

Bladder irrigation, continuous



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Revised: December 15, 2025

■ Introduction

Continuous bladder irrigation can help prevent urinary tract obstruction after prostate or bladder surgery by flushing out small blood clots.^[1] It can also be used to treat an irritated, inflamed, or infected bladder lining.

Continuous bladder irrigation requires the placement of a triple-lumen indwelling urinary catheter. One lumen controls balloon inflation, a second allows irrigant inflow, and a third allows irrigant outflow.^[2] The continuous flow of irrigation solution through the bladder creates a mild tamponade effect that may help prevent venous hemorrhage. (See [Setup for continuous bladder irrigation](#).) Although a urinary catheter is typically inserted while the patient is in an operating room after prostate or bladder surgery, it may be inserted at the bedside if the patient hasn't undergone surgery.^[3]

Unless otherwise specified by the practitioner, the patient should remain on bed rest throughout continuous bladder irrigation to avoid kinking, dislodging, or pulling on the catheter, which increases the risk of catheter-associated urinary tract infection (CAUTI). To reduce the risk of CAUTI, the urinary catheter should be removed as soon as it's no longer clinically indicated.^{[1][4][5]}

♦ **Hospital-acquired condition alert:** Keep in mind that the Centers for Medicare and Medicaid Services considers CAUTI a hospital-acquired condition *because it can be reasonably prevented using a variety of best practices*. Make sure to follow evidence-based CAUTI prevention practices—such as performing hand hygiene before and after any catheter manipulation; maintaining a sterile, continuously closed drainage system; maintaining unobstructed urine flow; emptying the collection bag regularly; replacing the catheter and drainage system using sterile technique when a break in sterile technique, disconnection, or leakage occurs; and discontinuing the urinary catheter as soon as it's no longer clinically indicated—when caring for a patient with an indwelling urinary catheter *to reduce the risk of CAUTI*.^{[1][4][5][6][7][8]} ♦

■ Equipment

- Catheter securement device
- Disinfectant pad
- Drainage bag and tubing
- Gloves
- Graduated collection container
- IV pole
- Prescribed sterile irrigation solution
- Sterile irrigation solution administration set tubing
- Vital signs monitoring equipment
- Optional: labels, other personal protective equipment

Note: After prostate or bladder surgery, the practitioner usually prescribes normal saline solution for continuous bladder irrigation. Preventing hemorrhage and blockage usually requires large volumes of

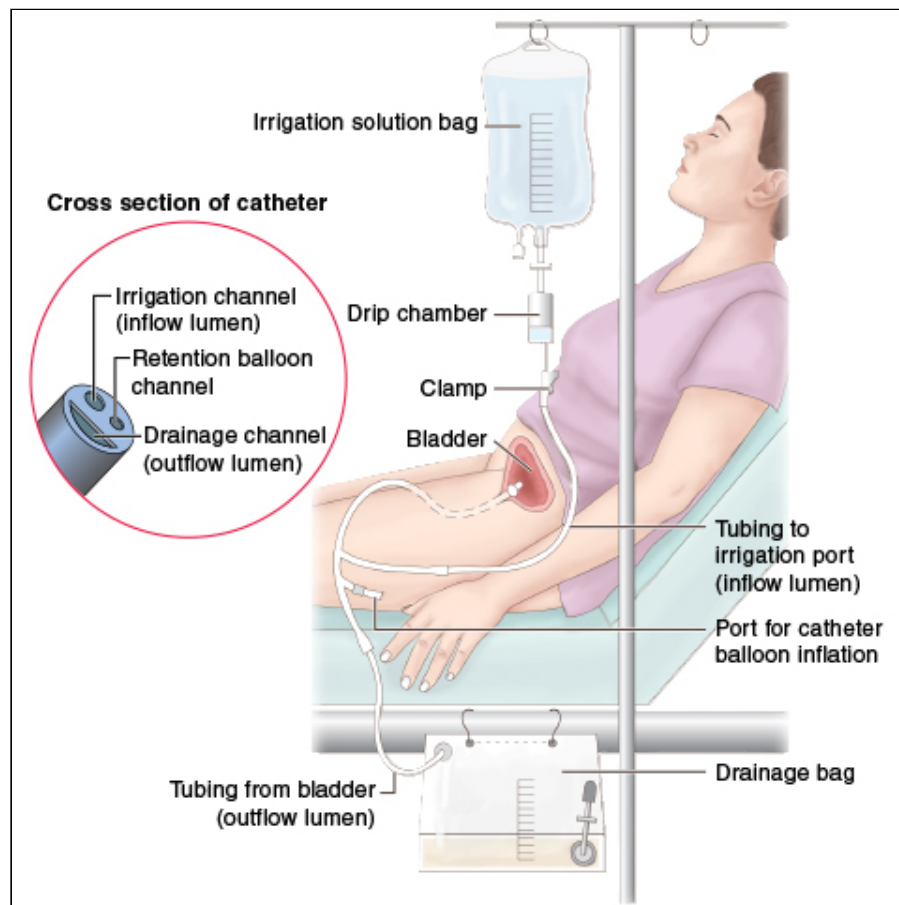
irrigation solution during the first 24 to 48 hours after prostate or bladder surgery. The irrigation solution may also contain an antibiotic.



EQUIPMENT

SETUP FOR CONTINUOUS BLADDER IRRIGATION

In continuous bladder irrigation, the practitioner inserts a triple-lumen indwelling urinary catheter through the patient's urethra and advances it into the bladder (as shown below). The urinary catheter enables irrigation solution to flow into the bladder through one lumen and out through a second lumen (as shown in the inset). The third lumen inflates the balloon that holds the urinary catheter in place in the patient's bladder.



■ 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 facility.

Make sure that the irrigation solution is at room temperature *to prevent bladder spasm*.

■ Implementation

- Avoid distractions and interruptions when preparing and administering the irrigation solution *to prevent administration errors*.^{9 10}

- Verify the practitioner's order. [11](#) [12](#) [13](#) [14](#)
 - Check the patient's medical record for an allergy or a contraindication to the prescribed irrigation solution. If an allergy or a contraindication exists, don't administer the solution and notify the practitioner. [11](#) [12](#) [13](#) [14](#)
 - Gather and prepare the necessary equipment and supplies.
 - Compare the irrigation solution label to the order in the patient's medical record. [11](#) [12](#) [13](#) [14](#)
 - Check the expiration date on the irrigation solution. If the solution is expired, return it and obtain new irrigation solution. [11](#) [12](#) [13](#) [14](#)
 - Visually inspect the irrigation solution for particles, discoloration, or other loss of integrity. Don't administer the solution if integrity is compromised. [11](#) [12](#) [13](#) [14](#)
 - Perform hand hygiene. [15](#) [16](#) [17](#) [18](#) [19](#) [20](#)
 - Confirm the patient's identity using at least two patient identifiers. [21](#)
 - Assemble all equipment at the patient's bedside.
 - Provide privacy. [22](#) [23](#) [24](#) [25](#)
 - 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.* [26](#)
 - If the patient is receiving the irrigation solution for the first time, teach the patient and family (if appropriate) about potential adverse reactions and discuss other concerns related to the solution. [11](#) [12](#) [13](#) [14](#)
 - Hang the bag of irrigation solution on the IV pole. [27](#)
 - Using sterile no-touch technique, insert the spike of the irrigation solution administration set tubing into the irrigation solution bag. If you're using a Y-type tubing, insert the second spike into the second bag of irrigation solution. [27](#)
 - Squeeze the drip chamber on the irrigation solution administration set tubing until it's about one-half full of irrigation solution.
 - Open the flow clamp and prime the tubing *to remove air, which could cause bladder distention.* Then close the flow clamp. If applicable, perform the same priming technique for the second bag and then close the clamp. [27](#)
- ♦ **Clinical alert:** Open one irrigation bag at a time when priming *to prevent the fluid from running up into the other bag.* [27](#) ♦
- Raise the bed to waist level before providing care *to prevent caregiver back strain.* [28](#)
 - Perform hand hygiene. [15](#) [16](#) [17](#) [18](#) [19](#) [20](#)
 - Put on gloves and, as needed, other personal protective equipment *to comply with standard precautions.* [1](#) [27](#) [29](#) [30](#) [31](#)
 - Disinfect the opening to the inflow lumen of the urinary catheter thoroughly with a disinfectant pad and then allow it to dry. [4](#) [6](#) [27](#) 
 - Using sterile no-touch technique, insert the distal end of the irrigation solution administration set tubing securely into the inflow lumen of the urinary catheter. [27](#) 
 - Trace the tubing from the patient to its point of origin *to make sure that you've attached it to the proper port.* [32](#) [33](#) 
 - If there's more than one access site, label the tubing at both the distal (near the patient connection) and proximal (near the source container) ends *to distinguish the different tubings and reduce the risk of misconnections.* [33](#)
 - Secure the urinary catheter with a catheter securement device *to prevent movement and urethral traction, which increase the risk of CAUTI.* [1](#) [4](#) [5](#) [6](#) [27](#) 
 - Ensure that the urinary catheter's outflow lumen is securely attached to the drainage bag tubing *to maintain a closed system, preventing disconnections that increase the risk of CAUTI.* 
 - Open the flow clamp under the bag of irrigation solution and set the drip rate as ordered. 

- *To prevent air from entering the system*, don't allow the irrigation solution bag to empty completely before replacing it.
- Keep the drainage bag below the level of the bladder at all times *to prevent backflow of urine into the bladder, which increases the risk of CAUTI*.^{[1][4][6]} Don't place the drainage bag on the floor.^{[1][4][5]}
- Ensure that the urinary catheter and drainage bag tubing remain free from kinking.^{[4][5]}
- Regularly empty the drainage bag using a graduated collection container.^{[1][4][5]} Use sterile no-touch technique, avoid splashing, and prevent the drainage spigot from contacting the nonsterile collection container *to decrease the risk of contamination*.^{[1][4][5][6]}
- Measure the outflow volume accurately. It should equal or (allowing for urine production) slightly exceed the inflow volume. If the inflow volume exceeds the outflow volume postoperatively, suspect bladder rupture at the suture lines or kidney damage, assess the patient, and notify the practitioner immediately.^[27]
- Assess the outflow drainage for changes in appearance and blood clots, especially if the patient is undergoing postoperative continuous bladder irrigation to control bleeding. If the drainage is bright red, you should infuse the irrigation solution rapidly (with the flow clamp wide open) until the drainage clears (if ordered). Notify the practitioner immediately if you suspect hemorrhage.^[27] If the drainage appears clear, you'll typically administer the irrigation solution at a rate of 40 to 60 drops/minute. The practitioner usually specifies the rate for irrigation solutions containing an antibiotic.
- Monitor vital signs as often as required by the patient's condition, increasing the frequency if the patient becomes unstable.
- Monitor urine output, assess for abdominal pain, and palpate for bladder distention as indicated. Notify the practitioner of abnormal findings.^[27]
- Check the inflow and outflow irrigation solution tubing periodically for kinks *to make sure that the solution is running freely and to prevent obstruction, reducing the risk of CAUTI*.^{[1][4][6]}
- Return the bed to the lowest position *to prevent falls and maintain the patient's safety*.^[34]
- Discard used supplies in appropriate receptacles.^[31]
- Remove and discard your gloves and, if worn, other personal protective equipment.^[31]
- Perform hand hygiene.^{[15][16][17][18][19][20]}
- Document the procedure.^{[35][36][37][38]}

■ Special Considerations

- Don't clean the periurethral area with an antiseptic. Instead, clean the meatal surface during routine hygiene *to reduce the risk of CAUTI*.^{[1][4][5]}
- Encourage oral fluid intake of 2 to 3 L/day, unless contraindicated by another medical condition.
- The Joint Commission issued a sentinel event alert related to managing risk during transition to new International Organization for Standardization tubing standards that were designed to prevent dangerous tubing misconnections, *which can lead to serious patient injury and death*. During the transition, make sure to trace each tubing and catheter from the patient to the point of origin before connecting or reconnecting any device or infusion, at any care transition (such as a new setting or service), and as part of the handoff process; route tubes and catheters having different purposes in different standardized directions; when there are different access sites or several bags hanging, label tubing at both the distal and proximal ends; use tubing and equipment only as intended; and store medications for different delivery routes in separate locations.^[33]

■ Complications

Complications associated with continuous bladder irrigation may include:

- infection
- obstruction in the urinary catheter's outflow lumen

- bladder distention
- bladder spasms
- pain.

■ Documentation

Documentation associated with continuous bladder irrigation includes:

- date, time, and amount of fluid administered in the intake and output record (each time an irrigation solution container empties)
- time and amount of fluid each time you empty the drainage bag
- appearance of the outflow drainage
- complaints expressed
- tolerance of the procedure
- complications
 - name of the practitioner notified
 - date and time of notification
 - prescribed interventions
 - response to those interventions
- teaching provided to the patient and family (if applicable)
 - understanding of that teaching
 - follow-up teaching needed.

This procedure has been reviewed by the Academy of Medical-Surgical Nurses.



■ Related Procedures

- [Bladder irrigation with medicated solution](#)
- [Bladder irrigation, continuous, home care](#)
- [Bladder irrigation, continuous, pediatric](#)
- [Chemotherapy administration, intravesicular \(bladder\)](#)

■ References

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

1. Healthcare Infection Control Practices Advisory Committee. (2010, revised 2019). *Guideline for prevention of catheter-associated urinary tract infections 2009*. Retrieved October 2025 from <https://www.cdc.gov/infection-control/hcp/cauti/index.html> (Level I)
2. Ziegelmann, M., & Logan, C. (2024). *Medical student curriculum: Bladder drainage*. American Urological Association. Retrieved October 2025 from <https://www.auanet.org/meetings-and-education/for-medical-students/medical-students-curriculum/bladder-drainage> (Level VII)
3. Craven, R. F., et al. (2021). *Fundamentals of nursing: Concepts and competencies for practice*. (9th ed.). Wolters Kluwer.
4. Patel, P. K., et al. (2023). Strategies to prevent catheter-associated urinary tract infections in acute-care hospitals: 2022 update. *Infection Control & Hospital Epidemiology*, 44(8), 1209–1231. Retrieved October 2025 from <https://doi.org/10.1017/ice.2023.137> (Level I)
5. Association for Professionals in Infection Control and Epidemiology. (2025). *Guide to preventing catheter-associated urinary tract infections (CAUTI)*. Retrieved October 2025 from https://apic.org/wp-content/uploads/2025/07/2025_CAUTI_Implementation_Guide-2.pdf (Level VII)
6. The Joint Commission. (2025). Standard NPSG.07.06.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
7. Jarrett, N., & Callahan, M. (2016). *Evidence-based guidelines for selected hospital-acquired conditions: Final report*. Retrieved October 2025 from <https://www.cms.gov/Medicare/Medicare-Fee->

[for-Service-Payment/HospitalAcqCond/Downloads/2016-HAC-Report.pdf](#)

8. Agency for Healthcare Research and Quality & U.S. Department of Health and Human Services. (2015). *Toolkit for reducing catheter-associated urinary tract infections in hospital units: Implementation guide*. Retrieved October 2025 from <http://www.ahrq.gov/professionals/quality-patient-safety/hais/cauti-tools/impl-guide/index.html>
9. Westbrook, J. I., et al. (2010). Association of interruptions with an increased risk and severity of medication administration errors. *Archives of Internal Medicine*, 170(8), 683–690. Retrieved October 2025 from <https://doi.org/10.1001/archinternmed.2010.65> (Level IV)
[Abstract](#) | [Complete Reference](#)
10. Institute for Safe Medication Practices. (2012). Side tracks on the safety express: Interruptions lead to errors and unfinished... Wait, what was I doing? *Nurse Advise-ERR*, 11(2), 1–4. Retrieved October 2025 from <https://www.medscape.com/viewarticle/778966>
11. The Joint Commission. (2025). Standard MM.06.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
12. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Nursing services. 42 C.F.R. § 482.23(c).
13. Accreditation Commission for Health Care. (2025). Standard 16.01.03. *Accreditation requirements for acute care hospitals*. (Level VII)
14. DNV GL-Healthcare USA, Inc. (2024). MM.1.SR.3. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)
15. The Joint Commission. (2025). Standard NPSG.07.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
16. Centers for Disease Control and Prevention. (2002). Guidelines for hand hygiene in health-care settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. *MMWR Recommendations and Reports*, 51(RR-16), 1–45. Retrieved October 2025 from <https://www.cdc.gov/mmwr/pdf/rr/rr5116.pdf> (Level VII)
17. World Health Organization (WHO). (2009). *WHO guidelines on hand hygiene in health care: First global patient safety challenge, clean care is safer care*. Retrieved October 2025 from https://iris.who.int/bitstream/handle/10665/44102/9789241597906_eng.pdf?sequence=1 (Level VII)
18. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Infection prevention and control and antibiotic stewardship programs. 42 C.F.R. § 482.42.
19. Accreditation Commission for Health Care. (2025). Standard 07.02.05. *Accreditation requirements for acute care hospitals*. (Level VII)
20. DNV GL-Healthcare USA, Inc. (2024). IC.1.SR.3f. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)
21. The Joint Commission. (2025). Standard NPSG.01.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
22. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Patient's rights. 42 C.F.R. § 482.13(c)(1).
23. The Joint Commission. (2025). Standard RI.01.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
24. Accreditation Commission for Health Care. (2025). Standard 15.01.07. *Accreditation requirements for acute care hospitals*. (Level VII)
25. DNV GL-Healthcare USA, Inc. (2024). PR.2.SR.5. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)
26. The Joint Commission. (2025). Standard PC.02.01.21. *Comprehensive accreditation manual for hospitals*. (Level VII)
27. Agency for Clinical Innovation. (2022). *Bladder irrigation: Management of haematuria* (version 3). Retrieved October 2025 from https://aci.health.nsw.gov.au/_data/assets/pdf_file/0009/497088/ACI-Urology-bladder-irrigation.pdf (Level VII)
28. Waters, T. R., et al. (2009). *Safe patient handling training for schools of nursing*. Retrieved October 2025 from <https://www.cdc.gov/niosh/docs/2009-127/pdfs/2009-127.pdf> (Level VII)

29. Siegel, J. D., et al. (2007, revised 2024). *2007 guideline for isolation precautions: Preventing transmission of infectious agents in healthcare settings*. Retrieved October 2025 from <https://www.cdc.gov/infection-control/media/pdfs/Guideline-Isolation-H.pdf> (Level VII)
30. Accreditation Commission for Health Care. (2025). Standard 07.02.04. *Accreditation requirements for acute care hospitals*. (Level VII)
31. Occupational Safety and Health Administration. (2019). *Bloodborne pathogens, standard number 1910.1030*. Retrieved October 2025 from <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030> (Level VII)
32. U.S. Food and Drug Administration. (2023). *Examples of medical device misconnections*. Retrieved October 2025 from <https://www.fda.gov/medical-devices/medical-device-connectors/examples-medical-device-misconnections>
33. The Joint Commission. (2014). *Sentinel event alert 53: Managing risk during transition to new ISO tubing connector standards*. Retrieved October 2025 from <https://digitalassets.jointcommission.org/api/public/content/df1ada467ed147518c77827f35acd1ea> (Level VII)
34. Ganz, D. A., et al. (2013). *Preventing falls in hospitals: A toolkit for improving quality of care* (AHRQ Publication No. 13-0015-EF). Agency for Healthcare Research and Quality. Retrieved October 2025 from <https://www.ahrq.gov/sites/default/files/publications/files/fallpxtoolkit.pdf> (Level VII)
35. The Joint Commission. (2025). Standard RC.01.03.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
36. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Medical record services. 42 C.F.R. § 482.24(b).
37. Accreditation Commission for Health Care. (2025). Standard 10.00.03. *Accreditation requirements for acute care hospitals*. (Level VII)
38. DNV GL-Healthcare USA, Inc. (2024). MR.2.SR.1. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)

■ Additional References

- Lucas, A., & Ward, C. W. (2022). Manual and continuous bladder irrigation: Best practices. *Nursing*, 52(7), 31–36. Retrieved October 2025 from <https://doi.org/10.1097/01.nurse.0000832324.25954.7b>
- Newman, D. K. (2021). Society of Urologic Nurses and Associates (SUNA) clinical practice procedure: Urinary catheterization of the adult female. *Urologic Nursing*, 41(2), 65–69. Retrieved October 2025 from https://www.suna.org/sites/default/files/download/resources/SUNA_catheterizationFemaleCCP.pdf (Level VII)
- Newman, D. K. (2021). Society of Urologic Nurses and Associates (SUNA) clinical practice procedure: Urinary catheterization of the adult male. *Urologic Nursing*, 41(2), 70–75. Retrieved October 2025 from https://www.suna.org/sites/default/files/download/resources/SUNA_catheterizationMaleCCP.pdf (Level VII)

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

The following leveling system is adapted from *Evidence-Based practice in nursing & healthcare: A guide to best practice*, Fifth edition, by Bernadette Mazurek Melnyk and Ellen Fineout-Overholt (2023).

Level I	Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs)
Level II	Evidence from well-designed single RCTs (experimental)
Level III	Evidence from well-designed nonrandomized controlled trials (quasi-experimental), systematic reviews of a complete body of evidence, and intervention studies using mixed methods
Level IV	Evidence from well-designed case-control and cohort studies (observational)

Level V	Evidence from systematic reviews of qualitative and descriptive studies
Level VI	Evidence from single descriptive and qualitative studies, evidence-based practice implementation, and quality improvement projects
Level VII	Evidence from expert opinion, expert committee reports, and literature reviews

Data from Gyatt, G., & Rennie D. (2002). Users' guides to the medical literature. American Medical Association; Harris, R. P., et al. (2001). Current methods of the U.S. Preventative Services Task Force: A review of the process. American Journal of Preventative Medicine, 20, 21-35.