

## PROSTATECTOMY

Many men older than age 75 have small, slow-growing prostate tumors that cause little harm. However, surgical resection of the portion of the prostate gland encroaching on the urethra may be required to improve urinary flow and relieve acute urinary retention regardless of the patient's age. *Note:* Laser prostatectomy is being done in routine practice; however, published data relative to the efficacy of the procedure are currently insufficient for long-term outcomes.

***Transurethral resection of the prostate (TURP):*** Obstructive prostatic tissue of the medial lobe surrounding the urethra is removed by means of a cystoscope/resectoscope introduced through the urethra.

***Suprapubic/open prostatectomy:*** Indicated for masses exceeding 60 g (2 oz). Obstructing prostatic tissue is removed through a low midline incision made through the bladder. This approach is preferred if bladder stones are present.

***Retropubic prostatectomy:*** Hypertrophied prostatic tissue mass (located high in the pelvic region) is removed through a low abdominal incision without opening the bladder. This approach may be used if the tumor is limited.

***Perineal prostatectomy:*** Large prostatic masses low in the pelvic area are removed through an incision between the scrotum and the rectum. This more radical procedure is done for larger tumors/presence of nerve invasion and may result in impotence.

### CARE SETTING

Inpatient acute surgical unit.

### RELATED CONCERNS

Cancer

Psychosocial aspects of care

Surgical intervention

## Patient Assessment Database

Refer to CP: Benign Prostatic Hyperplasia (BPH), p. 000, for assessment information.  
**Discharge plan considerations:** DRG projected mean length of inpatient stay: 3.3–7.1 days

Refer to section at end of plan for postdischarge considerations.

### NURSING PRIORITIES

1. Maintain homeostasis/hemodynamic stability.
2. Promote comfort.
3. Prevent complications.
4. Provide information about surgical procedure/prognosis, treatment, and rehabilitation needs.

### DISCHARGE GOALS

1. Urinary flow restored/enhanced.
2. Pain relieved/controlled.
3. Complications prevented/minimized.
4. Procedure/prognosis, therapeutic regimen, and rehabilitation needs understood.
5. Plan in place to meet needs after discharge.

**NURSING DIAGNOSIS: Urinary Elimination, impaired**

**May be related to**

Mechanical obstruction: blood clots, edema, trauma, surgical procedure

Pressure and irritation of catheter/balloon

Loss of bladder tone due to preoperative overdistension or continued decompression

**Possibly evidenced by**

Frequency, urgency, hesitancy, dysuria, incontinence, retention

Bladder fullness; suprapubic discomfort

**DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:**

**Urinary Elimination (NOC)**

Void normal amounts without retention.

Demonstrate behaviors to regain bladder/urinary control.

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Urinary Elimination Management (NIC)</b></p> <p><b>Independent</b></p> <p>Assess urine output and catheter/drainage system, especially during bladder irrigation.</p> <p>Assist patient to assume normal position to void, e.g., stand, walk to bathroom at frequent intervals after catheter is removed.</p> <p>Record time, amount of voiding, and size of stream after catheter is removed. Note reports of bladder fullness; inability to void, urgency.</p> <p>Encourage patient to void when urge is noted but not more than every 2–4 hr per protocol.</p> <p>Measure residual volumes via suprapubic catheter, if present, or with Doppler ultrasound.</p> <p>Encourage fluid intake to 3000 mL as tolerated. Limit fluids in the evening, once catheter is removed.</p> <p>Instruct patient in perineal exercises, e.g., tightening buttocks, stopping and starting urine stream.</p> <p>Advise patient that “dribbling” is to be expected after catheter is removed and should resolve as recuperation progresses.</p>	<p>Retention can occur because of edema of the surgical area, blood clots, and bladder spasms.</p> <p>Encourages passage of urine and promotes sense of normality.</p> <p>The catheter is usually removed 2–5 days after surgery, but voiding may continue to be a problem for some time because of urethral edema and loss of bladder tone.</p> <p>Voiding with urge prevents urinary retention. Limiting voids to every 4 hr (if tolerated) increases bladder tone and aids in bladder retraining.</p> <p>Monitors effectiveness of bladder emptying. Residuals more than 50 mL suggest need for continuation of catheter until bladder tone improves.</p> <p>Maintains adequate hydration and renal perfusion for urinary flow. “Scheduling” fluid intake reduces need to void/interrupt sleep during the night.</p> <p>Helps regain bladder/sphincter/urinary control, minimizing incontinence.</p> <p>Information helps patient deal with the problem. Normal functioning may return in 2–3 wk but can take up to 8 mo following perineal approach.</p>

ACTIONS/INTERVENTIONS	RATIONALE
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<p><b>Urinary Elimination Management (NIC)</b></p> <p><b>Collaborative</b></p> <p>Maintain continuous bladder irrigation (CBI), as indicated, in early postoperative period.</p>	<p>Flushes bladder of blood clots and debris to maintain patency of the catheter/urinary flow.</p>
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<p><b>NURSING DIAGNOSIS: Fluid Volume, risk for deficient</b></p> <p><b>Risk factors may include</b></p> <p>Vascular nature of surgical area; difficulty controlling bleeding  Restricted intake preoperatively  Postobstructive diuresis</p> <p><b>Possibly evidenced by</b></p> <p>[Not applicable; presence of signs and symptoms establishes an <i>actual</i> diagnosis.]</p> <p><b>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</b></p> <p><b>Hydration (NOC)</b></p> <p>Maintain adequate hydration as evidenced by stable vital signs, palpable peripheral pulses, good capillary refill, moist mucous membranes, and appropriate urinary output.</p> <p>Display no active bleeding.</p>
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<p><b>ACTIONS/INTERVENTIONS</b></p> <p><b>Fluid Management (NIC)</b></p> <p><b>Independent</b></p> <p>Monitor I&amp;O.</p> <p>Monitor vital signs, noting increased pulse and respiration, decreased BP, diaphoresis, pallor, delayed capillary refill, and dry mucous membranes.</p> <p>Investigate restlessness, confusion, changes in behavior.</p> <p>Encourage fluid intake to 3000 mL/day unless contraindicated.</p>	<p><b>RATIONALE</b></p> <p>Indicator of fluid balance and replacement needs. With bladder irrigations, monitoring is essential for estimating blood loss and accurately assessing urine output. <i>Note:</i> Following release of urinary tract obstruction, marked diuresis may occur during initial recovery period.</p> <p>Dehydration/hypovolemia requires prompt intervention to prevent impending shock. <i>Note:</i> Hypertension, bradycardia, nausea/vomiting suggests “TURP syndrome,” requiring immediate medical intervention.</p> <p>May reflect decreased cerebral perfusion (hypovolemia) or indicate cerebral edema from excessive solution absorbed into the venous sinusoids during TUR procedure (TURP syndrome).</p> <p>Flushes kidneys/bladder of bacteria and debris but may result in water intoxication/fluid overload if not monitored closely.</p>
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<p><b>ACTIONS/INTERVENTIONS</b></p> <p><b>Bleeding Reduction (NIC)</b></p>	<p><b>RATIONALE</b></p>
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<p><b>Independent</b></p> <p>Anchor catheter, avoid excessive manipulation.</p> <p>Observe catheter drainage, noting excessive/continued bleeding.</p> <p>Evaluate color, consistency of urine, e.g.: Bright red with bright red clots;</p> <p>Dark burgundy with dark clots, increased viscosity;</p> <p>Bleeding with absence of clots.</p> <p>Inspect dressings/wound drains. Weigh dressings if indicated. Note hematoma formation.</p> <p>Avoid taking rectal temperatures and use of rectal tubes/enemas.</p>	<p>Movement/pulling of catheter may cause bleeding or clot formation and plugging of the catheter, with bladder distension.</p> <p>Bleeding is not unusual during first 24 hr for all but the perineal approach. Continued/heavy bleeding or recurrence of active bleeding requires medical evaluation/intervention.</p> <p>Usually indicates arterial bleeding and requires aggressive therapy.</p> <p>Suggests venous source (the most common type of bleeding), which usually subsides on its own.</p> <p>May indicate blood dyscrasias or systemic clotting problems.</p> <p>Bleeding may be evident or sequestered within tissues of the perineum.</p> <p>May result in referred irritation to prostatic bed and increased pressure on prostatic capsule with risk of bleeding.</p>
<p><b>Collaborative</b></p> <p>Monitor laboratory studies as indicated, e.g.: Hb/Hct, RBCs;</p> <p>Coagulation studies, platelet count.</p> <p>Administer IV therapy/blood products as indicated.</p> <p>Maintain traction on indwelling catheter; tape catheter to inner thigh.</p> <p>Release traction within 4–5 hr. Document period of application and release of traction, if used.</p> <p>Administer stool softeners, laxatives as indicated.</p>	<p>Useful in evaluating blood losses/replacement needs.</p> <p>May indicate developing complications, e.g., depletion of clotting factors, DIC.</p> <p>May need additional fluids, if oral intake inadequate, or blood products, if losses are excessive.</p> <p>Traction on the 30-mL balloon positioned in the prostatic urethral fossa creates pressure on the arterial supply of the prostatic capsule to help prevent/control bleeding.</p> <p>Prolonged traction may cause permanent trauma/problems with urinary control.</p> <p>Prevention of constipation/straining for stool reduces risk of rectal-perineal bleeding.</p>

**NURSING DIAGNOSIS: Infection, risk for**

**Risk factors may include**

Invasive procedures: instrumentation during surgery, catheter, frequent bladder irrigation  
Traumatized tissue, surgical incision (e.g., perineal)

**Possibly evidenced by**

[Not applicable; presence of signs and symptoms establishes an *actual* diagnosis.]

**DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:**

**Infection Status (NOC)**

Experience no signs of infection.

**Wound Healing: Primary Intention (NOC)**

Achieve timely healing.

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Infection Protection (NIC)</b></p> <p><b>Independent</b></p> <p>Maintain sterile catheter system; provide regular catheter/meatal care with soap and water, applying antibiotic ointment around catheter site.</p> <p>Ambulate with drainage bag dependent.</p> <p>Monitor vital signs, noting low-grade fever, chills, rapid pulse and respiration, restlessness, irritability, disorientation.</p> <p>Observe drainage from wounds, around suprapubic catheter.</p> <p>Change dressings frequently (suprapubic/retropubic and perineal incisions), cleaning and drying skin thoroughly each time.</p> <p>Use ostomy-type skin barriers.</p> <p><b>Collaborative</b></p> <p>Administer antibiotics as indicated.</p>	<p>Prevents introduction of bacteria and resultant infection/sepsis.</p> <p>Avoids backward reflux of urine, which may introduce bacteria into the bladder.</p> <p>Patient who has had cystoscopy and/or TURP is at increased risk for surgical/septic shock related to manipulation/instrumentation.</p> <p>Presence of drains, suprapubic incision increases risk of infection, as indicated by erythema, purulent drainage.</p> <p>Wet dressings cause skin irritation and provide media for bacterial growth, increasing risk of wound infection.</p> <p>Provides protection for surrounding skin, preventing excoriation and reducing risk of infection.</p> <p>May be given prophylactically because of increased risk of infection with prostatectomy.</p>

**NURSING DIAGNOSIS: Pain, acute**

**May be related to**

Irritation of the bladder mucosa; reflex muscle spasm associated with surgical procedure and/or pressure from bladder balloon (traction)

**Possibly evidenced by**

Reports of painful bladder spasms  
Facial grimacing, guarding, restlessness  
Autonomic responses

**DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:**

**Pain Level (NOC)**

Report pain is relieved/controlled.  
Appear relaxed, sleep/rest appropriately.

**Pain Control (NOC)**

Demonstrate use of relaxation skills and diversional activities as indicated for individual situation.

ACTIONS/INTERVENTIONS	RATIONALE
<b>Pain Management (NIC)</b>	
<b>Independent</b>	
Assess pain, noting location, intensity (0–10 scale).	Sharp, intermittent pain with urge to void/passage of urine around catheter suggests bladder spasms, which tend to be more severe with suprapubic or TUR approaches (usually decrease by the end of 48 hr).
Maintain patency of catheter and drainage system. Keep tubings free of kinks and clots.	Maintaining a properly functioning catheter and drainage system decreases risk of bladder distension/spasm.
Promote intake of up to 3000 mL/day as tolerated.	Decreases irritation by maintaining a constant flow of fluid over the bladder mucosa.
Give patient accurate information about catheter, drainage, and bladder spasms.	Allays anxiety and promotes cooperation with necessary procedures.
Provide comfort measures, e.g., position changes/back rub, Therapeutic Touch, and diversional activities. Encourage use of relaxation techniques, including deep-breathing exercises, visualization, guided imagery.	Reduces muscle tension, refocuses attention, and may enhance coping abilities.
Provide sitz baths or heat lamp if indicated.	Promotes tissue perfusion and resolution of edema, and enhances healing (perineal approach).
<b>Collaborative</b>	
Administer antispasmodics, e.g.: Oxybutynin (Ditropan), flavoxate (Urispas), B & O suppositories;	Relaxes smooth muscle to provide relief of spasms and associated pain.
Propantheline bromide (Pro-Banthine).	Relieves bladder spasms by anticholinergic action. Usually discontinued 24–48 hr before anticipated removal of catheter to promote normal bladder contraction.

**NURSING DIAGNOSIS: Sexual Dysfunction, risk for**

**Risk factors may include**

Situational crisis (incontinence, leakage of urine after catheter removal, involvement of genital area)  
Threat to self-concept/change in health status

**Possibly evidenced by**

[Not applicable; presence of signs and symptoms establishes an *actual* diagnosis.]

**DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:**

**Sexual Functioning (NOC)**

Report understanding of sexual function and alterations that may occur with surgery in individual situation.  
Discuss concerns about possible changes in body image, sexual functioning with partner/SO and caregiver.  
Demonstrate problem-solving skills regarding solutions to problems that occur.

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Sexual Counseling (NIC)</b></p> <p><b>Independent</b></p> <p>Provide openings for patient/SO to talk about concerns of incontinence and sexual functioning.</p> <p>Discuss basic anatomy. Be honest in answers to patient's questions.</p> <p>Give accurate information about expectation of return of sexual function.</p> <p>Discuss retrograde ejaculation if transurethral/suprapubic approach is used.</p> <p>Instruct in perineal and interruption/continuation of urinary stream exercises.</p> <p><b>Collaborative</b></p> <p>Refer to sexual counselor as indicated.</p>	<p>May have anxieties about the effects of surgery and may be hesitant about asking necessary questions. Anxiety may have affected ability to access information given previously.</p> <p>The nerve plexus that controls erection runs posteriorly to the prostate through the capsule. In procedures that do not involve the prostatic capsule, impotence and sterility usually are not consequences. Surgical procedure may not provide a permanent cure, and hypertrophy may recur.</p> <p>Physiological impotence occurs when the perineal nerves are cut during radical procedures; with other approaches, sexual activity can usually be resumed in 6–8 wk. <b>Note:</b> Penile prosthesis may be recommended to facilitate erection and correct impotence following radical perineal procedure. Another option that may restore the ability to have an erection is the use of sildenafil citrate (Viagra).</p> <p>Seminal fluid goes into the bladder and is excreted with the urine. This does not interfere with sexual functioning but will decrease fertility and cause urine to be cloudy.</p> <p>Kegel exercises promote regaining muscular control of urinary continence and sexual function.</p> <p>Persistent/unresolved problems may require professional intervention.</p>

**NURSING DIAGNOSIS: Knowledge, deficient [Learning Need] regarding condition, prognosis, treatment, self-care, and discharge needs**

**May be related to**

Lack of exposure/recall; information misinterpretation  
 Unfamiliarity with information resources

**Possibly evidenced by**

Questions, request for information, statement of misconception  
 Verbalization of the problem  
 Inaccurate follow-through of instruction, development of preventable complications

**DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:**

**Knowledge: Disease Process (NOC)**

Verbalize understanding of surgical procedure and potential complications.

**Knowledge: Treatment Regimen (NOC)**

Verbalize understanding of therapeutic needs.  
 Correctly perform necessary procedures and explain reasons for actions.  
 Initiate necessary lifestyle changes.  
 Participate in therapeutic regimen.

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Teaching: Disease Process (NIC)</b></p> <p><b>Independent</b></p> <p>Review implications of procedure and future expectations.</p> <p>Stress necessity of good nutrition; encourage inclusion of fruits, increased fiber in diet.</p> <p>Discuss initial activity restrictions, e.g., avoidance of heavy lifting, strenuous exercise, prolonged sitting/long automobile trips, climbing more than two flights of stairs at a time.</p> <p>Encourage continuation of perineal exercises.</p> <p>Instruct in urinary catheter care if present. Identify source for supplies/support.</p> <p>Instruct patient to avoid tub baths after discharge.</p> <p>Review signs/symptoms requiring medical evaluation, e.g., erythema, purulent drainage from wound sites; changes in character/amount of urine, presence of urgency/frequency; heavy bleeding, fever, or chills.</p> <p>Stress importance of follow-up care, e.g., PSA testing.</p>	<p>Provides knowledge base from which patient can make informed choices.</p> <p>Promotes healing and prevents constipation, reducing risk of postoperative bleeding.</p> <p>Increased abdominal pressure/straining places stress on the bladder and prostate, potentiating risk of bleeding.</p> <p>Facilitates urinary control and alleviation of incontinence.</p> <p>Promotes independence and competent self-care. (Catheter may be in place for 2 wk post discharge.)</p> <p>Decreases the possibility of infection, introduction of bacteria.</p> <p>Prompt intervention may prevent serious complications. <i>Note:</i> Urine may appear cloudy for several weeks until postoperative healing occurs and may appear cloudy after intercourse because of retrograde ejaculation.</p> <p>PSA levels are monitored to assess for residual tumor. Persistent incontinence will require additional evaluation/treatment.</p>

**POTENTIAL CONSIDERATIONS following acute hospitalization (dependent on patient's age, physical condition/presence of complications, personal resources, and life responsibilities)**

In addition to postsurgical concerns:

Urinary Elimination, impaired—loss of bladder tone, possible discharge with catheter in place.

Sexual Dysfunction—leakage of urine; loss of erectile function following radical procedure.