the gauze with the ampoule or your fingers.
4. Apply clean gloves and remove the old dressing carefully, without pulling on the suprapubic catheter and dispose of the dressing and your gloves.
5. Wash your hands well a second time, dry them and apply clean gloves.

6. Take one of the saline soaked gauze squares and wipe the catheter insertion site in a circular motion once. Dispose of the gauze into the bin.
7. Take the second saline soaked gauze and wipe around the catheter site just slightly outside the area you have already wiped only once, and then dispose of the gauze. *It is important during cleaning not touch the skin with your fingers or drag any germs that may be sitting outside the cleaned site onto the catheter or the wound as this may cause an infection.*
8. The final gauze remains dry and is used to wipe around the cleaned catheter site to soak up any saline left there. Wait for a couple of minutes to allow the skin to dry thoroughly.
9. Place your absorbent 'split gauze' dressing around the catheter, taking care not to pull on it too much.

Procedure for Site Care Once Insertion Site Has Healed

It may take several weeks for the fistula and insertion site to heal. Once this happens and the skin around the immediate catheter site is fully healed then the absorbent 'split gauze' dressing and waterproof dressing may be removed and normal bathing using soap and water can recommence. You may also wish to apply a small amount of barrier cream onto the skin just around the catheter to maintain good skin integrity and prevent it from becoming irritated or inflamed.

You may also wish to secure the catheter with a special catheter 'securement device' (e.g. tape, stat-lock, 'gate' or Velcro catheter strap) to your child's abdomen or thigh to optimise its position for drainage and to prevent it from moving around or becoming caught up in their clothes or accidentally pulled. Ensure that when taped the catheter is not pulling to either side of the opening as this may cause damage to the skin.

Note: if child is paraplegic or has limited sensation, please use caution with tapes to maintain skin integrity.

CHANGING THE SUPRA-PUBIC CATHETER

If you have any concerns about the catheter site, condition of the skin surrounding the catheter or if your child has had a recent urinary tract infection seek assistance or information from your child's medical team or registered nurse regarding the change of catheter.

Catheter Insertion and Changes

Initial catheter insertion happens in theatre by the surgeon using a telescope into the bladder (cystoscopy). The first change of the catheter is usually done by the Medical team or Urology Nurse at the hospital clinic. The type of catheter that best suits your child's individual needs will be assessed at this time. Following this, catheter changes occur approximately every 4-6 weeks by a suitably trained registered nurse or a family member. It is usually done in the family home with the appropriate equipment.

Changing of a supra-pubic catheter must be done as cleanly as possible due the increased risk of a urine infection during removal or insertion of the catheter. As such additional equipment is required to make the procedure as clean as possible is necessary.

Equipment

- 1 Sterile Catheter/Dressing Pack
- 1 pair of Sterile Gloves & 2 pairs of clean designated gloves (preferably latex free)
- Sterile lignocaine 2% gel with chlorhexidine 0.5% in syringe
- Replacement sterile silicone catheter of appropriate size with 10 ml balloon. In children above a normal body weight with a larger abdomen.
- Replacement sterile urine drainage bag, leg bag or flip flow valve
- Aqueous Chlorhexidine 0.1% Irrigation Solution for cleaning around fistula
- 2 x 10 mL sterile syringes
- 1 x 10mL ampoule sterile water
- Sterile absorbent 'split gauze' dressing for final dressing to fistula site
- Tape to secure gauze
- Securement tape or catheter strap to secure tubing to thigh
- Waterproof sheet or absorbent pads (bluey)

Procedure

It is important to ensure the bladder is at least partially filled at the time of SPC change. The catheter can be clamped or Flip-flo valve needs to be closed for at least 30 minutes before the catheter can be changed. Otherwise the bladder can be filled with sterile saline or water via the catheter (approximately 50mL) prior to removing the old catheter.

- Wash hands and dry them well.
- Clean trolley (or table) with hospital grade disinfectant wipes and gather equipment.
- Wash hands for 1 minute and dry them well.
- Open catheter pack carefully only touching the outside edges so that the inner parts are protected from micro-organisms (aseptic field).
- Expose supra-pubic catheter site and remove dressing. Place bluey (absorbent pad) under child.
- Pour Chlorhexidine 0.1% Irrigation Solution onto gauze squares for cleaning, and open lignocaine 2% with chlorhexidine 0.5% gel onto sterile field without contamination.

- Squirt water from 10mL ampoule into one empty bay of the catheter pack.
- Put on two pair of sterile gloves – one over the top of the other.
- Draw up sterile water into the 10ml syringe
- Using forceps provided in the catheter pack, clean around fistula site with gauze soaked in cleaning solution.
- Lubricate tip of new catheter with a small amount (1mL) lignocaine 2% gel. Then use the remaining gel to squeeze around fistula site.
- Place the paper drape close to the area (usually between the child's legs) and place a sterile kidney dish top.
- Deflate balloon of existing catheter using a 10 mL syringe by attaching the syringe to the balloon port (often labelled BAL) at the end of the catheter, and slowly drawing back the plunger of the syringe until there is no more water coming out.
- **ASSISTANT** to wash hands and put on clean designated gloves ready to remove existing catheter.
- **ASSISTANT** to remove existing catheter gently and firmly (there may be some resistance due to ridge around tip of catheter, but catheter should come out easily as balloon is deflated). If there is any resistance, stop the procedure and seek appropriate advice from your doctor or nurse. *Leaving a small amount of urine in the bladder so that it isn't completely empty allows urine to reflux up into the new tube when inserted to confirm correct placement into the bladder.*
- As soon as catheter is removed, **immediately insert the replacement catheter** into the fistula. Place sterile kidney dish to receive urine draining from catheter.
- Once urine or water has come through the catheter then
- Fill catheter balloon with 7-10mls sterile water (depending on the child's age and bladder capacity – be guided by your doctor or nurse for an appropriate volume), gently draw the catheter back until resistance is felt to ensure balloon is inflated and catheter is secure.
- Connect catheter to sterile urine drainage bag or flip flow valve.
- IF you usually use a dressing on the catheter site apply 'split gauze' dressing around the fistula site and secure with tape.
- Tape tubing to inner thigh with tape or catheter strap or gate if available. Ensure that when taped the catheter is not pulling to either side of the fistula as this may cause skin breakdown. **Note:** If child is paraplegic or has limited sensation, please use caution with tapes to maintain skin integrity.
- Leave your child clean and comfortable.
- Discard equipment appropriately in the household bin
- Remove gloves and wash hands.

- **Note:** If there is any doubt about correct placement of the catheter contact a Medical Officer to review your child. A small amount of bloody/straw coloured ooze from around the stoma or into the catheter itself may occur following this procedure. If bleeding continues, the patient should also be reviewed by a medical officer.

POINTS OF EMPHASIS

Emptying the Bladder and Signs of Urinary Tract Infection

It is very important that the bladder is emptied completely at each drainage of the supra-pubic catheter. It is important the legbag or overnight bag is below the level of the bladder when draining it will assist with completely emptying the bladder.

Any urine that remains in the bladder may cause recurrent urinary tract infections. Signs of a urinary tract infection include fever without a clear reason, cloudy, smelly, bloody urine or abdominal/pelvic pain. If your child is unwell with a urinary tract infection you will need to take your child to a doctor to have a sample of urine tested for the type of bacteria and an appropriate antibiotic may be prescribed.

If your child is not unwell and has cloudy offensive urine, encourage your child to drink more fluids and empty the bladder more often until urine becomes clear again. Urine in the bladder is not sterile. It is important to note that **most** children who are catheterized will have urine that contains bacteria and leucocytes (white blood cells). This test result alone does not indicate a urine infection. Your child should only be prescribed antibiotics if they have one of the symptoms described above of antibiotic resistant bacteria. Constipation can also contribute to urinary tract infections, as well as negatively impact on the bladder, so regular bowel emptying is also recommended.

Bleeding

Notify the appropriate doctor or nurse if fresh (bright red) or old (dark red or brown) blood is found in your child's urine. This can occur if there is local trauma to the insertion site due to pulling on the catheter, from the catheter rubbing against the bladder wall, or from an infection.

Blockage of the Catheter

Blockage of the catheter can sometimes occur when sediment forms in the bladder or the tubing of the catheter. If this occurs it may require a gentle flush of saline to help clear the blockage in the tubing or a washout of the bladder to clear the sediment. Guidance should be sought from your child's doctor or nurse if this is required. If the blockage is unable to be rectified, a change of catheter will need to be done.

Prevention of blockages is very important and this can be done by ensuring your child drinks plenty of water throughout the day.

Leaking (around the catheter or via urethra) Between Catheter Emptying

There are a number of reasons for leaking between supra-pubic catheter emptying. Most often it is caused by an overfilled bladder that may need to be emptied more often. It can occur because of a blocked catheter that does not allow proper drainage during emptying. This can be caused by a urine infection. It can also be caused by a gradual change in the bladder's ability to stretch and store urine at low pressures. If your child does experience regular leakage from their urethra, despite regularly emptying their urine via the catheter then speak with your child's doctor about other possible causes or tests that may be required.

Medication

Most children who have a suprapubic catheter will require medication to relax the bladder and improve its storage capacity. The most common medication currently used is Oxybutynin (Ditropan) that is taken orally in tablet form or medicated patches (Oxytrol) which are changed every few days as prescribed by your doctor. This medication can have some mild side effects such as dry mouth, headaches and blurred vision, which usually diminish in time. Children taking this medication need to be warned that they may not be able to cool their bodies as effectively while on the medication and need to be careful to stay well hydrated and actively cool themselves when playing or exercising in hot weather. Extra fluids in summer and staying out of the sun can help to minimise these side effects. These types of medications usually cause constipation. Some more recent additions of medications we use to help with bladder storage are Solifenacin (Vesicare) and Mirabegron. If Oxybutynin is not effective then these are other options your doctor may consider for your child.

Alternate Therapies

Cranberry tablets, juice or new products such as Urofem D-Mannose (a naturally occurring sugar that bacteria attach to in the bladder that is then flushed out when the catheter is emptied) taken daily as recommended by a health adviser, have been found to assist in preventing urine infections in some people who have suprapubic catheters. Talk to your doctor or nurse before initiating this therapy.

Monitoring Your Bladder

Regular renal ultrasounds, nuclear medicine studies and blood analysis may be required will be required to monitoring for any kidney damage as a result of high pressures and/or bacterial infections. It is important to have an annual review with your surgeon. Having periodic cystoscopy (very small camera inserted into the bladder) may be required in some children. If you have any questions about these tests, please contact your child's appropriate doctor or nurse.

TYPES OF CATHETERS

There are several different types of suprapubic catheters available for use, depending on your child's particular needs, with variations available in catheter tip, style and angle, length of catheter, the balloon size and position relative to the catheter tip. Speak with your doctor or nurse about the appropriate catheter for your child's individual needs.

TEACHING CHILDREN TO MANAGE THEIR SUPRAPUBIC

Children can often start managing their suprapubic catheter themselves by 7 - 8 years of age, depending on their physical and cognitive abilities. This has usually been preceded by a long period of supervised instruction in order to achieve independence. Children need to have a good understanding of the importance of keeping the insertion site clean, washing hands well before and after handling the catheter and regular emptying routines when learning to look after their suprapubic catheter.

SUPPLY OF CATHETERS

Supra-pubic catheters may be purchased from **Brightsky NSW** – 6 Holker Street, Newington NSW 2127 Phone: 02 8741 5600 or 1300 886 601 or visit www.brightsky.com.au **OR** Independence Australia – Phone: 1300 788 855 or visit www.independencesolutions.com.au **OR** Paralogic <https://www.paralogic.com.au/>.

All children (under 16 years) with permanent and severe incontinence are eligible to be supplied with catheters through **ENABLENSW**. This program has an annual co-payment per person which is means tested. Phone 1800 362 253 or visit www.enable.health.nsw.gov.au

People over the age of 5 years with permanent and severe incontinence and have an eligible condition can apply to the **Continence Aids Payment Scheme (CAPS)** which provides families a set amount of money each year paid through the Medicare system into the family's bank account to go towards the purchase of continence supplies for their child. Contact Medicare Australia – 132 011 (Select option 1) or visit www.bladderbowel.gov.au/ to find out more information about CAPS.

If your child is eligible for the National Disability Insurance Scheme funding will be incorporated into your child's Core Supports. For more information about eligibility for the NDIS please visit www.ndis.gov.au or speak to your nurse.

REFERENCES

SCHN Catheters (Urinary) Management Procedure: Procedure No: 2016-9035 v2

INFORMATION ABOUT MY SUPRAPUBIC CATHETER

Child's Name: _____ MRN: _____

Surgeon's Name: _____

Date of initial suprapubic catheter insertion: _____

First suprapubic catheter change is due: _____

Details about my Suprapubic Catheter

Description of the Catheter: _____

Size of Catheter: _____ Code for ordering new catheters: _____

Balloon size: _____ Recommended balloon inflation amount: _____

Who to contact if I have a problem with my Suprapubic Catheter

Doctor: _____ Phone: _____

Nurse: _____ Phone: _____

GP: _____ Phone: _____

Local Emergency Department: _____ Phone: _____