



Radical Prostatectomy Patient Pathway



SCHOOL OF MEDICINE
Urology

UNC Urology Medical Center Office

NC Memorial Hospital, 2nd Floor
101 Manning Drive
Chapel Hill, NC

Important numbers:

PreCare Urology Clinic

Urology Clinic

Urology Oncology

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BEFORE SURGERY: PRE-ADMISSION

Your goals are to:

- Understand how prostate cancer has affected your body.
- Learn about the proposed surgery and understand the risks involved.
- Discuss any necessary tests and treatments prior to your surgery.
- Obtain bowel prep instructions (if required by your physician).
- Address any concerns you have about the surgery.
- Learn about the pain management methods following the surgery.
- Learn how to do Pelvic Floor Exercises (Kegels) and regularly practice them before your surgery.

What to do before surgery:

- Attend all your preadmission appointments.
- Review all of the material in this booklet.
- Plan your transportation arrangements.
- Review bowel prep instructions (if required) and obtain the supplies.
- Call the nurse at your physician's office if you have any questions.

At your appointments:

- Your Urologists will discuss the procedure(s) in detail.
- Urology Residents will perform a preop evaluation, physical examination, and cover a lot of paperwork for you to sign including the "Informed Consent Form."

Tests:

Tests will be ordered by the Urology Resident during the preop phase and will be performed at the PreCare appointment(s). Tests could include: blood tests, chest x-ray, EKG, or others.

****Other tests could be necessary based on your medical condition****

Medicines:

Continue to take all of your regular prescription medicines up to the night of your surgery.

- Be sure to stop all blood thinning medications 10 days prior to surgery unless otherwise instructed. These include:
 - Aspirin
 - Coumadin
 - Plavix
 - Naprosyn
 - Alka-Seltzer
 - BC/Goody's powder
 - Aleve
 - Ibuprofen
 - Advil
- Stop all supplemental or alternative medicines 2 weeks prior to surgery.
- All other medications should be taken even the morning of the surgery with a sip of water.

Diet:

Between now and the time you come into the hospital it is important to eat a healthy diet that includes lots of fruits and vegetables that are low in fat.

- Do not eat or drink anything after midnight the night before surgery unless instructed otherwise.
- Follow the preoperative instructions given to you.

Smoking:

If you smoke, it is very important to cut down, or even better, quit before you come to the hospital for surgery. Smokers have an increased risk of complications and can have prolonged recovery time after surgery.

Activity:

- Practice the Pelvic Floor Exercises (Kegels) everyday
- If you don't already, add a daily walking routine and continue it all the way up to your surgery, including the day before.

Discharge Planning:

Having an established plan for after your surgery is important. A social worker is available to speak with you if you have concerns about self-care needs after you leave the hospital and a financial counselor is available to assist you with questions about hospital bills and insurance coverage.

PRE-OPERATIVE PREPARATION

Diet and Bowel Preparation:

- Do not eat or drink anything after midnight the night before surgery unless instructed otherwise.
- Take a Fleets enema (if required) the evening prior to surgery. You may be given another Fleets enema at the hospital the day of the surgery.
- Other _____

Medication Instructions:

Avoid the use of prescription or non-prescription drugs containing blood thinners 10 days prior to surgery. This includes, but is not limited to:

- | | | |
|------------|---------------------|-------------|
| ▪ Aspirin | ▪ Naprosyn | ▪ Aleve |
| ▪ Coumadin | ▪ Alka-Seltzer | ▪ Ibuprofen |
| ▪ Plavix | ▪ BC/Goody's powder | ▪ Advil |

If you are taking Coumadin, Plavix, or Lovenox, discuss these with your doctor.

Follow instructions from your doctor or nurse regarding the use of all other medications prior to surgery.

Other _____

General Instructions:

- During the preoperative workup in PreCare, you will receive a chest x-ray, EKG, and any blood work that was ordered by your doctors.
 - Follow any specific instructions from the nurses to "get you ready" for the day of surgery.
 - Other _____
-

****You will receive a phone call from PreCare the afternoon before surgery with your specific arrival time.****

THE DAY OF SURGERY

Goals:

- Arrive the day of the surgery able to describe your diagnosis and the planned surgery.
- Know your medication allergies (you will be asked frequently).
- Meet with the Anesthesiologist to understand the anesthesia plan.
- Update the nurses about your pain levels after surgery.
- Get out of bed and walk a short distance in the evening.

Who are the caregivers:

During your hospitalization, you will be taking care of by multiple medical professionals including:

- Intake staff and nurses
- Operating room nurses
- Recovery room nurses
- Nurses and medical assistants on the hospital floor
- Urologists, including urology residents
- Anesthesiologists (the doctors who will put you to sleep for surgery)
- Possibly medical students

Treatment – What to expect:

- Your vital signs will be taken frequently, which includes your temperature, pulse, blood pressure, and respiratory rate.
- A catheter will be inserted in your bladder while you are unconscious, and you will awake with this tube draining urine through your penis to a bag after the surgery.
- After its removal, a pelvic drain will be placed in the area of your prostate and exit through a small hole in your lower abdomen to a little suction ball. This will be emptied multiple times and the output will be measured. Occasionally, patients will go home with this in place and if this occurs, you will be taught how to care for it.
- You will have frequent physical examinations from nurses and doctors.
- You will have at least one IV needle in your arm providing fluids and medications through a small tube. This is usually removed just before you go home.
- You may require supplemental oxygen through a little tube that runs underneath your nose.
- You will be taught to use an incentive spirometer (breathing device) to keep your lungs working well.

Medicines:

- Pain medications are available as issued by your medical team. Be sure to advise them of your comfort level after your surgery.
- Antibiotics will be given through your IV to prevent infection and your regular medications will be provided to you. Please do not use your medications from home unless instructed to do so.

Diet:

- Do not eat or drink anything after midnight the night before surgery unless instructed otherwise.
- If you need to take medication take it with only a small sip of water.
- After surgery, you will be given clear liquids, ice chips, or water.
- Most patients will get regular food the morning following surgery.

Activity:

- The evening after your surgery, you will need to get out of bed and walk around a little bit.
- This is extremely important to help with circulation and lung inflation.

****Ask your nurse to help you when you get up the first time.****

Education:

The first day you are in the hospital your nurses and the urology team will teach you:

- How to use the incentive spirometer (breathing device)
- How to use the bed controls
- How to call for a nurse
- About your follow-up care

FIRST DAY AFTER SURGERY

Goals:

- Explain and demonstrate the at-home plans and treatments you will follow
- Help with the care of your incisions and your catheter
- Be able to tell the difference between bladder spasms and pain from your surgery
- Walk the hall at least 5 times, more if you're able
- Continue to use the breathing device
- Address any concerns you have about your recovery plan
- Drink plenty of fluids and eat your breakfast
- Pass gas and perhaps have a bowel movement before you leave the hospital
- Take control of the care for the catheter

****Most patients are well enough to go home in the afternoon of the first day after surgery.****

Who are the caregivers:

- Nurses and medical assistants on the hospital floor
- Urologists, including urology residents
- Possibly medical students

Tests:

- You may have your blood drawn for testing

Treatments:

- Your vital signs will be checked regularly
- Your belly will be examined periodically to check the incision, the drain, the catheter, and to ask if you have passed gas
- Your IV will remain in until right before you are discharged
- Continued use of the incentive spirometer (breathing device)

Medicines:

- Pain medicine as needed for your comfort
- Stool softener
- Toradol or Celebrex

Diet:

At first, you will only be allowed to consume clear liquids and most patients progress to a regular diet by the next morning.

Activity:

You will be assisted to walk in the halls at least 5 times, walking a longer distance each time.

Discharge Plan:

The nurses will help address any of your needs and follow your doctor's plan for discharge. As part of this:

- The nurses will educate you about your home care
- The nurses will order supplies for you
- The nurses will make appointments for your follow-up visits

Education:

You will be taught about:

- The continued use of the incentive spirometer (breathing device)
- Controlling your pain after surgery
- Pelvic Muscle Exercises (Page 17)
- Catheter care and the use of a leg bag
- The medicines you will take home
- Incision site care
- Signs and symptoms of infection
- Reasons you might need to call your doctor

- Boundaries for your activities at home

****You may need to stay in the hospital for a second day depending on your condition.****

RETURNING HOME AFTER RADICAL RETROPUBIC PROSTATECTOMY

When you are ready to leave the hospital, there are several things to keep in mind to continue your recovery at home:

Bathing:

You can shower but you cannot take a bath until after your catheter has been removed. When showering, bring your catheter drainage bag in with you, and do not use soap on or scrub your incisions. Simply let the water run over those parts of your body. When finished, pat the incisions dry with a towel.

Activity:

- You are encouraged to go for walks as soon as you return home and you may use any stairs. It is best to start slowly with your walks and gradually increase the distance as you recover.
- During the first weeks, you may feel better if you partially recline on a sofa, in a recliner, or in a chair with a footstool. Sitting with your feet up limits the strain on your incisions and will help your legs to drain any fluids, which reduces the possibility of clots. To further help with this, before you leave the hospital, you will be given elastic stockings. We recommend that you continue wearing them at home until your activity has returned to normal.
- You should not do any heavy lifting (more than 10 pounds, e.g. a gallon of milk) for at least 3 weeks after your surgery.
- You should not drive for the first few weeks after surgery. We will help you determine when you can resume driving based on if you're catheter is in place, you're experiencing incisional discomfort, you're taking narcotics, or you're concerned about leaking urine preventing you from reacting quickly.

Your Bladder Catheter:

We recommend that you keep the large drainage bag connected to your catheter the majority of the time. Use the leg bag only if you plan to go out of the house.

You may occasionally feel the urge to urinate while the catheter is in place, this is a bladder spasm. Bladder spasms may cause a small amount of blood or urine to leak around the catheter. This may also occur when you strain during a bowel movement. You shouldn't worry about this as long as the urine keeps flowing freely through the tubing. You will be able to prevent bladder spasms by keeping the urine bag below the level of your bladder so that the tubing doesn't get kinked, allowing urine to drain properly. Refer to page 20 "How to Care for Your Catheter" for more information.

From time-to-time, your urine may be blood-tinged, especially after walking or straining to move your bowels. While this is not normal when the catheter is in place, it is not a cause for concern as long as it is not an excessive amount.

Some men have reported discomfort at the tip of the penis when the catheter is in place. It is important that the catheter is taped to the thigh to minimize movement of the catheter and prevent pulling. You may find it more comfortable to apply bacitracin ointment, Vaseline, or Neosporin around the catheter at the tip of your penis.

The nurses will teach you exercises to strengthen the muscles that allow you to hold urine in your bladder until you are ready to urinate. You should begin these exercises when you still have the catheter in place.

You will return to the clinic 7-14 days after surgery to have your catheter removed. 2 or 3 days before your catheter is removed, you will start taking an antibiotic. To remove your catheter, the nurse will put about a cupful of fluid in your bladder then deflating the balloon holding the catheter in place through a port on the outside portion of the catheter, allowing the catheter to slip out. Once removed, you will be asked to urinate the fluid to observe the force and urinary control of your stream. We will let you know if you should continue the use of the antibiotic.

It usually takes time to regain urinary control. The nurse will provide you with disposable protection to wear after your catheter is removed and give you an information packet on where to buy these products. This packet will also discuss realistic expectations regarding urinary control and how we will be following your progress. Do not use an incontinence device, such as a clamp or a condom catheter attached to a bag, without asking us. Use of these devices will slow your development of the necessary muscle strength to control your urine.

Urinary control is typically regained in three phases:

Phase 1 – You are dry when lying down at night

Phase 2 – You are dry while sitting down

Phase 3 – You are dry when rising from a sitting and with activity

Diet:

It is important that you continue to drink plenty of fluids, as concentrated urine is more irritating to the bladder. Avoid alcohol and excessive amounts of caffeine (for example: soda, coffee, cocoa, tea) as these are also irritating to the bladder and make it harder for you to control your urine.

You may eat and drink whatever you like after you return home. Some men have mild stomach cramps or other digestive problems after the anesthesia. If you have a problem, you may want to avoid milk products as these are harder to digest. It may take several days before your normal bowel movements return. If you develop diarrhea, call us as we may need to evaluate this further.

It is important to avoid constipation. We will give you a prescription for a stool softener that you may need to take until your activity and diet are back to normal. If you become constipated, you can take Milk of Magnesia. Do not use suppositories or enemas as these could cause injury to your rectal wall.

Swollen Testicles:

During your surgery, sometimes the lymph nodes that are removed are the ones that drain the groin, scrotum, and penis. These areas may be swollen or bruised for a week or two after surgery. This usually corrects itself as the body develops other ways to drain the fluid. You will find it will be more comfortable if you support your genitals by putting a towel underneath them when you sit or lie down.

Sexual Activity:

The return of sexual function depends on your age and the size of your tumor. Erections may return gradually and improve month-by-month. Of those men who have a return of function, most do so within the first year, but it may take longer.

It is important to be patient and not to wait for the "perfect erection" before attempting intercourse. Trying to have intercourse even with a partial erection will encourage erection improvement. During the first year after surgery, touch is the major stimulus for arousal so don't be afraid to experiment with sexual activity.

You should be able to have an orgasm even if you are unable to have an erection. However, you will not ejaculate any fluid because your prostate and seminal vesicles have been removed by the surgery.

Remember – Be patient! We will ask you about your progress when we see you for follow up. While you continue to recover, there are options that will help you resume a satisfying sex life that we can discuss with you.

Early results of the research show that taking one of the erectile dysfunction pills can help patients return to sexual activity sooner. Your doctor may prescribe a PDE5 inhibitor such as Viagra, Cialis, or Levitra for this reason. The goal of taking a PDE5 inhibitor is not to have sexual intercourse, but to help keep blood flowing to the penis while you recover from surgery. These medications sometimes cause side effects such as a headache, facial flushing, blue-tinged vision, and muscle aches. If you have any side effects from the medicine, call the Urology clinic at (984) 974-1316.

When to Call the Doctor:

- If you notice signs of infection, such as swelling or redness around your incision.
- If you have a fever (temperature above 101°F) or chills.
- If your catheter becomes clogged and urine no longer drains freely.
- If bleeding persists or becomes worse.
- If you have difficulty urinating after your catheter is removed.

- If you have any new sources of discomfort, for example, sore, swollen legs, or shortness of breath.

Call the Urology department anytime (24 hours a day) at (984) 974-1000 and ask for the urology resident on call.

Follow Up:

After you have had your first follow up visit, we will see you at 3 months, 6 months, 9 months, and annually thereafter. As part of these visits, you will have a blood test to measure your Prostate Specific Antigen (PSA). After removal of the prostate, we expect this to be at an undetectable level because the prostate is gone. If the result isn't undetectable and rises on two separate tests, there's a chance that cancer has recurred.

Our goal is to help you get back to normal. We will ask you about your urine control and your erectile function to help us monitor your progress.

If you choose to have any follow-up care closer to home, please ask your physician to send us reports of these examinations so we can continue to follow your progress.

PELVIC MUSCLE EXERCISES (Kegel Exercises)

The organs inside the pelvis (lower belly) are supported by the muscles in the area between your legs. For many reasons, these muscles can become weak and no longer support the organs very well. When these muscles get weak, people often will wet themselves when they laugh, cough, sneeze, or lift something heavy. Other people may wet themselves because they cannot hold urine back until they get to the bathroom while others relax these muscles.

Unlike the muscles like those in your arms and legs, the pelvic muscles are hidden and cannot be seen or felt easily. It can take some practice to accurately control and strengthen them. The directions found in the "Pelvic Floor Muscle Exercises for Men" booklet will teach you how to find and make these muscles strong, allowing you to regain your better control.

It is important to remember, that just like any other kind of exercise program, you must keep up these exercises to keep your pelvic floor muscles strong. Pelvic floor Physical Therapy (PT) can also be an option to assist with recovery of continence.

DAILY BLADDER DIARY

Keep a diary to keep track of bladder accidents AND to show the progress you are making as you learn to control your bladder.

Sample Diary:

Date:	Time:	Small Accidents	Large Accidents	Reason (e.g.: coughed, couldn't get to the bathroom)

CARING FOR YOUR INDWELLING CATHETER AT HOME

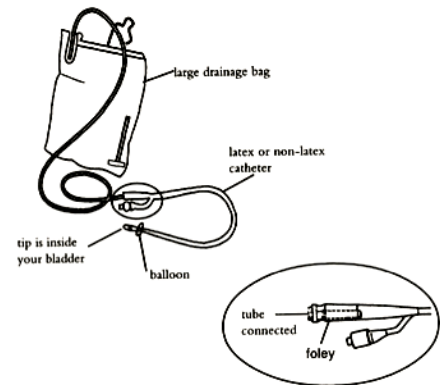
Your doctor will send you home with an indwelling catheter. This latex or non-latex tube permits continuous urine drainage, so you will not have to use a bedpan or the toilet. There is a balloon on one end of the tube that holds it inside your bladder. Your catheter is connected to a drainage tube that leads to the drainage bag. During the day, you may use a leg bag that is strapped to your thigh.

What is a Foley Catheter?

A Foley catheter is a thin, flexible tube that continuously drains urine from your bladder.

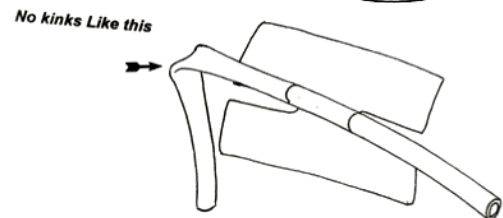
There are three important things to remember about the care of your catheter at home:

- Always keep the drainage bag and tubing LOWER than your bladder. If you don't your urine cannot drain into the bag.
- Your catheter must be kept taped to the skin to keep it from pulling and hurting the inside of your bladder.
- The catheter and its tubing must not be "kinked" or bent or twisted in any way. Any of these problems will keep the urine from draining from the bladder which could cause the urine to leak around the catheter and make you wet.



Daily Care for Your Skin and Catheter:

- Wash the area around the catheter and the catheter tube twice a day with soap and water.
- Check for any irritation or soreness at the insertion site of the catheter.
- If you are not circumcised, pull your foreskin back over the tip of the penis after washing.



How Often Will I Need to Empty the Drainage Bag?

Usually every 8 hours for the large drainage bag. If using a leg bag, it will be every 2-3 hours.

- Wash your hands thoroughly before and after your catheter care.
- To empty the bag, unclamp the drain tube and remove it from its sleeve.

- Do not touch the tip of the drain tube.
- Let the urine drain into the toilet or measure container.
- Swab the end of the drain tube with alcohol swabs, or soap and water, and replace the stopper.
- Re-clamp and insert the drain tube into its sleeve.

****If any connections touch the toilet or container, wash with soap and water or alcohol swabs, and re-connect.****

Bathing:

You can shower but you cannot take a bath until after your catheter has been removed. When showering, bring your catheter drainage bag in with you, and do not use soap on or scrub your incisions. Simply let the water run over those parts of your body. When finished, pat the incisions dry with a towel.

You should dry the tape carefully with a towel. If you have a hair dryer blow COOL air on the tape to help it dry. Change the tape if it is not sticking well.

Are You Having Any Problems?

For example: Leaking urine around the catheter, pain and/or fullness in your bladder, blood in the urine, no urine drainage, passing clots, or sediment. All problems should be told to your health care provider, but the above items should be reported immediately.

****Never pull on the catheter or try to remove it yourself (unless instructed to do so) because of the potential injury to the urethra from the balloon.****

Attaching Leg Bag with Extension Tubing:

The leg bag is smaller and straps to your leg BELOW THE KNEE. It is to be used ONLY when you are out of bed, sitting, or walking around. You will need to empty your leg bag every 2-3 hours because it is smaller than the closed drainage bag you wear at night.

- Wash your hands thoroughly before and after your catheter care.
- Remove the bag, straps, and tubing from the package.
- Hold the leg bag to your leg below the knee with the drain at the bottom.
- Run each strap around your leg and place the hooks over the "buttons" on the top and bottom of the bag.
- Adjust the straps so the bag will not slip – BUT NOT TOO TIGHT.
- Unhook your catheter from the beside bag and plug in the tubing.
- Stand up straight so someone can see if the tubing needs to be made shorter to fit the top of the leg bag. If it is too long, cut off the extra tubing while you are standing straight.
- Attach tubing to the leg bag. Now you can wash your hands and get dressed.
- Empty the bag by removing the stopper and drain all urine. Remember to hold the bag upright. (If requested, empty into a measuring container and record the amount.)

- Swab the end of the drain tube with alcohol swabs or soap and water and replace the stopper.
- Make sure the bag is securely attached to your leg, but not too tight. (If the bag is too tight skin irritation and decreased circulation could result. If circulation is decreased, you may notice that your leg is becoming discolored.)

Before Going to Bed, Replace the Leg Bag with a Large Drainage Bag. To Replace Your Leg Bag:

- First empty the bag completely.
- Clamp catheter.
- Clean the area where the catheter and leg bag tube join with alcohol to remove as many bacteria as possible.
- Disconnect the catheter and the leg bag tube by gently twisting each tube in the opposite direction. Be careful not to pull on the catheter.
- Connect the catheter to the large bag tube you will be using at night time.
- Unclamp the catheter.
- Tape the drainage tube to the front of your thigh on the side next to the hanging drainage bag. Use Cath-Secure tube holder.

****Leave enough slack in the tubing so it does not pull when you move your leg. When you get into bed arrange the tubing, so it is not kinked or looped so there is a "downhill" flow of urine. Make sure that collecting bags always remain below the level of the bladder.****

Cleaning the Leg Bag and the Large Drainage Bag:

Every night after disconnecting the leg bag:

- Wash it with soap and water then rinse (1/4 teaspoon liquid soap added to a pitcher of warm water).
- Fill the bag with vinegar and water mix (mix 1 ¼ cups vinegar to 2 quarts of water).
- Rinse the bag with the solution to reduce the urine smell and to control bacterial growth.
- Drain the mixture, rinse the bag, and hang the bag in a clean place with the drain open until you are ready to use it.

Preventing Bladder Infection When You Have an Indwelling Catheter:

When you have an indwelling catheter, your risk of developing a bladder infection increases. It is important for you to report any of the following warning signs of infection to your healthcare provider immediately.

- Fever above 101°F
- Cloudy urine
- Discharge around the catheter
- Pain in the suprapubic (bladder) area

You may not always be able to prevent infection, but here are some things to do which help reduce the risk of getting an infection:

- Drink at least 5 to 6 glasses of water every day to flush bacteria from the urinary tract.
- Vitamin C acidifies the urine, which helps decrease bacterial growth. Drink 1 or 2 glasses per day of either Orange, grapefruit, or cranberry juice.
- Take the medicine prescribed by your doctor.
- Wash the area around the catheter and the catheter tube twice a day with soap and water.
- Fill the drainage bag with the vinegar and water mixture. Rinse the bag and tubing with the vinegar and water mixture once a day.
- Empty your leg bag and least every 2-3 hours. Empty your large drainage bag at least every 8 hours.
- Keep your drainage bag below the level of your bladder.
- Contact your health care provider if you have urine leaking around the catheter, pain and/or fullness in your bladder, or blood in the urine.
- Never pull on the catheter.
- Never try to remove the catheter yourself unless you have been given instructions about how to do it.
- Keep your follow-up appointments with your health care provider.

What to do if you think the catheter is blocked?

If you suspect that your catheter is blocked because you have been drinking plenty of fluid and urine has not flowed for the last two hours:

- Check to see if the tubing is straight and not kinked.
- Change position. If the catheter is lying against the bladder wall, urine will not flow.
- Try lowering the large drainage bag or the leg bag.

Do not remove the catheter yourself! Contact your healthcare provider, Urology Clinic at (984) 974-1316 or, if after hours, call UNC Hospitals operator at (984) 974-1000 and ask for the urology resident on call.

HOW CAN YOU HELP SUPPORT UNC UROLOGY?

Your generous support of urology research and technological advances is much needed and greatly appreciated. Clinical and basic science research leads to ongoing improvements in our understanding and treatment of urologic diseases and has allowed the UNC Urology Department to become one of the premier urology programs in the nation.

Contributions made to The Medical Foundation of North Carolina, Inc. are tax deductible.

Their Tax ID number: 56-6057494

If you would like to support the ongoing research and program development at the UNC Urology Department, please help by sending in a contribution made payable to:

The Medical Foundation of North Carolina, Inc.
PO Box 1050
Chapel Hill, NC 27514-9981

Check Memo: Department of Urology | UNC School of Medicine

Should you have any questions or would like to discuss your support, please contact:

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