



Indwelling urinary catheter (Foley) care and management, home care

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■ Introduction

An indwelling urinary catheter, also known as a Foley catheter, is a catheter inserted through the urethra, advanced into the bladder, and held in place with a balloon to provide continuous urine drainage to a urine collection bag. An indwelling urinary catheter may be used in home care patients for severe or intractable urine retention (such as that associated with spinal cord injury or progressive neurologic impairment), bladder outlet obstruction (such as that due to strictures or prostate enlargement), comfort care at the end of life, and assistance with healing open sacral or perineal wounds in patients with incontinence.^{[1][2][3]}

Because of the risks associated with indwelling urinary catheter use—including catheter-associated urinary tract infection (CAUTI), urine blockage or leakage, and tissue trauma—an indwelling urinary catheter should be used for bladder drainage only when alternative methods of urine management, such as bladder training, use of an external collection device, and intermittent catheterization, aren't feasible.^{[1][2][3]} Proper care of the indwelling urinary catheter is imperative to help prevent complications.

■ Equipment

- Agency-approved disinfectant
- Blanket or sheet
- Fluid-impermeable pads
- Gloves
- Mild soap and warm water
- Towel
- Urine collection container
- Vital signs monitoring equipment
- Washcloths
- Written educational materials
- Optional: catheter, catheter securement device (strap or adhesive securement device), disinfectant pads, drainage system, gown, labels, laboratory biohazard transport bag, laboratory requisition form, mask with face shield, mask and goggles, protective skin barrier, urine specimen collection supplies

■ Preparation of Equipment

Inspect all equipment and supplies. If a product is expired, is defective, or has compromised integrity, remove it from patient use, label it as expired or defective, and report the expiration or defect as directed by your agency.

■ Implementation

- Review the referral information, plan of care, and prior visit documentation, if available.^[4]
- Verify the practitioner's order.^{[5][6][7][8]}
- Review the patient's medical record for the indication for indwelling urinary catheter use and any past or current complications of use.^[4]
- Gather and prepare the necessary equipment and supplies.
- Introduce yourself and state the purpose of your visit.
- Confirm the patient's identity using at least two patient identifiers.^[9]
- Ask the patient and family (if appropriate) about any recent changes in the patient's health status, including practitioner visits, tests, and changes in medications, diet, fluid intake, or activity level.^[4] Also ask about problems with the indwelling urinary catheter, such as leakage, obstruction, bladder spasms, and signs and symptoms of CAUTI, including fever and chills, suprapubic tenderness, flank pain, and changes in urine color, odor, and clarity.

- Explain the procedure to the patient and family (if appropriate) according to their individual communication and learning needs *to increase their understanding, allay their fears, and enhance cooperation.*^{10|11|12|13}
 - Make sure that you have adequate lighting *to see the urethral meatus, perineum, and indwelling urinary catheter system clearly.*
 - Perform hand hygiene.^{14|15|16|17|18}
 - Organize the equipment and supplies on a clean surface. Place a fluid-impermeable pad between the environment and equipment, if needed.^{14|19}
 - Obtain the patient's vital signs *to identify fever, tachycardia, hypotension, and increased respiratory rate, which may indicate CAUTI.*²
 - Perform hand hygiene.^{14|15|16|17|18}
 - Put on gloves and, as needed, other personal protective equipment *to comply with standard precautions.*^{14|20|21|22|23}
 - Have the patient remove clothing below the waist *to expose the perineum.*
 - Assist the patient to a supine or semirecumbent position.
 - Place a fluid-impermeable pad under the patient's buttocks *to prevent soiling.*
 - Drape the patient with a blanket or sheet, exposing only the perineal area, *to maintain warmth and modesty.*²⁴
 - Inspect the urinary catheter system for disconnections and leakage, *because a continuously closed system is required to reduce the risk of CAUTI.* Replace the catheter and drainage system using sterile no-touch technique when a break in technique, disconnection, leakage, or infection occurs. Routine indwelling urinary catheter and collection bag changes at set intervals aren't recommended.^{1|2|3|25}
 - Assess the urethral meatus and periurethral area for encrustations, urine leakage or other drainage, irritation or erosion, and signs of inflammation and infection, including edema and erythema.²
 - Perform perineal care using mild soap, warm water, and a washcloth, as appropriate. Gently clean the urethral meatus first and then clean the rest of the perineal area from front to back *to avoid contaminating the urinary tract.* For a patient with an uncircumcised penis, gently retract the foreskin *to clean beneath it* and then return the foreskin to its normal position after cleaning *to avoid constriction of the penis, which can cause edema and tissue damage.* Rinse the area carefully and pat it dry with a towel. Avoid aggressively cleaning the meatal area and creating traction on the catheter *because these actions can cause meatal irritation, tissue trauma, and infection.*^{1|2|3}
 - Assess the integrity of the catheter securement device, the surrounding skin and, if a strap is used, the skin under the device. Ensure that the tubing has enough slack *to prevent tension on it, which could injure the urethral lumen and bladder wall.*^{1|2|26|27}
- ◆ **Clinical alert:** Avoid using constricting catheter securement devices, such as thigh straps, in patients with phlebitis, impaired circulation, or diabetes *because of the risk of deep vein thrombosis.*^{2|26} ◆
- As appropriate, change the catheter securement device when clinically indicated and as recommended by the manufacturer. Before placing a new adhesive securement device, clean the skin and apply a protective skin barrier following the manufacturer's instructions. Allow it to dry. Connect the securement device to the catheter before applying the securement device to the patient.^{1|2|26|27}
- ◆ **Clinical alert:** Use adhesives cautiously in patients with fragile skin *because the adhesive can irritate and damage the skin.* As appropriate, use products specially formulated for fragile skin *to prevent skin stripping and tearing during removal.*^{2|28} ◆
- Collect a urine specimen, if clinically indicated and ordered. Label the specimen in the presence of the patient *to prevent mislabeling.*⁹ Complete a laboratory requisition form, noting that the specimen was obtained from an indwelling urinary catheter. Place the specimen in a laboratory biohazard transport bag and send it to the laboratory as soon as possible.²² (See the "[Urine specimen collection from an indwelling urinary catheter \[Foley\], home care](#)" procedure.)
 - Make sure that the catheter and drainage tubing are free of kinks and dependent loops *to prevent obstruction of urine flow.*^{1|2}
 - Ensure that the drainage bag is maintained below the level of the bladder *to prevent backflow of urine into the bladder, which increases the risk of CAUTI.* Don't place the drainage bag on the floor *to reduce the risk of contamination and subsequent CAUTI.* Instead, hook the drainage bag onto the patient's bed or chair or place it on a stand.^{1|2|29}

- Empty the urine drainage bag by removing the drainage spout from the protective sleeve, unclamping it, and draining the bag into a urine collection container. Then reclamp the drainage spout and replace it in the protective sleeve. Prevent the drainage spout from touching the collection container. If the spout accidentally touches the container (or any other object), disinfect it with a disinfectant pad and allow it to dry before replacing it in the protective sleeve.^{1|2}
- Assess the urine volume, color, clarity, and odor.
- Pour the urine in the collection container into the toilet slowly and carefully *to prevent spilling and splashing*. Close the lid and flush the toilet.
- As appropriate, replace the drainage bag when clinically indicated (such as when clouding, a foul odor, or discoloration is present) and as recommended by the manufacturer using no-touch technique. To replace the drainage bag, clamp the catheter, clean the connection between the catheter and the drainage bag tubing with a disinfectant pad, and disconnect the tubing from the catheter. Then clean the tip of the new drainage bag tubing with a disinfectant pad, connect the tubing to the catheter, and unclamp the catheter.^{1|2}
- Assist the patient to a comfortable position and ensure that the patient is covered appropriately.
- Discard used supplies in appropriate receptacles.^{21|22|30|31}
- Remove and discard your gloves and, if worn, other personal protective equipment.²²
- Perform hand hygiene.^{14|15|16|17|18}
- Put on gloves and, as needed, other personal protective equipment *to comply with standard precautions*.^{14|20|21|22|23}
- Clean and disinfect reusable equipment according to the manufacturer's instructions *to prevent the spread of infection*.^{32|33|34}
- Remove and discard your gloves and, if worn, other personal protective equipment.²²
- Perform hand hygiene.^{14|15|16|17|18}
- Provide emotional support to the patient and family *because indwelling urinary catheter use can be distressing and can negatively affect the quality of life*. Encourage them to verbalize their thoughts and feelings. Address their specific concerns, which may include poor self-image, embarrassment, social isolation, and impaired intimacy.^{2|29}
- Review progress toward the goals in the plan of care with the patient and family (if appropriate).^{4|35}
- Make arrangements for the next visit, as appropriate, and ensure that the patient and family have adequate supplies for self-care until then.
- Provide and review written educational materials, the visit schedule, and contact information in case concerns arise between visits.^{36|37|38|39}
- Report changes in the patient's condition and progress toward goals to the practitioner, as appropriate.^{40|41|42|43}
- Coordinate care with other services, such as a wound, ostomy, continence nurse, as appropriate.^{44|45|46|47}
- Document the procedure.^{48|49|50|51}

■ Special Considerations

- Purple urinary bag syndrome is a blue or purple discoloration of the urine, catheter, tubing, and drainage bag that occurs in some patients and is considered a benign condition, unless the patient is symptomatic. It is more common in women and those with chronic debilitation, severe constipation, and asymptomatic urinary tract infection. When dietary tryptophan is metabolized and then exposed to alkaline urine, a blue or purple pigment occurs and is excreted in the urine.²
- Cleaning of the meatal area with an antiseptic solution, routine bladder irrigation, instillation of additives (such as antiseptics or antimicrobial solutions) into the drainage bag, and systemic prophylactic antibiotic therapy aren't recommended.^{1|2|3}
- A catheter drainage valve that fits into the distal end of an indwelling urinary catheter may be used in select circumstances in place of a drainage bag. After allowing the bladder to fill, the patient or a family member opens the valve long enough to empty the bladder, closes the valve, and repeats the process every 3 to 4 hours. Use of a catheter drainage valve more closely mimics normal urinary function and helps maintain bladder capacity and tone. It's contraindicated in patients with severe cognitive impairment, poor manual dexterity, overactive bladder, limited bladder capacity, urinary tract infection, urethral reflux, or renal impairment.^{2|52}

■ Patient Teaching

Instruct the patient and family (if appropriate) to perform hand hygiene when handling the catheter or drainage bag. Teach them to empty the drainage bag when it becomes one-half full *to prevent undue traction on the urethra from the weight of urine in the bag*. Discuss the importance of washing the urethral meatus and perineal area with soap and water as part of routine hygiene and the anal area after each bowel movement *to help prevent infection*. Encourage the patient to maintain adequate fluid intake (30 mL/kg of body weight per day, or about 2,000 mL), unless contraindicated, *to dilute the urine, maintain urine pH, flush the bladder, and help prevent encrustations and blockages*. Advise the patient to avoid artificial sweeteners and caffeine, *which can cause bladder irritation and contribute to dehydration*. As appropriate, teach the patient how to use self-monitoring tools, such as a diary to record intake and output. Also teach the patient about the signs and symptoms of complications, including infection and blockage, to report to the practitioner.^{2]}

If the patient will use a leg bag, provide instructions on how to use it. (See [Teaching about leg bags](#).)

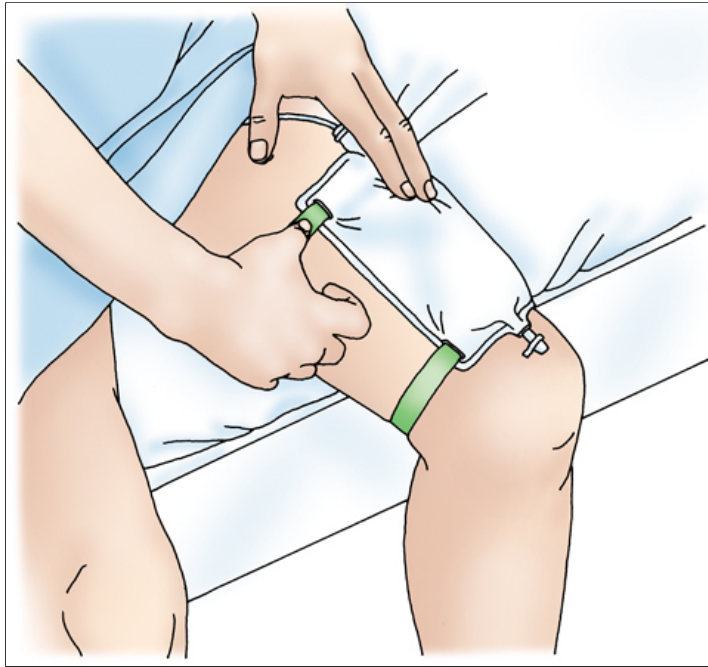


PATIENT TEACHING

TEACHING ABOUT LEG BAGS

Although maintaining a closed urine drainage system is ideal, switching out a standard urine drainage bag to a smaller, more discreet urine drainage bag attached to the leg and hidden under clothes provides a catheterized patient with greater mobility. Because a leg bag is smaller than a standard drainage bag, it needs to be emptied more frequently. Leg bags worn during the day are replaced at night with a standard drainage bag to allow for uninterrupted sleep and prevent urine overflow. In some cases, a standard drainage bag may be connected to the leg bag at night to maintain a closed urine drainage system. Follow these steps to teach the patient how to use a leg bag:

- Explain the procedure to the patient and discuss the advantages and disadvantages.
- Perform hand hygiene and put on gloves. Instruct the patient to perform hand hygiene whenever handling the catheter and urine drainage system.
- Show the patient how to clamp the catheter, clean the connection between the catheter and the standard drainage bag tubing with a disinfectant pad, and disconnect the tubing from the catheter.
- Demonstrate how to remove the protective covering from the tip of the leg bag tubing without touching it, clean the tip of the leg bag tubing with a disinfectant pad by wiping away from the opening, attach the leg bag tubing to the catheter, and unclamp the catheter.
- Place the leg bag on the patient's calf or thigh and teach the patient to secure it with straps (as shown below) or place it in a leg-bag holder. Instruct the patient to avoid fastening the straps of the leg bag too tightly *because doing so can impede circulation*. Emphasize that the patient must leave slack in the catheter tubing *to minimize pressure on the bladder, urethra, and related structures*. *Excessive pressure or tension can lead to tissue breakdown*.



- Although most leg bags have a valve in the drainage tube that prevents urine reflux into the bladder, urge the patient to keep the drainage bag lower than the bladder at all times *because the urine in the bag is a medium for bacterial growth*. Caution the patient not to go to bed or take long naps while wearing the leg bag.
- To prevent a full leg bag from pulling on the catheter and damaging the bladder wall and urethra, encourage the patient to empty the bag when it's one-half full. Also instruct the patient to inspect the catheter and drainage tube periodically for compression and kinking, *which could obstruct urine flow and result in bladder distention*.
- Tell the patient how to clean or dispose of the urine drainage bags according to the manufacturer's instructions. Although many urine drainage bags are intended for single-use only, some may be cleaned with soap and water or a bacteriostatic solution, such as a dilute acetic acid (vinegar) solution or a dilute sodium hypochlorite (bleach) solution, and then allowed to air-dry.^[2]

■ Complications

Complications associated with indwelling urinary catheter and management may include:

- CAUTI
- obstruction
- urine leakage
- catheter-related bladder discomfort
 - pain
 - urgency
 - spasms
- genitourinary irritation
- genitourinary trauma.

■ Documentation

Documentation associated with indwelling urinary catheter care and management includes:

- indication that requires home catheter use
- type of catheter, drainage bag, and securement device
- assessment findings

- vital signs
- signs and symptoms of complications
- urine characteristics
- care provided
- urine specimen collection (if applicable)
 - practitioner's information
 - laboratory's information
 - date and time of specimen delivery to the laboratory
- teaching provided to the patient and family (if appropriate)
 - understanding of that teaching
 - follow-up teaching needed.

This procedure has been co-developed and reviewed by
the National Association for Home Care & Hospice.



■ Related Procedures

- [Indwelling urinary catheter \(Foley\) care and management](#)
- [Indwelling urinary catheter \(Foley\) care and management, pediatric](#)
- [Indwelling urinary catheter \(Foley\) insertion, assigned female at birth, home care](#)
- [Indwelling urinary catheter \(Foley\) insertion, assigned male at birth, home care](#)
- [Indwelling urinary catheter \(Foley\) irrigation, home care](#)
- [Indwelling urinary catheter \(Foley\) removal, home care](#)
- [Indwelling urinary catheter \(Foley\) removal, pediatric](#)
- [Indwelling urinary catheter \(Foley\) urine specimen collection, pediatric](#)
- [Urine specimen collection from an indwelling urinary catheter \(Foley\)](#)
- [Urine specimen collection from an indwelling urinary catheter \(Foley\), home care](#)

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(Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions)

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Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions

The following leveling system is from *Evidence-Based Practice in Nursing and Healthcare: A Guide to Best Practice* (2nd ed.) by Bernadette Mazurek Melnyk and Ellen Fineout-Overholt.

Level I: Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from well-designed RCTs

Level III: Evidence obtained from well-designed controlled trials without randomization

Level IV: Evidence from well-designed case-control and cohort studies

Level V: Evidence from systematic reviews of descriptive and qualitative studies

Level VI: Evidence from single descriptive or qualitative studies

Level VII: Evidence from the opinion of authorities and/or reports of expert committees

Modified from Guyatt, G. & Rennie, D. (2002). Users' Guides to the Medical Literature. Chicago, IL: American Medical Association; Harris, R.P., Hefland, M., Woolf, S.H., Lohr, K.N., Mulrow, C.D., Teutsch, S.M., et al. (2001). Current Methods of the U.S. Preventive Services Task Force: A Review of the Process. American Journal of Preventive Medicine, 20, 21-35.

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