



Information for Patients and Families



UNIVERSITY OF COLORADO
HOSPITAL

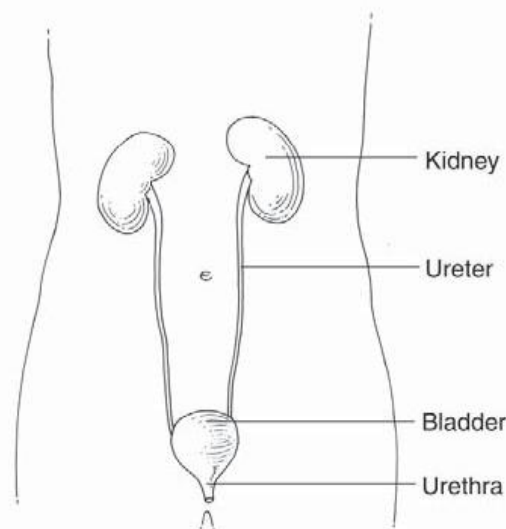
ANSCHUTZ MEDICAL CAMPUS

The Continent Urinary Reservoir

What is a Continent Urinary Reservoir?

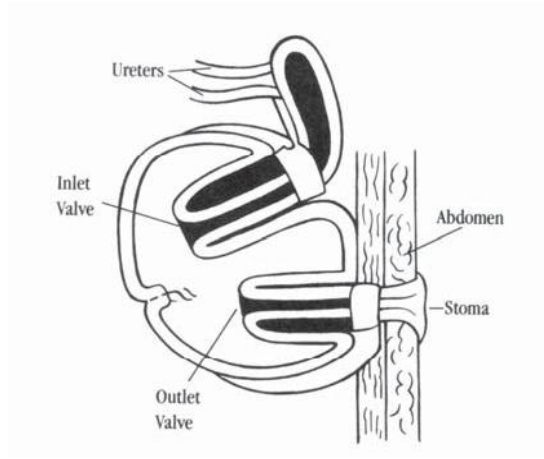
A Continent Urinary Reservoir is an internal pouch that is surgically created to take the place of the urinary bladder. In this surgical procedure, the bladder is bypassed or removed (cystectomy) and the ureters are connected to the surgically created reservoir or *pouch* which is formed from a portion of the intestine. The external opening to this reservoir, which is visible on the abdomen, is called a *stoma*. Because the stoma is made from mucous membrane, which is the inside lining of the intestine, it will always have a red, moist appearance. The reservoir is called "*continent*" because after appropriate healing has taken place, urine will not drain from the reservoir unless a catheter is inserted through the stoma into the new pouch, allowing the urine to drain through the catheter. A small protective dressing is all that will be needed to cover your stoma at that time.

Normal Urinary System

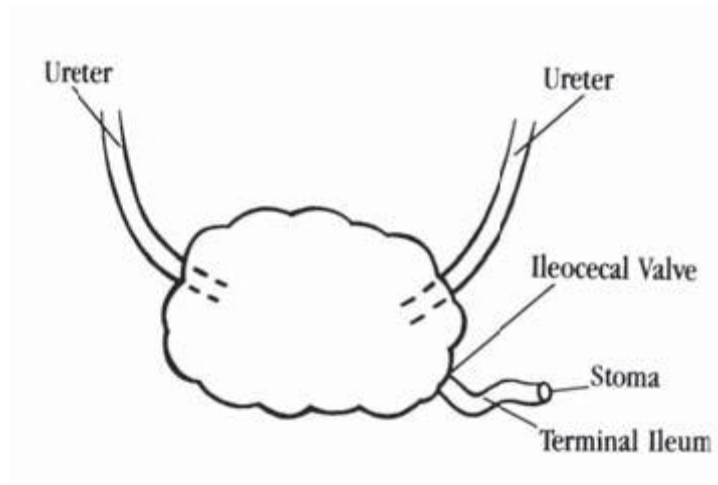


There are several versions of the continent urinary reservoirs:

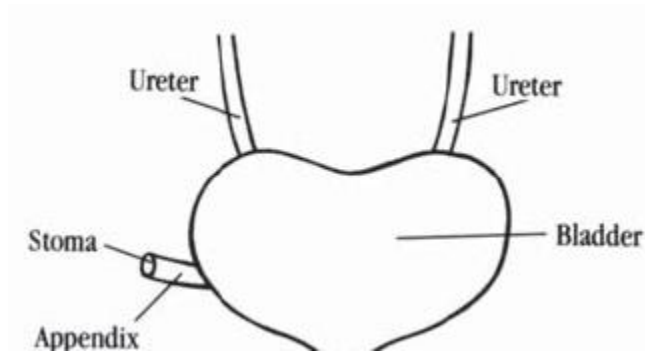
- The Kock Pouch uses a portion of the small intestine, called the ileum.



- The Indiana Pouch uses part of the large intestine to form a pouch.



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- The Mitrofanoff procedure (and different variations) uses segments from the large and small intestine.



The general principle of all versions is to create a low pressure reservoir that holds urine until you empty it.

Post-Operative Management of a Continent Urinary Reservoir

Initial Post-op Phase: continuous drainage catheter(s) in the reservoir

For two or three weeks after surgery, one or more catheters may protrude from the stoma and your abdomen. These catheters assure that the urinary system, especially the newly created reservoir, drains properly and the reservoir remains undistended until the suture lines heal. During the time that these catheters are in place, you may need to wear an external ostomy wafer and ostomy bag and a Foley catheter to drain the urine that drains around and through the catheters. During your hospitalization, at first your ostomy nurse and the other nurses caring for you will take care of your catheters. They will involve you in the care as soon as you are ready so you can be comfortable handling the procedures and supplies when you go home. Your home responsibilities will include irrigations of the catheter, care of the supplies required for your new reservoir, and the care of your stoma.

Instructions for Irrigating Stoma Catheters

The catheter in your new bladder has three parts.

- 1) Coming out of your body is the “draining catheter”. It travels to the large collection bag (Foley bag).
- 2) The “balloon port” is the portion with a cuff at the tip.
- 3) The “irrigation port” is the third section of your catheter.

The nursing staff will help you identify these three parts.

Equipment Needed:

- Normal Saline (NS)
- 60cc Irrigating Syringe (cath tip)
- Measuring Container
- Absorbent Towel or Tissue
- Clean Pitcher for NS
- Catheter

Procedure:

1. Wash hands before and after this procedure!
2. Pour some normal saline at room temperature into clean pitcher.
3. With the catheter syringe, draw up 60 cc of normal saline. Place the syringe on a clean towel within reach.
4. With one hand clamp the area above the irrigation port and remove the catheter plug. Place the plug on a clean towel within reach.
5. Fit the filled catheter syringe into the mouth of the irrigation port. THEN release your hand clamping the catheter.
6. Clamp with that same hand the area below the irrigation port and gently instill the saline into your bladder.
7. Withdraw gently on the syringe to remove mucous particles.
8. Note the amount withdrawn and discard it into the measuring container.

9. If necessary, clamp the irrigation port with the catheter plug and repeat this procedure. Use another 60cc of normal saline exactly the same way until the urine returning is fairly clear of mucous and drains freely from the catheter.

You will need to irrigate your catheter _____ times a day for _____ weeks and then _____ times a day, as directed by the Urology Clinic.

During the day, you will need to empty your urinary bag whenever the urine fills it 1/2 full or every 4 to 6 hours. Do not touch the end of the drainage spout and ALWAYS wash your hands before and after touching the catheter or drainage bag.

How to Make Your Own Normal Saline

Instead of buying already prepared normal saline, you may want to make it. Here are two different ways to make your own normal saline.

First way:

1. Boil two quarts of water for 10 minutes.
2. Add four teaspoons of table salt to the boiled water.
3. Let the saline cool and then pour it into a clean plastic or glass bottle.

Second way:

1. Buy a gallon of distilled water at the grocery store.
2. Add eight teaspoons of table salt directly into the bottle.
3. Shake it until the salt has dissolved before using it.

Studies show that this saline remains free of bacteria for 4 weeks if you keep this solution in the refrigerator. Date the saline, keep it in the refrigerator, and only pour into a clean covered pitcher the amount you need for irrigation over a 24 hour period. You can keep the saline at room temperature for 24 hours before being discarded.

After Your Stoma Catheters have been Removed

After the continent reservoir has had adequate time to heal, your doctor may do some different tests to see if the pouch is healed and working properly. One test, called a pouchoscopy involves inserting a lighted tube through your stoma to look at the inside of your new reservoir. An x-ray of your new urinary tract may also be done. These tests are not painful or time consuming. After checking the results of these tests, your doctor may remove the continuous drainage catheter. You will be shown how to catheterize the stoma for periodic draining of the pouch. At first, you will be instructed to catheterize the pouch every 2 to 3 hours day and night to make sure that the urine does not build up excessive pressure in the reservoir.

As the reservoir matures further and is able to hold more urine, you will need to catheterize the pouch only 4 to 5 times a day. These catheterizations are not painful. They are usually done in the bathroom. You can sit on a toilet (normally or facing the tank) or stand in front of it. Use the position most comfortable for you.

Instructions for Catheterizing Reservoir

Equipment Needed:

- 2 plastic food storage bags
- Catheter
- Clean paper towels
- Soap and water or cleansing wipes
- Chlorhexidine[®] wipes
- Stoma covering (1/2 of a panty liner)
- Water Soluble** lubricant if necessary (not Vaseline[®])

Procedure:

1. Wash hands with soap and water or cleansing wipes.
2. Remove stoma covering.
3. Wipe any mucus from the stoma using tissue
4. Wash the surrounding skin with soap and water or cleansing wipes and thoroughly dry. Inspect the appearance of your skin and stoma. Note any changes.
5. Remove a clean catheter from plastic bag. Lubricate if necessary. (Stoma mucus usually allows the catheter to pass easily. Use water based lubricant only if necessary).
6. Insert the catheter into the stoma until urine appears.
7. At least once a day after emptying your pouch, before removing catheter, irrigate your reservoir. You should irrigate it several times until the output is clear of mucus.
8. Remove the catheter from the stoma slowly to ensure complete emptying of your pouch. This can decrease the risk of infection.
9. Put the used catheter in a plastic bag (do not mix with clean catheters) until it is convenient to clean the catheter properly.

At first, catheterizations may seem somewhat frightening or difficult. It is normal to feel some slight resistance when the catheter reaches the continence mechanism.

Catheter Care

- When soap and water are available, wash catheters in hot, soapy water. Use a syringe or turkey baster to push water through catheter. Rinse thoroughly with clear water. Shake water off the catheters and place on clean paper towels to dry. Do not soak catheters in water as this causes them to soften quickly.
- Place dry, clean catheters in clean plastic bag to store until needed.
- Never store clean catheters with dirty one and never place clean catheters on the back of a toilet or sink in a public restroom. If you need to put the catheter down, place it on a clean towel.
- One catheter may last several months with proper care. You should discard the catheter when it:
 - becomes too soft or too stiff
 - smells bad
 - cannot be cleaned thoroughly any more.
- You should carry extra catheters and cleaning wipes with you at all times in a clean plastic bag. Extra catheters can be stored in the car, locker at work, etc.

- You will be given names of local retail suppliers for future needs.

Catheterization Schedule

The following timeframe for catheterizing your pouch provides a guideline for avoiding too much pressure on your reservoir and for slowly increasing its size. Your doctor or ostomy nurse will give you a specific schedule to follow. If you feel pressure or fullness, empty your pouch despite your catheterization schedule.

	Daytime	Nighttime
Week 1	Every 2 to 3 hours	Every 3 to 4 hours
Week 2	Every 3 to 4 hours	Every 4 to 5 hours
Week 3	Every 4 to 5 hours	Every 5 to 6 hours
Week 4	Every 4 to 6 hours	Every 6 to 8 hours
Week 5	Every 4 to 6 hours	None

After the fifth week, you will catheterize yourself about 3 to 5 times a day, allowing for some flexibility. This flexibility depends on:

- the instructions you are given
- your daily schedule (when you get up, eat meals, and go to bed)
- your food and fluid intake
- a feeling of fullness from the area of your pouch.

Troubleshooting

If you are having trouble inserting your catheter try to stay relaxed. Take a few deep breaths, or perhaps change your position. Look up at the ceiling to help your abdominal muscles relax. If these muscles are tense, it makes insertion more difficult. If these steps don't work, try using a smaller catheter or have someone insert the catheter for you. If you have tried everything and still cannot insert the catheter, call your doctor or your ostomy nurse for assistance.

If the urine is not flowing freely and it has been some hours since your last catheterization, the catheter may be clogged with mucus. Try irrigating with 60cc NS. After instilling the saline, shake your hips for a few seconds to help the saline mix with the mucus. The catheter may not be in a good position. Try rotating the catheter or sliding it gently back and forth a few times. Lastly, remove the catheter completely and re-insert.

Helpful Hints

You will want to wear a Medic Alert band with the following inscription:

“My stoma is a continent urinary reservoir which needs to be catheterized every 4 to 6 hours with a catheter.”

You can get a Medic Alert band from the Medic Alert Foundation by calling 1-800-ID-ALERT.

When you are going out, be sure to take the necessary equipment along with you that you will need to catheterize and care for your continent pouch. Catheters can easily be carried in a re-sealable sandwich bag to keep them clean.

Think of your new pouch in the same way you would think of your bladder. Regardless of your catheterization schedule, empty your pouch before such activities as going out, traveling, having sex, playing sports, etc. This could save you both time and aggravation by avoiding the need to empty when it is less convenient.

After your period of recuperation, get back into your social life and favorite activities!!! You can still enjoy all the things you did before your surgery including attending meetings, sporting events, social gatherings, and religious or community functions. Remember; do not try to make your life fit around your ostomy, **MAKE YOUR OSTOMY FIT INTO YOUR LIFE.**

Life with Your Continent Reservoir

Dietary Needs

There are no dietary restrictions because of your continent reservoir. It is essential, however to drink enough fluids. In order to keep the kidneys freely working and to help thin the mucus in the reservoir, you should drink eight to ten glasses (8 oz each) of a variety of fluids every day. Cranberry juice in particular can help thin mucus in your urine. Any liquid is fine to drink, especially water, but you should drink a VARIETY of fluids every day. Also, some foods may make your urine smell bad and some drugs will change the color of your urine.

Foods that can cause urine odor:

- Asparagus
- Fish
- Spices

Drugs that can discolor urine:

- Iron supplements
- Macrochantin[®]
- Flagyl[®]
- Heparin
- Coumadin[®]
- Laxatives such as Ex Lax[®], Senokot[®], Cascara[®]
- Ibuprofen
- Aspirin
- B-Vitamins

Clothing

There is no reason to change your style of clothing or wardrobe. You can wear anything you want, including a bikini if your stoma is low enough. Since your stoma is protected with a small, inconspicuous covering, it will not be noticeable to anyone. You can purchase coverings made

specifically for your stoma through your supply company or you could use a panty liner or small sanitary pad.

Activity and Exercise

You should avoid heavy lifting for the first 6-8 weeks after your surgery. Following your recuperative period (six to eight weeks), you can go back to your usual activities and exercises. You may even decide to take up some new ones. **PACE YOURSELF SLOWLY!** This way you will not over exert yourself and will slowly build up your endurance and strength. For the first few weeks after your surgery, space your activities evenly with short rest or nap periods during the day. After that, the sky's the limit. Your stoma does not limit your activity in any way.

Swimming and other water sports will NOT harm your stoma. You should waterproof your stoma covering to keep mucus from getting into the water and to keep your stoma covering dry and secure. If you scuba dive, check with your doctor before doing this activity because the pressure may affect your internal pouch. When the time comes that you can resume rough contact sports such as football, hockey, basketball, etc., your stoma will need extra padding over it for protection.

Driving is usually allowed after 6 to 8 weeks, but always check first with your doctor. The same holds true for abdominal exercises.

Work

There is no reason that having a continent stoma should affect your job. After your recuperation, you can work as you did before. You may even find that now you can go to the bathroom less often than your fellow employees.

Travel

You can travel as long or as far as you like. You can travel by any means as well. Seat belts will not harm your stoma or pouch. Be sure to wear them as recommended below or well above your stoma. Remember to pack enough supplies for your trip plus a few extras for any unforeseen delays or problems that may occur. If traveling by air, carry them in your carry-on luggage. Avoid extremes of temperatures when storing supplies in your car. This can decrease the longevity of your catheters.

When traveling abroad, it is important to carry a note from your doctor stating that your ostomy supplies are medically necessary. This will help prevent problems going through customs. Keep this note with your passport. Also, it is a good idea to carry all your products' order numbers on a reference card in your wallet. In foreign countries, NEVER use water you would not drink to care for your continent pouch or supplies. Also, avoid using contaminated water when camping, backpacking, or trekking.

Telling Others

As with other personal issues, only you can decide if you want to share the type of surgery you had. No one will know unless you want them to know. However, it may be unreasonable as well as uncomfortable for you to keep your ostomy a secret from everyone. Explaining your surgery and sharing your feelings with our spouse, loved one, or children can not only help dispel their fears and misunderstandings but also help you to cope with your feelings and adjust to your ostomy. You may

also wish to confide in a friend or co-worker. Even after you adapt to your ostomy, feelings of insecurity and discouragement can occur. It helps to talk to someone you are close to and can trust.

Social Relationships

Our attitudes influence how we relate to others and how others relate to us. Your ostomy itself has no affect on your social relationships but your attitude towards it may. A change has occurred in your body. This change in your body image may initially cause you to have negative feelings about yourself. People often feel anger, depression or low self-esteem temporarily after ostomy surgery. It is normal to need time to adjust to the change. With time, you will integrate the surgery and its changes into your self-concept. You are no different now than you were before your surgery. You are a person who happens to have a different way to urinate. This changes the way you urinate, not the way you are.

Sexual Relations and Intimacy

Your ability to express love and feelings is not affected by your surgery. Your attitude is a key factor in re-establishing sexual expression and intimacy in your life. As with any intimate relationship, you must maintain open and honest communication with your loved one. Clarify any mixed messages you may be getting rather than try to second guess them. What you think is rejection may be your partner's fear of hurting you. Hugging and other forms of physical contact will not harm your stoma. The small protective covering on your stoma does not interfere with any sexual positions, yet it hides your stoma from view and protects you both from any mucus discharge. Before engaging in sexual activity, you may want to empty your pouch. You should check with your doctor to find out how soon after your surgery you can resume sexual relations. This is also a good time to ask any questions you have. Feel free to contact your doctor or ostomy nurse at any time to discuss any of your sexual concerns. The American Cancer Society also has two books (one for men and one for women) that deal with sexuality in detail. Contact the American Cancer Society for a copy of these books. You can also arrange to see a counselor.

Many women have questions about pregnancy. Your ability to conceive does not change and pregnancy and delivery should be normal. Just as pregnant women empty their bladders more often, you will need to empty your pouch more often because the baby's growth decreases the capacity. Catheterizations can be more difficult when pregnant, but after delivery, should return to normal. If you are thinking about becoming pregnant, talk to your doctor first.

For some women, extensive malignancy may require the removal of the bladder and the female sexual organs. In these cases, intercourse may initially be uncomfortable due to decreased vaginal lubrication and possibly a shorter vagina. A water-soluble lubricant should be helpful. If necessary, your doctor may prescribe dilators.

Men may have problems with erections after their bladder removal. The surgical technique that spares nerves being offered by many physicians may help prevent this. Still, there are a number of factors, both physical and psychological, that can contribute to a problem with erections. It is important to give yourself plenty of time, even up to a year, to recuperate from your surgery before coming to any decisions about a permanent erection problem. Even if you cannot maintain an erection, you may still experience an orgasm with or without ejaculation. If traditional penile-vaginal penetration is not

possible, you and your partner may want to experiment with variations to achieve sexual enjoyment and satisfaction. There are many options available to you if a problem does exist. These options, such as oral medications, penile injections, or penile implants may even improve your sex life.

We encourage you to ask any questions about your particular lifestyle that may not have been answered in this section.

WHEN TO CALL THE DOCTOR:

If you experience one or more of the following symptoms, call your surgeon or primary care physician.

- Little or no urine drains through the catheter and irrigation does not open the flow of urine.
- The saline will not drain from the pouch when it is irrigated.
- Unusual drainage from ANY site.
- Irritation of the skin around the stoma, or bleeding from the stoma (more than the expected flecks of blood on the cloth).
- Leakage from the stoma.
- Temperature higher than 101degrees F.
- Vomiting with or without nausea
- Unusual pain in your abdomen, back or kidney areas.
- Blood in the urine.
- Urine that is foul-smelling or cloudy (NOT just pieces of mucus).

If you cannot contact your usual surgeon or primary care physician call the nurse who usually works with you concerning your ostomy. Or you may also call the ostomy nurse at the University of Colorado Hospital (303-372-8964) during working hours. If it is after working hours, and you are unable to reach your doctor or an ostomy nurse, please use the closest urgent care center or emergency room.

Resources

- United Ostomy of America Association: www.UOAA.org
- Wound, Ostomy and Continence Nurses Society: www.wocn.org
- American Cancer Society: www.cancer.org
- Medic Alert Foundation
PO Box 1009
Turlock, California 95381-1009
1-800-ID-ALERT (432-5378)
- National Association for Continence
PO Box 8310
Spartanburg, SC 29305
1-800-252-3337

- American Foundation for Urological Disease
300 W. Pratt St., Suite 401
Baltimore, MD 21201
1-800-242-2383

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Other references used include:

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