

Bladder Augmentation

What is bladder augmentation?

Bladder augmentation is a surgical procedure to make the bladder bigger so it can hold larger amounts of urine at low pressure.

Why is the bladder augmentation procedure done?

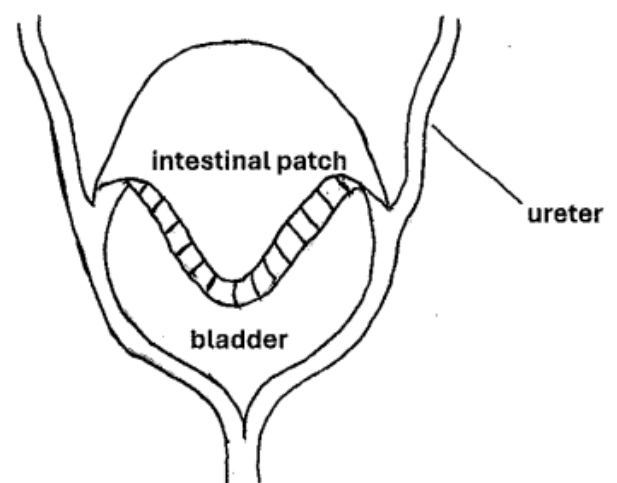
Bladder augmentation is a procedure for children with bladders that are too small or have pressure that is too high to store urine normally, causing urinary leakage or urine to back up into their kidneys. Bladder augmentation is done most often on patients with spina bifida, bladder outlet obstruction, bladder exstrophy (born with bladder inside-out), or spinal cord injuries.

Before surgery:

Before surgery, your child's surgeon will order a bowel cleanout. This is typically done at home with medications and a special diet to help clean out the bowel of stool. Some patients may need a more extensive bowel cleanout, and the surgeon may recommend admission to the hospital the day before surgery to have a formal cleanout completed. Our surgery scheduling department will give you further instructions and information on the bowel clean out your child's surgeon recommends.

What happens during surgery?

Your child will receive general anesthesia to help them sleep and not feel pain during surgery. Bladder augmentation surgery is often accompanied by other reconstructive surgeries (such as: building a catheterizable channel called Mitrofanoff, reimplanting the ureters or tightening the bladder outlet). The surgery takes 3-5 hours depending on other surgical procedures your child may need. The surgeon will use a small section of the intestine to make the bladder bigger. Typically your child will have a nasogastric tube in place to let the bowel rest after surgery for a few days. One or more bladder catheters will be placed for **3-5 weeks** after surgery to keep the bladder empty of urine and allow it to heal. Your child will need intermittent (repeated) bladder catheterization after the catheters come out. They will need to catheterize their newly augmented bladder for the rest of their life.



After surgery:

One or more catheters will be in place for **3-4 weeks** to keep the bladder empty and allow it to heal.

Foley catheter:

- a tube that is inserted through the urethra (the place where your child normally urinates) into the opening of the bladder.

Suprapubic catheter:

- a tube inserted into the bladder through the lower abdomen.

Your child will be admitted to the hospital for approximately 1-2 weeks after surgery. They will not be able to eat or drink anything after surgery until their bowel function returns. At that time, their diet will slowly advance. They will have an IV to provide fluids and to give medications. The surgeon and surgical team will decide when the IV is no longer necessary. Once your child is tolerating their diet and has active bowel sounds and able to tolerate pain medications if needed by mouth, the surgical team will decide when to begin the discharge process to home. The hospital team will be involved with discharge planning and helping to coordinate supplies needed after leaving the hospital until your child returns to clinic for catheter removal and cathing instructions.

Will my child be in pain?

Your child may experience both incisional pain and bladder pain (bladder spasms). The anesthesiologist and your child's surgeon will prescribe and explain the medications that will be used to keep your child comfortable after surgery while in the hospital.

Bladder spasms are a contraction of the bladder wall muscle caused by irritation from surgery and the urinary catheter(s). Signs of bladder spasms are sudden irritability, child drawing up their legs, urge to urinate, small urinary accidents, blood or increase in clots noted in urine or feeling pressure in their bottom. The spasms can come and go and usually last less than a minute. Your child may experience bladder spasms until the catheter(s) are removed. During this time, you should keep their urine diluted with good fluid intake. Clear liquids are best for hydrating. Minimize caffeine, carbonation, citrus, chocolate, and excessive vitamin C in their diet. These are bladder irritants/stimulants and can make the spasms worse. Constipation can also worsen the spasms. Keep stools soft and easy to pass daily. Medication(s) will be prescribed to help relieve bladder spasms and potential meds to help with softening the stool.

Recovery at home:

You will be taught how to care for the catheter(s) before you leave the hospital, and you will be instructed on how to irrigate the catheter(s) as needed to keep the bladder draining easily. Typically, the catheters stay in place for **3-5 weeks**, depending on the procedure(s) your child had done. Your child will need a test called a cystogram to assess bladder healing in the radiology department, and then will return to our clinic for catheter removal and teaching with our nursing staff. Future catheter supplies will be ordered at that time.

Before your child is discharged, you will be given written information about their care at home and any questions you have will be answered.

- **Diet:** Can resume regular diet as tolerated.
- **Activity:** Your child may return to school or daycare when pain is well controlled. Avoid vigorous activities, contact sports and swimming until the catheter(s) are removed.
- **Catheters:** Be sure your child's catheters are secure to their body to avoid being accidentally pulled out. Urine should constantly be draining from the catheter. Your child's urine may be pink or red with tiny blood clots or mucus. Keep your child well hydrated and irrigate the catheter(s) once a day or as directed by your child's surgeon.
- **Wound Care:** Your child will have surgical glue, possible staples, clear plastic dressing, or a combination of these on their incision. If staples are used your surgeon will instruct you when to return to our office for removal. It may take the surgical glue up to 2 weeks to completely dissolve. If a dressing is used, follow your surgeon's specific instructions for removal.
- **Bathing:** Sponge bathe your child for the first week after surgery and then they may shower or take short baths (5-10 minutes) in plain water until the catheter(s) are removed. This will promote healing and can be soothing. The catheters may be able to be plugged for bathing for short periods of time. Follow your child's surgeon's instructions for specific guidance.
- **Medicines:** Pain can be managed by alternating Acetaminophen (Tylenol® or another brand), and Ibuprofen (such as Advil® or Motrin®). Do not give aspirin because it may cause bleeding. If your child is prescribed an antibiotic, follow your surgeon's specific instructions for giving. Your surgeon may supply a prescription for medicine which should help relieve bladder spasms, follow your surgeon's specific instructions for the bladder spasm medicine.

What to call the surgeon for:

- Fever with worsening redness or pus like drainage at surgical incision or catheter sites.
- If the incision starts to separate.
- The catheter(s) are not draining, you have irrigated the catheter(s), and they are still not draining urine.
- Blood clots or increasing amounts of blood in urine.
- Foul smelling or cloudy urine.
- Nausea or vomiting that is not associated with medications.
- Pain or bladder spasms that are not controlled with prescribed medications.

We ask that you call your child's primary care provider for other concerns.

Follow-up care:

Follow-up with your child's surgeon as directed following the surgery.

Call your surgeon's office to schedule an appointment, (612) 813-8000 option 3.

Questions?

This information is not specific to your child but provides general information.

If you have any concerns further questions, please call our clinic at (612) 813-8000 option 6 for the nurse message line.

