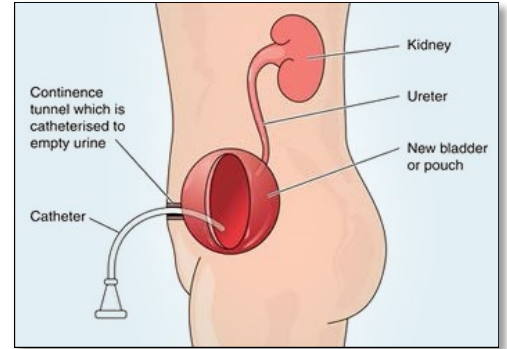


# BLADDER SURGERY

## What is it?

The ability to control urine may be limited because of disease or injury. Urinary diversion procedures can be used to facilitate easier drainage of urine. Different types of bladder surgeries can be performed to help manage problems when nonsurgical interventions are ineffective. The goal of surgery, like other bladder management strategies, is to enable the person to remove urine from the body and keep the kidneys healthy and free from infection. Bladder management cannot fix or solve the bladder problems but it can create new ways to release urine and/or enable a person to use alternative strategies like intermittent catheterization. Some surgical alternatives for bladder management include:



<b>Bladder augmentation</b>	Using the colon, ileum (small intestine), or ureter, the bladder is enlarged. An enlarged bladder helps hold urine at a lower pressure than was previously tolerated. The colon or ileum usually secretes mucous so the new bladder will also secrete mucous. The bladder will need to be irrigated daily to remain patent. Flushing with normal saline solution (NSS) will help reduce the incidence of kidney stones or urinary tract infections. A specific volume of NSS to be instilled should be ordered by the healthcare provider. This allows the bladder to expand enough to clean any folds in the structure. The NSS is then aspirated and repeated as necessary per order until mucous is cleared.
<b>Urostomy</b>	An ileal conduit is a common type of urostomy. If the bladder has been removed due to disease or injury, part of the small intestine is used to create a tube through which urine will flow out of the body. The intestine is reconnected and function unaffected. The ureters from the urinary tract are connected to this newly formed tunnel, only open at one end through the abdominal wall. Urine will free flow, uncontrolled, into a wearable
<b>Mitrofanoff</b>	A mitrofanoff procedure involves using the appendix to create a continent stoma for emptying the bladder. The appendix "tube" connects the exterior wall of the bladder to the belly button or newly created stoma. Through this opening, the bladder can be catheterized using clean intermittent technique about every 4 hours.
<b>Monti</b>	A monti procedure also creates an alternative self catheterization method. However, a portion of the small intestine (ileum) is used to create the tube that connects the bladder wall to the abdominal wall. This can be used if the appendix is not long enough or unavailable for a Mitrofanoff procedure.

## What are the complications?

The stoma and surrounding skin should be monitored for potential complications. Infection at the stoma site could cause pain, change in stoma appearance, and fever. A minimal amount of erythema is normal for a period of time after surgery, but prolonged or new onset erythema or edema should be treated. Stenosis, or narrowing, of the stoma opening can slow the flow of urine and requires treatment. If leakage occurs from a continent stoma, a minor procedure can be performed to correct the problem.



Kennedy Krieger Institute

The Specialized Health Needs Interagency Collaboration (SHNIC) program is a collaborative partnership between the Kennedy Krieger Institute and the Maryland State Department of Education.

## Specific health issues for Individualized Healthcare Plan

- Diagnosis and reason for catheterization, date of bladder surgery
- Current medication list (note medications that could affect urine color, volume and odor)
- Baseline status including color, consistency, and amount of urine
- Healthcare provider orders for catheterization procedure including catheter type, size, and frequency
- Parameters of when healthcare provider is to be notified (i.e. urine output amount or color, fever)
- Note history of urinary tract infections
- Baseline assessment of stoma and surrounding skin
- Plan to monitor for leakage and/or empty any bag/pouch as necessary
- Documentation of latex allergy
- Fluid intake goals
- Note student's catheterization technique (i.e. ability to self cath, positioning, accessibility of room/supplies)
- Accommodations for field trips
- Communicate with school staff, parents, and provider any changes or concerns about the student's disease or procedure
- Consideration of team discussion for a possible 504/IEP and Emergency Evacuation Plan

### Resources & Manuals

#### **Kennedy Krieger Institute– Programs and Services at the Philip A. Keilty Center for Spina Bifida and Related Conditions**

<https://www.kennedykrieger.org/patient-care/centers-and-programs/center-for-spina-bifida-and-related-conditions/programs-and-services>

#### **Hollister**

[https://www.hollister.com/en?sc\\_lang=en](https://www.hollister.com/en?sc_lang=en)

#### **ConvaTec**

<https://www.convatec.com/>

#### **Model Systems Knowledge Translation Center (MSKTC): Surgical Alternatives for Bladder Management Following SCI**

[https://msktc.org/lib/docs/Factsheets/SCI\\_Bladder\\_Surgery.pdf](https://msktc.org/lib/docs/Factsheets/SCI_Bladder_Surgery.pdf)