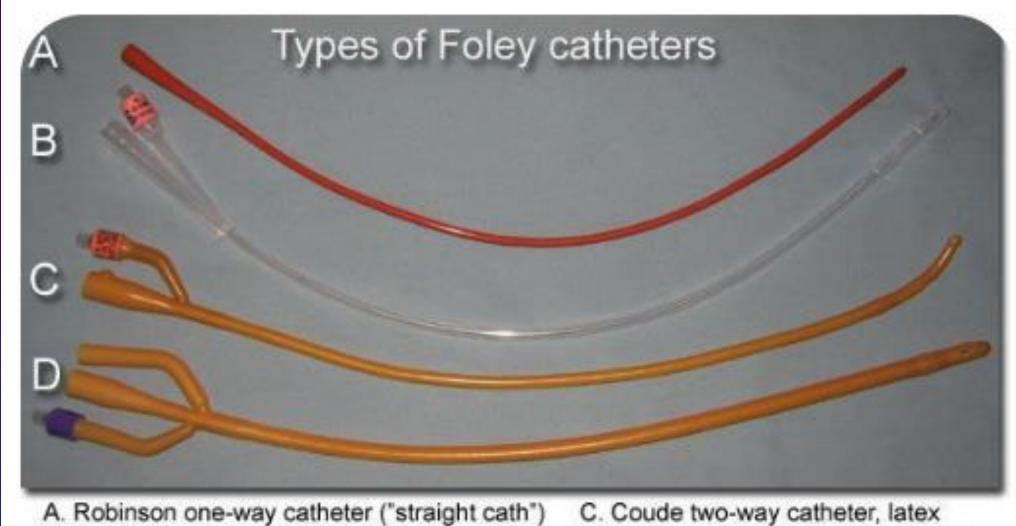


## OBJECTIVES

- Become familiar with different types of catheters
- Initial management of urinary retention
- Initial management of hematuria
- Use of suprapubic catheters

## CATHETER BASICS

- Sizes 8Fr-36 Fr
- Higher French=bigger catheter=more rigid (note this is the opposite of IVs where lower French is larger)
- 16 Fr "standard size" in Foley catheter kits stocked on floors
- NEVER REMOVE A DIFFICULT FOLEY of foley placed by urology in the afternoon/evening without urology permission
- Never remove a red catheter (Council tip) without urology permission



- B. Robinson two-way catheter, silicon
- C. Coude two-way catheter, latex
- D. Robinson three-way catheter, latex

# URO-JET®

Lidocaine HCI Jelly, USP, 2%

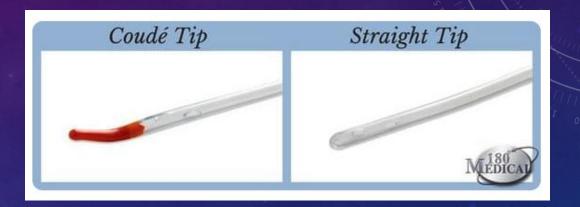
**Prefilled Disposable Syringe** 



- Facilitates passage of difficult catheter placement
- Improves patient comfort
- stocked in Pyxis on all nursing units as "override" option
- Requires MD order to use

### COUDE TIP CATHETER

- Curved at 45 degree angle at tip
- FIRM
- Ideal for men age >50 or with history of BPH
- Consider starting this catheter in a high risk male patient
- Keep curved tip pointed up towards ceiling during insertion (allows catheter to follow normal male anatomy)
- Nurses can insert



https://www.180medical.com/blog/why-do-i-need-to-use-coude-catheters/

## STRAIGHT CATHETER

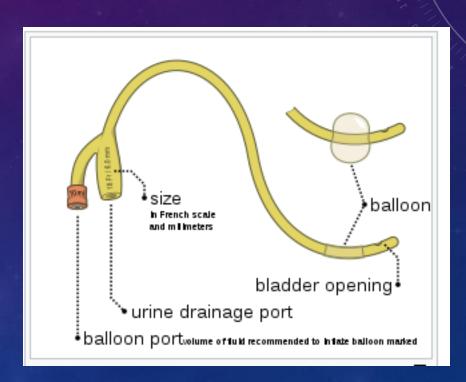
- No balloon on end
- Used once
- Color of the funnel indicated french
- Can be used by patients at home to self cath
- Catheter itself may be clear or red (red is more flexible)
- Coude tip is available





## REGULAR/STANDARD 2 WAY FOLEY

- Drainage port and balloon port
- Straight tip



https://en.wikipedia.org/wiki/Foley\_catheter

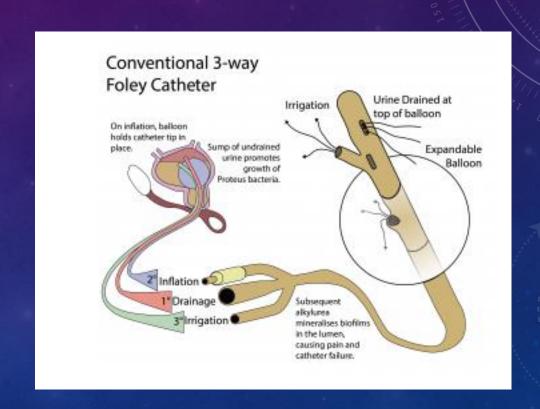
## COUNCIL TIP CATHETER

- PLACED BY UROLOGY
- INSERTED OVER A WIRE
- DO NOT REMOVE THIS CATHETER WITHOUT APPROVAL FROM UROLOGY



### 3 WAY BLADDER IRRIGATION CATHETER

- Treatment of hematuria with continuous bladder irrigation (CBI)
- Also has metal coil within catheter to facilitate manual irrigation of large clots
- Once CBI stopped, the irrigation port is capped
- Patients can be discharged with this catheter in place



http://nexacath.com

### URINARY RETENTION

- Straight cath or foley placement for urinary retention >400 cc's
- Bladder scans typically performed q 4-6 hours
- Take into account patients clinical situation when considering the significance of PVR
- Example: previously anuric pt on HD now s/p renal tx will have lower bladder capacity than average patient
- Initiation of alpha blocker therapy often facilitates successful voiding trials, especially in males

## SENDING PATIENTS HOME WITH FOLEY

- Urinary retention patient often sent home with foley in place
- Prolonged bladder rest/decompression after large volume urinary retention
- Voiding trial in GU clinic
- Outpatient cystoscopy and functional urodynamic to evaluate bladder voiding capacity
- Most patients DO NOT require home heath when discharging home with foley
- Bedside nurse can provide education of hygiene, catheter care, emptying drain bag and can offer patient leg bag vs night bag

# HEMATURIA-DESCRIBE BY BEVERAGE COLOR IT RESEMBLES IN THE TUBING



Ambulatory, Onice-based, and Geriatric Orology

## A Visual Scale for Improving Communication When Describing Gross Hematuria

Thomas E. Stout A Michael Borofsky, Ayman Soubra

| Hematuria Grade                              |  |   |  |   | V  |  |
|--|--|---|--|---|--|--|
| Different words used to describe urine color | Clear Clear pink Light Peach Pink lemonade Pigmentless | Clear Clear pink Light red Pale red Pink lemonade Peach Rosé Watermelon | Bloody Cherry Grapefruit Kool-Aid Pink lemonade Strawberry Pink Watermelon | Berry Bloody Cherry Fruit punch Kool-Aid Raspberry Red Strawberry Watermelon Wine | Bloody Cherry Red Frank blood Ketchup Magenta Mauve Sanguineous Strawberry Tomato Wine |  |

## WHAT TO DO WHEN YOUR PATIENT HAS HEMATURIA

- Determine severity
- Microscopic hematuria does not require an inpatient consultation and can be deferred to outpatient GU clinic
- Mild hematuria ("pink lemonade") without significant blood loss or evidence of urinary retention may not necessarily require indwelling foley catheter placement
- If clots or retention → manual bladder irrigation and CBI

## MANUAL BLADDER IRRIGATION

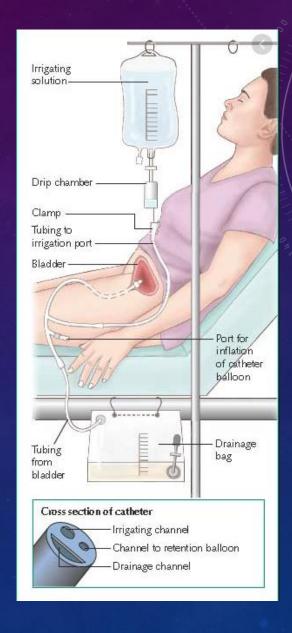
- Should always be performed prior to initiation of continuous bladder irrigation
- Using 60cc toomey/piston syringe, through main drainage port of foley catheter (disconnect tubing/bag)
- Irrigate fluid in, then aspirate to evacuate clots; repeat until clots have resolved



## CONTINUOUS BLADDER IRRIGATION

- Initiating continuous bladder irrigation (CBI) with retained clots in bladder will decrease risk of catheter clotting off
- Hematuria" catheter 

  metal coil
  within catheter to prevent collapse
  while aspirating large clots
- Titrate CBI drip to keep output clear to light pink



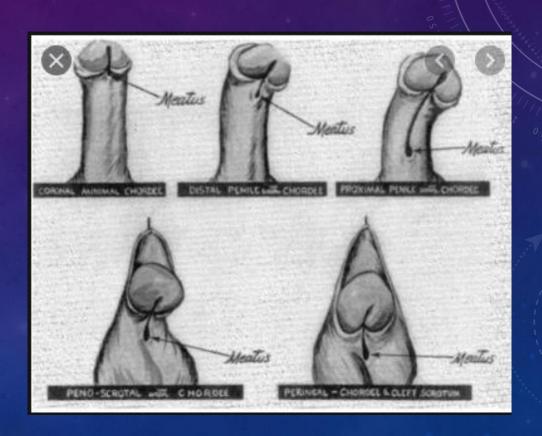
https://nursekey.com/continuous-bladder-irrigation/

## EVALUATION OF HEMATURIA

- CT Urogram (CT Abd/Pelvis w+w/o IV contrast, and delayed phase; specify CT Urogram in order comments)
- UA with reflex to culture if indicated
- Urine cytology
  - Cystoscopy
    - Often deferred to outpatient setting due to poor quality of bedside cystoscopes for diagnostic cystoscopy
    - Inpatient cystoscopy with clot evacuation and fulguration occasionally performed in OR for significant hematuria with acute blood loss anemia

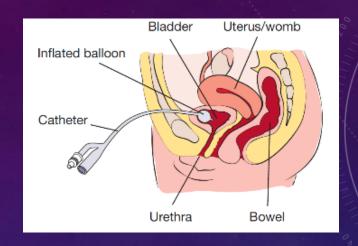
## LONG TERM MECHANICAL COMPLICATIONS OF FOLEY CATHETERS

- Irreversible urethral erosion/traumatic hypospadias
- Erosions problematic in women too
- URINARY INCONTINANCE



https://www.auajournals.org/doi/10.1016/j.juro.2016.10.094

#### SUPRAPUBIC CATHETERS



- Recommended for any patient with confirmed neurogenic bladder or long-term need for urinary catheter, if unable to perform clean intermittent catheterization
- SP catheters can be placed under imaging guidance by IR department
- Initial exchange of newly placed SP catheter to be performed by Urologist 4-6 weeks post placement
- Subsequent SPC exchanges can be performed by patient, family, home health nurse, urology clinic, etc
- Exchange of chronic SPC is within RN scope of practice; Banner requires they be evaluated and signed off for competency

### TROUBLESHOOTING CATHETER PLACEMENT

- Distal = able to advance catheter "a few centimeters" before resistance (probable stricture), try smaller catheter (lower French)
- Proximal = able to advance catheter at least 2/3 way, resistance before HUB (ddx: BPH, bladder neck), try coude
- Uncomfortable=try urojet

## WHAT UROLOGY NEEDS TO KNOW WHEN YOU CALL FOR DIFFICULT FOLEY

- Number of attempts and what type of catheter used
- What is the level of the problem? Distal or proximal
  - Cannot visualize urethral meatus (phimosis {tight foreskin}, edema, retracted female urethra)
  - Meatus: cannot insert catheter past urethral opening (meatal stenosis, retromeatal stricture)
- Relevant patient history:
  - Prior prostate surgery or radiation (TURP or prostatectomy) = likely bladder neck contracture
  - History of urethral stricture, gonococcal urethritis, or urethral trauma = likely stricture

## UROLOGIC EMERGENCIES

- Obstructive uropathy
  - Lower urinary tract obstruction
  - Gross hematuria with clot retention
  - Ureteral obstruction
- Priapism
- Fournier's gangrene
- Paraphimosis-occurs when foreskin is pulled back behind the glans and not replaced in anatomic position

- Testicular torsion
- Trauma
  - Bladder rupture
  - Urethral trauma
  - Renal trauma
  - Ureteral trauma
  - Testicular trauma

https://www.auanet.org/education/auauniversity/for-medical-students/medical-students-curriculum/medical-student-curriculum/urologic-emergencies

CALL UROLOGY FOR EMERGENCIES!

YES, URINARY RETENTION IS AN EMERGENCY, IT IS VERY PAINFUL WHEN ACUTE!

