University of Michigan Health System

Urinary Diversion: Ileovesicostomy/Ileal Loop/Colon Loop

Why do I need this surgery?

A urinary diversion is a surgical procedure that is performed to allow urine to safely pass from the kidneys into a pouch on a person's abdomen (belly). It is performed for people who have otherwise untreatable urinary incontinence (leakage) chronic urinary infections, or dangerous bladder conditions that may damage kidney function. The goal of these procedures is to improve a person's long term health and quality of life.

What is a stoma?

A stoma is the end of the urinary diversion that protrudes through your abdominal wall. The stoma is red, moist, soft, and has no nerve endings. A pouch is placed around the stoma to collect the urine. You will meet with an enterostomal therapy nurse prior to surgery to find the optimal location for the stoma on your abdomen, provide education regarding stoma and skin management, and show you samples of the ostomy pouches that may be used over your stoma after surgery.

What is done during the surgery?

A urinary diversion surgery is performed in the operating room under general anesthesia (you are not awake for the procedure). The procedure can take 3 to 5 hours, depending on the complexity.

Types of urinary diversions:

1. **Ileovesicostomy.**

In this procedure, the surgeon isolates a 15cm segment of intestine (ileum) from the GI tract. The bowels are then reconnected so that you will still have regular bowel movements, if you had regular movements before. A small hole is made in the bladder and the isolated segment is then sewn to the bladder. The concept is much like adding a chimney (intestine segment) to a house (bladder). The end on the intestine segment is then brought out through the abdominal wall as a stoma. In this procedure, the bladder will store urine but urine will drain from the bladder, through the segment, and out into a pouch on the abdominal wall.

2. **Ileal/Colon Loop**

   The surgeon isolates a 15 cm segment of intestine, either small bowel (ileum) or large bowel (colon) from the GI tract. The bowels are then reconnected so that you will still have regular bowel movements, if you had regular movements before. The ureters (tubes connecting kidney to bladder) are then divided and connected to the isolated segment of intestine. The end of this segment is then brought out through the abdominal wall as a stoma. In this procedure, the bladder is bypassed. Urine will drain from the kidneys, through the segment, and out into a pouch on the abdominal wall. Your bladder may or may not be removed during the surgery, depending on the indications. You will have temporary stents in place that drain urine from the stoma. These will either be removed before you are discharged from the hospital or at the first post-operative visit to the Urology Clinic.

Generally, these procedures are performed as an open procedure, through an incision. However, some patients may be candidates for a robotic assisted procedure in which the surgery is performed by inserting a camera and instruments into the abdomen through 5 separate 1cm “keyhole” incisions.

The surgeon performs the same procedure, with the exception of the larger incision in the abdomen.

Will I be able to urinate after the surgery?

No. The goal of the procedure is to passively divert urine into an ostomy pouch on your abdomen**.**

What happens during the hospital stay?

Your hospital stay usually lasts 3 – 7 days. You will wake up from the surgery with a tube in your nose (NG tube) that will empty your stomach and keeps you from vomiting. We remove the tube at the bedside when your intestines start functioning, usually 3 – 5 days after the surgery. We begin to advance your diet during this time, starting with clear liquids. You will be given fluids through an IV into your veins till your bowels begin to function. If your bowels take longer than 7 days to function (called an ileus), your nutrition will be additionally supplemented through your IV. You may also have additional drains that will be removed during the hospital stay.

You may have some post-operative pain after the procedure. While in the hospital, this is treated with a Patient Controlled Analgesic device (PCA). With this device, the patient can immediately receive a safe dose of pain medications, up to a certain dose, every few minutes. Nurses may also give additional pain medications as needed.

During the hospital stay, you will meet many people who are involved in your care. The University of Michigan is a teaching hospital, meaning that the Department of Urology is dedicated to training resident physicians. Residents are MD’s at various stages in their training. Residents round on patients, address immediate needs, and carry out the plan on the attending physician (your surgeon). You will see an enterostomal therapy nurse who will teach you

how to care for your stoma and give instruction on how to change the ostomy pouches. At U of M, we believe strongly in a team approach to medicine and the nurses, residents, and other medical professionals all work together to carry out the attending physician's plan and insure safe, quality post-operative care.

What happens when I go home?

Generally, you will be discharged home when your vital signs are stable, your pain is controlled, and you can feed yourself. You may have a catheter or stents to manage and will be given instructions for care. When you are home, you should be active – sitting in chairs, moving around. Try to avoid any prolonged activity that involves strongly tensing your abdominal muscles. This includes exercise, lifting heavy objects greater than 10 lbs., playing sports such as golf. You may drive when you no longer need pain medication and your movements are not limited by pain. You may shower, as long as you do not submerge your incision, ostomy pouch, or catheter under water. It is safe to get the incision, ostomy pouch, or catheter wet as long as you pat it dry afterwards.

You will have your staples from the incision removed either at home by a visiting nurse, or at a return visit to your surgeon's clinic.

What do I do about urinary incontinence after urinary diversion?

During the initial recovery phase from ileovesicostomy (first 30 days), many patients experience urinary incontinence from his/her urethra. This usually represents the bladder healing from surgery, but it also may be due to a urinary tract infection. If the urine is cloudy or foul smelling, please call the contact numbers noted below. You may need to provide a urine sample so we can test it for infection and treat with an antibiotic if necessary. If the urine is clear, we usually treat the incontinence with bladder anti-spasmodic. Patients treated

with ileal or colon loops should not have any urinary incontinence from his/her urethra.

What are the risks of this procedure?

All surgery carries some risk and it is not possible to fully define the risk for each patient prior to surgery. We work with your internist and neurologist to optimize your heath and minimize your risk prior to surgery. If you have any underlying heart or lung problems that are currently being treating please inform your surgeon and request that your primary physician is involved in the pre-operative planning

General anesthesia can rarely cause pneumonia, heart problems, damage to the mouth and airways. Your anesthesiologist will talk with you prior to the surgery to go over the risks of anesthesia prior to admission to the hospital.

Complications that can occur during urinary diversion include but are not limited to wound infections, bleeding, injury to the bowels/bladder, large blood vessels, or other organs. Bowel obstruction can also occur after abdominal surgery. This may require extended bowel rest with an NG tube or surgery to correct the obstruction. Blood clots in your legs, in your lungs, or in your brain also rarely occur either during the surgery or afterwards. Occasionally, a progressive neurologic disease such as MS can worsen after a complicated urinary diversion surgery. Nerve injuries also rarely occur during surgery which could require further rehabilitation or treatment.
Over time, the urinary diversion may also develop some scaring which keeps it from properly draining urine. If this occurs, more surgery is needed to correct this. If you gain or lose weight, your stoma may also require revision.

Recent investigations suggest that attaching a piece of intestine to the bladder is associated with a very small increased risk of developing bladder cancer in

the future. We monitor patients with augmented bladders by regularly checking the urine for cancer cells and by examining the bladder with a cystoscope on a yearly basis.

How am I followed over time?

You will return for a post-operative visit 3 to 4 weeks after surgery. The next visit is 3 months after surgery at which we will obtain a renal ultrasound and urodynamics, if needed. Afterwards, we follow on a 6 month schedule for 1 year then yearly afterwards. You may also need to follow-up with your enterostomal therapy nurse as needed for any issues related to the stoma, skin, or your ostomy pouches.

Contact Information

If you have any questions, please contact the University of Michigan, Department of Urology at 734-936-7030 during working hours (8:00 am – 5:00 pm). If there are any concerns that need to be addressed during business hours or on weekends, please call 734-936-6267 and ask to speak with the Urology Resident on Call. If you need to be evaluated by a physician on an emergent basis, please go to the nearest ER and have the ER physician contact the University of Michigan urology resident on call for assistance

Disclaimer: This document is for informational purposes only and is not intended to take the place of the care and attention of your personal physician or other professional medical services. Talk with your doctor if you have Questions about individual health concerns or specific treatment options.

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