BLADDER CATHETERIZATION

Indications

Short-term catheterization

- Acute urinary retention
- Collection of uncontaminated urine for specimen
- Diagnostic studies of the lower urinary tract
- Monitor urinary output
- Measure post-void urine
- Irrigation of bladder
- Surgery on urinary tract
- Bladder drainage during surgery
- Neurogenic bladder

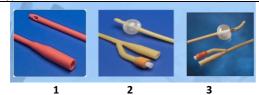
Long-term catheterization

- Chronic urinary retention
- Neurogenic bladder
- Incontinence with complicated skin breakdown
- Terminally ill/disabled
- Note: If used long-term, catheter needs to be replaced every 6 weeks

Contraindications

- Known urethral disruption or pelvic trauma
- Recent reconstructive surgery
- Urinary tract obstruction or urethral stricture (unless it can be dilated)
- Combative or uncooperative patient
- Acute infection of the prostate or the urethra

Types of Catheters



- (1) **Robinson Catheter**: Straight, round tip catheter used for short-term catheterization, has no balloon so it cannot stay in place unaided
- (2) **Foley Catheter**: straight, self-retaining catheter with 2-3 lumina, contains balloon that can be inflated with sterile water to remain in the bladder
- (3) **Coude Catheter**: similar to Foley but has a more curved end, used in men that a Foley or Robinson cannot be inserted due to an enlarged prostate or elevated bladder neck



Filiforms and followers: thin, pliable solid catheters that range in size that are used to dilate a male urethral stricture. Followers are larger in diameter and hollow.





Condom catheter: used frequently in elderly patients. For this method, no tube is inserted through the urethra. Instead, a condom device is placed over the penis where urine is collected into a bag. Condom must be changed daily.

Catheterization Procedure

Note: Keep in mind - catheterization is among one of the top five most painful emergency procedures.

- Positioning. Place male in the supine position, or place female in dorsal lithotomy or supine position.
- (2) Identify the urethral meatus by grasping the penis with the non-dominant hand, with the penis pointed toward the umbilicus.
 - Use lateral and outward traction of the labia with the non-dominant hand to identify the urethral meatus.
- (3) Cleanse the urethral meatus and surrounding area with antiseptic solution, isolate the genitalia with sterile drapes.
- (4) Lubrication and local anesthesia. Insert the lubricant into the urethra with a syringe (anesthetic jelly should always be prioritized – if used leave in place for 5-10 minutes). Place the end of the syringe gently inside the urethral meatus and inject the jelly into the urethra.



- (5) Catheter selection and insertion. Select a 16-18 Fr Foley or Robinson catheter for adults <50 years and follow the course of the urethra into the bladder.
 - Select a Coude catheter in males >50 years, directing the tip at 12 o'clock anterior position.
 - Catheter placement is confirmed when urine is obtained.
- (6) Inflate the balloon with 5mL of saline solution (in a Foley catheter), and pull outward until there is resistance.
- (7) Secure the catheter to the leg with tape or other means. Robinson and non-self retaining Coude catheters need to be secured to the penis.

Complications

- Transient hematuria
- Trauma: false passage or perforation from excessive force, urethral tear, urethral stricture, obstruction of flow
- Infection: UTI, epididymitis, pyelonephritis, urosepsis are seen with prolonged catheterization
- Increased mortality in nursing home patients with indwelling catheter at one year

Filiform and Followers Procedure

Note: If you experience an unsuccessful catheterization especially in males there may be a possible stricture. Try this technique.

- (1) Re-instill anesthetic jelly.
- (2) With non-dominant hand hold penis taut and directed at umbilicus.
- (3) With dominant hand dip a filiform in anesthetic jelly and insert it into the urethra.
- (4) Take a second filiform and repeat. Rotate until resistance is felt.



- If the first filiform does not advance add another Filiform.
- (6) Insert additional filiforms until the urethra dilates or you pass a fold.
- (7) Lubricate a follower catheter and attach it to a Filiform.
- (8) If the follower catheter is 16 or 18 Fr remove it and insert a Foley catheter.