

## Chapter 22

### ELIMINATION OF URINE

#### **What You Will Learn**

- Age-related changes affecting the urinary system
- Factors that maintain normal urine elimination
- Characteristics of normal urine
- Conditions that may cause abnormal urine elimination
- Factors that can lead to urinary incontinence
- How to care for a client with a urinary catheter
- How to care for a client with a ureterostomy
- How to help a client use a bedpan, urinal, or bedside commode
- Observations to make about the urinary system
- How to give perineal care with catheter according to proper procedure
- How to change urinary drainage bag according to proper procedure
- How to empty urinary drainage bag according to proper procedure
- How to assist a client in using urinal according to proper procedure
- How to assist a client in using bedpan according to proper procedure
- How to care for a ureterostomy according to proper procedures
- How to care for a suprapubic catheter according to proper procedures
- How to apply and remove an external catheter according to proper procedures

#### **Age-Related Changes Affecting the Urinary System**

Aging affects all of the body systems including the urinary system. With age the bladder opening weakens which may result in urinary incontinence and dribbling. A decrease in bladder muscle tone occurs that leads to urinary retention and infections. The aging kidneys' ability to filter waste and concentrate urine decreases.

## **Factors That Maintain Normal Urine Elimination**

The body usually eliminates urine every two-three hours if fluid intake is adequate. The body needs 2,000-3,000 mL of fluid each day. Provide adequate fluids, especially water and fruit juices. It is the In-Home Aide's responsibility to determine where and how often the client usually voids. Try to follow established routines and respect the client's privacy. Assist client to the bathroom when requested; at least every two-three hours while he is awake.

## **Normal Urine Characteristics**

Normal urine is a straw yellow color and is clear and free of sediment or mucous. The usual amount voided is 200-300 mL five to six times a day; or 1,000 to 1,500 mL every 24 hours; however, this amount varies by individual. Frequency of urination depends on fluid intake. Most people void at least every three hours while awake. Certain liquids such as coffee or some medications can change the color or odor of urine.

## **Conditions That May Cause Abnormal Urine Elimination**

Several conditions can cause abnormal urine elimination. An infection of the kidneys or bladder can cause incontinence, frequency changes, a sense of urgency, and burning when urinating. Confusion is a common sign of a urinary tract infection in the elderly client. Blood tinged or cloudy foul smelling urine are also symptoms. Complaints of mid-back or pain over the bladder may occur with some infections.

Urinary retention is the inability to empty the bladder caused by poor muscle tone of bladder, obstruction of urethra, or damage to certain areas of nervous system. The client with urinary retention usually complains of difficulty passing urine and urinates in small amounts. Many clients will complain of feeling of fullness in the bladder.

Incontinence is the inability to stop or control the passage of urine. There are several types of incontinence.

- Stress incontinence is the inability to control the passage of urine when pressure is placed on the bladder when coughing, sneezing, laughing, exercising, or pressure on the lower abdomen.
- Urge incontinence occurs when the client is unable to control the passage of urine long enough to reach a bathroom after experiencing the urge to urinate. This may be seen in a client with a urinary tract infection or an elderly person who has poor muscle control in the bladder.
- Neurogenic incontinence occurs as the result of an injury or disease of the nervous system that affects the client's ability to feel the urge to urinate.
- Functional incontinence is caused by disease conditions or disabilities that create strong urges to void or bladder contractions that cannot be controlled until the client reaches the bathroom.

## **Factors That Can Lead to Incontinence**

There are many causes of incontinence. If a client is confused or overmedicated he may be unable to understand where or when he is urinating. Inadequate fluid intake often causes urine to become concentrated causing irritation to the bladder wall. Sphincter muscle weakness can cause the bladder to release urine unexpectedly. Damage to nerves in the bladder prevents stimulation of a full bladder from signaling the brain. Damage to the brain, such as after a stroke, may prevent a person from feeling the urge to urinate. Irritation and reduction in the size of the bladder due to a catheter can cause dribbling after the catheter is removed. If a client has limited mobility and lacks assistance in getting to the bathroom he may become incontinent. Bladder infections and bladder spasms can also cause incontinence.

## **Caring for a Client with a Urinary Catheter**

An indwelling catheter (Foley™) is a sterile tube inserted through the urethra into the bladder to drain urine. It is held in place by a small inflated balloon (Figure 22.1).

An indwelling catheter must be ordered by a physician and is inserted only by a licensed nurse.

A partial obstruction in the urethra causing urinary retention requires catheterization.

When caring for a client with an indwelling catheter it is important to remember that the bladder is considered sterile. The catheter and drainage tube and bag area are not a sterile system. Do not open this system except when the catheter or bag must be changed. If the system is opened, germs may enter, which could lead to an infection.

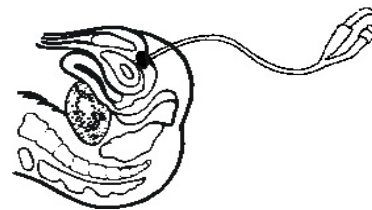
Drainage tubing/bags must not touch the floor. Urine drains by the principle of gravity. Always hang the catheter bag from an unmovable part of the bed frame or chair. The catheter and tubing should be free of bends or kinks. Tubing should be coiled or looped instead of hanging loosely. Prevent tubing from hanging below the level of the drainage bag. The drainage bag should be below the level of the bladder. If moved above, urine could flow back into the bladder.

When the client is positioned on his back, the tubing is positioned over the top of the leg. When the client is positioned on his side, the tubing should be positioned between the client's legs toward the side he is facing.

Never pull on the catheter tubing. Secure the tubing by taping it loosely to the inner thigh or using a leg band as instructed by the nurse or client to help prevent pulling. When transferring a client from bed to chair, always move drainage bag over to the chair before moving client. Be careful not to step on the tubing.

Hands must be washed and gloves must be used every time a catheter bag is emptied. The drainage tube must not touch the rim of the container; floor or left out of its pouch

*Figure 22.1,  
Indwelling Catheter*



after the bag is emptied. Drainage bag must be emptied when it starts getting full and before leaving the client's home.

**NOTE: IMMEDIATELY REPORT LACK OF URINE OUTPUT TO THE NURSE/SUPERVISOR**

The drainage bag is changed as directed by the Nurse/Supervisor. A Suprapubic catheter is a sterile tube is inserted into the bladder through the abdominal wall above the pubis (Figure 22.2).

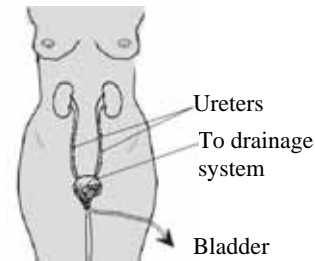


Figure 22.2,  
Suprapubic Catheter

When caring for a client with a suprapubic catheter the In-Home Aide should:

- Observe the catheter for patency (draining properly)
- Maintain a close drainage system
- Observe for signs of urinary tract infection
- Monitor skin at insertion point and observe the dressing (if present) for drainage
- Empty the drainage bag
- If the client is on a clamp/release protocol, check with the supervisor/nurse for specific instructions
- Avoid pulling on the catheter to prevent accidental removal. If the catheter becomes dislodged, place a sterile dressing over the puncture site and notify the supervisor/nurse immediately

A Texas/external catheter is used only for male clients. A condom-type device is attached to the penis with a drainage bag (Figure 22.3).



Figure 22.3  
External Catheter

In-Home Aides may apply an external catheter or assist the client. This is not a sterile system; use clean techniques. Various types of external catheters are available. Follow the directions that come with external catheter for applying it. Assist the client with peri care and check the skin around the catheter for skin breakdown, secretions on the penis and the position of the tubing. An external catheter that is not correctly applied can cause a lack of circulation to the penis.

### **Caring for a client with a ureterostomy**

An ureterostomy is the surgical creation of an opening (stoma) from a ureter to the surface of the body, usually the abdomen. The ureterostomy allows urine to drain from the body into a uretostomy bag without entering the bladder. The ureterostomy bag should be changed as often as desired by the client. Some clients will have ureterostomies that are permanent. Other clients may have temporary ureterostomies.

Proper stoma care is required to maintain healthy tissue. The In-Home Aide is permitted to perform ureterostomy care on a site that is well healed and does not have open or irritated areas. You should observe the area around the stoma for redness, swelling, drainage or bleeding and report your observations to the supervisor/nurse.

## **Helping the Client Use the Bedpan, Urinal, or Bedside Commode**

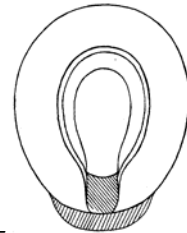
A client who is unable to get up to the bathroom may use a Bedpan (Figure 22.4) or urinal (Figure 22.5). Provide privacy for the client when using a bed pan or urinal. Keep the bedpan or urinal clean and within the client's reach. Putting powder on a bedpan prevents it from sticking to the client's skin and helps him to slide on and off more easily.

Using the bed pan or urinal is easier with the head of the bed or upper body elevated into a sitting position.

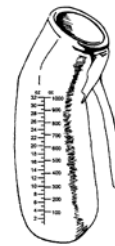
A bedside commode (Figure 22.6) may be used for a client who can be out of bed but is unable to use the bathroom. Always allow for privacy when the client is using a bedside commode. Make sure you can hear the client call for assistance when the client is on the commode. When the client has finished using the commode, remove the bucket and clean according to agency policy. Replace the seat cushion or close the cover when the commode is not in use.

After using the bedpan, urinal, or commode assist with proper hygiene of the perineal area. Provide daily washing and proper wiping from front to back.

*Figure 22.4 Bedpan*



*Figure 22.5 Urinal*



*Figure 22.6 Bedside Commode*



## **Observations to Make About the Urinary System**

The In-Home Aide should monitor the client's bladder habits, frequency, and amount of urine voided. Observations that should be reported to the nurse/supervisor immediately include:

- Fever.
- Confusion.
- Mid-back or lower abdominal pain.
- Burning sensation when urinating.
- Cloudy or bloody urine.
- Foul smelling urine.
- Frequent voiding.
- Small quantities of urine.
- Sudden onset of incontinence, which may be an indication of infection.

## Chapter 22

### ELIMINATION OF URINE

#### PROCEDURE FOR GIVING PERINEAL CARE WITH CATHETER:

1. Gather necessary equipment.
2. Wash your hands. Put on gloves.
3. Explain what you are going to do.
4. Provide privacy.
5. Client should be in supine position with legs apart; place towel or bed protector under buttocks.
6. Cover client with towel or blanket then remove top sheet.
7. Check catheter and drainage bag for leaks, kinks, level of bag, color and character of urine; ensure that it is securely attached to bed frame.
8. Expose the perineal area.
  - a. Separate the labia of the female client and gently wash around the opening of the urethra with soap and warm water.
  - b. If the male client is uncircumcised, gently pull back the foreskin and wash around the opening of the urethra with soap and warm water.
9. Wash the catheter tubing from the opening of the urethra outward four inches or farther if needed. Do not pull on the catheter.
10. Using a clean washcloth, continue washing and rinsing the perineal area. Dry the perineal area (follow procedure in Chapter 16 Perineal Care).
11. Remove bed protector and blanket or towels. Place soiled linens in appropriate container.
12. Remove and dispose of gloves. Wash hands.
13. Make the client comfortable.
14. Record observations and report anything unusual to the supervisor/nurse.

## Chapter 22

### ELIMINATION OF URINE

#### PROCEDURE FOR CHANGING URINARY DRAINAGE BAG:

1. Gather necessary equipment.
2. Wash your hands. Put on gloves.
3. Explain what you are going to do.
4. Provide privacy.
5. If applying a reusable leg bag, swab the end to be connected with alcohol and place on sterile gauze in alcohol packet. Do not allow it to touch anything else.
6. Crimp with your fingers or clamp the catheter tubing so urine does not flow.
7. Disconnect catheter tubing from drainage bag. Apply cap over end of tubing if the drainage bag is to be reused.
8. Swab end of catheter tube with alcohol before connecting to leg bag.
9. Connect leg bag to the catheter.
10. Unclamp catheter. Check to see that urine is flowing (may take a few minutes)
11. If placing a leg bag or applying new tape, allow enough slack so catheter does not get pulled.
12. If drainage bag is to be reapplied later, remove the cap, swab the end of the connection with alcohol, and replace cap.
13. Remove and dispose of gloves. Wash hands.
14. Make the client comfortable.
15. Record observations and report anything unusual to the supervisor/nurse.

## Chapter 22

### ELIMINATION OF URINE

#### PROCEDURE FOR EMPTYING URINARY DRAINAGE BAG:

1. Gather necessary equipment.
2. Wash hands; put on gloves.
3. Explain what you are going to do.
4. Provide privacy.
5. Place container under the drain at the bottom of the bag.
6. Open the drain and allow the urine to drain into the container, making sure the drain does not touch the inside of the container or the floor. Be careful not to splash.
7. Close the drain and replace it in the holder on the bag.

**NOTE: IF YOU ACCIDENTALLY TOUCH THE INSIDE OF THE CONTAINER WITH THE TIP OF THE DRAIN, THEN CLEANSE THE TIP OF THE DRAIN WITH AN ALCOHOL SWAB AND REPLACE IT IN THE HOLDER.**

8. Note the color, clarity, and amount of urine.
9. Empty the urine into the toilet and flush (notify the supervisor/nurse of any abnormalities before emptying the urine).
10. Clean, dry, and replace the equipment.
11. Remove and dispose of gloves; wash hands.



## Chapter 22

### ELIMINATION OF URINE

#### PROCEDURE FOR ASSISTING CLIENT IN USING A URINAL:

1. Wash your hands. Put on gloves.
2. Gather necessary equipment.
3. Explain what you are going to do.
4. Provide privacy.
5. Turn back top bedding, except for top sheet. Expose the perineal area.
6. Place the client's penis in the urinal and the urinal between his legs. Make sure there is no pressure on the client's scrotum.
7. Make sure urinal is placed at an angle to keep urine from spilling out. Flat edge should be lying on bed.
8. Remove and dispose of gloves.
9. Wash your hands.
10. Leave the room and provide privacy while making sure you can hear the client if he calls for assistance.
11. Return to room promptly when client calls.
12. Wash hands. Put on gloves.
13. Remove urinal; take it to the bathroom.
14. Empty urinal into toilet.
15. Clean equipment.
16. Remove and dispose of gloves. Wash hands.
17. Store equipment.
18. Give client a clean, wet washcloth to wash his hands. Make client comfortable.
19. Record observations and report anything unusual to supervisor/nurse.

## Chapter 22

### ELIMINATION OF URINE

#### PROCEDURE FOR ASSISTING CLIENT IN USING A BEDPAN:

1. Wash your hands. Put on gloves.
2. Gather necessary equipment.
3. Explain what you are going to do.
4. Provide privacy.
5. Client should be in supine position (lying on his/her back); turn back top bedding.

NOTE: SPRINKLE POWDER ON BEDPAN TO PREVENT STICKING.

6. Client is able to assist.
  - a. Have client flex his knees and lift buttocks off mattress. Assist by slipping hand under the lower part of his back. If client is wearing pajamas or underwear, lower them to his knees.
  - b. With your other hand, slip the bedpan under the client's hips and adjust.
7. Client is unable to assist.
  - a. Turn client on his/her side away from you.
  - b. Expose buttocks and position bedpan firmly against buttocks.
  - c. Place small pillow/rolled towel at top of bedpan at the small of client's back.
  - d. Turn client toward you and onto the bedpan.
8. Raise the head of bed or upper body (if allowed) for client's comfort. Place toilet tissue within reach.
9. Remove and dispose of gloves.
10. Wash your hands and leave the room.
11. Return to room promptly when the client calls or check on him after five minutes.
12. Wash hands. Put on gloves.

13. Lower the head of bed.
14. Client is able to assist.
  - a. Place one hand under small of the back and assist client to lift his hips.
  - b. Hold bedpan with other hand.

Client is unable to assist.

  - a. Hold bedpan with one hand and roll client off pan with other hand.
  - b. This prevents contents of bedpan from spilling.
15. Remove bedpan.
16. Wipe, wash and dry perineal area from front to back.
17. Take bedpan to bathroom and empty into toilet.
18. Clean equipment.
19. Remove and dispose of gloves. Wash hands.
20. Store equipment.
21. Give the client a clean, wet washcloth to wash his hands, make client comfortable.
22. Record observations and report anything unusual to supervisor/nurse.

## Chapter 22

### ELIMINATION OF URINE

#### PROCEDURE FOR URETEROSTOMY CARE (UNCOMPLICATED ESTABLISHED URETEROSTOMY)

1. Gather equipment - gloves, towel or bath blanket, towel or bed protector, clean ureterostomy pouch, disposable wipes, skin barrier paste if used, scissors if needed, washcloth, basin of warm water, soap, and plastic bag.
2. Provide privacy.
3. Explain what you are going to do.
4. Wash your hands and put on gloves.
5. Fold back bed linens and cover the client with a towel or bath blanket.
6. Place a towel or bed protector under the client and expose the stoma site.
7. Gently remove the ureterostomy bag by pushing the skin away from the flange.
8. Disconnect the tubing and gravity bag if attached.
9. Discard the used ureterostomy bag in a plastic bag.
10. Wipe any continual drainage from around the stoma with disposable wipes and discard the wipes in the plastic bag.
11. Cleanse the skin around the stoma with mild soap and warm water. Rinse and pat the area dry.
12. Observe the skin around the stoma for any redness, irritation or open areas in the skin.
13. If not using a precut flange, measure the stoma and cut the flange 1/8" larger than the stoma measurement with a scissors.
14. If used, apply skin barrier paste around the stoma and spread with a wet, gloved finger.
15. Remove paper backing from adhesive area on clean ureterostomy bag. Center the bag over the stoma and apply.
16. Press the adhesive firmly around the stoma to form a secure, wrinkle-free seal.
17. Attach ureterostomy appliance to tubing and gravity bag if client desires.

18. Remove gloves and wash hands.
19. Make client comfortable.
20. Report any unusual findings the supervisor/nurse.

## Chapter 22

### ELIMINATION OF URINE

#### PROCEDURE FOR SUPRAPUBIC CATHETER CARE (UNCOMPLICATED ESTABLISHED SUPRAPUBIC CATHETER)

1. Gather equipment-gloves, towel or bath blanket, towel or bed protector, washcloth, basin of warm water, soap.
2. Provide privacy.
3. Explain what you are going to do.
4. Wash your hands and put on gloves.
5. Fold back bed linens and cover the client with a towel or bath blanket.
6. Place a towel or bed protector under the client and expose the site.
7. Cleanse the skin around the site with mild soap and warm water. Rinse and pat the area dry.
8. Observe the skin around the stoma for any redness, irritation or open areas in the skin.
9. Remove gloves and wash hands.
10. Make client comfortable.
11. Report any unusual findings to the supervisor/nurse.

## Chapter 22

### ELIMINATION OF URINE

#### PROCEDURE FOR APPLYING AND REMOVING AN EXTERNAL CATHETER

CAUTION: ALWAYS FOLLOW THE MANUFACTURER'S INSTRUCTIONS FOR APPLYING AN EXTERNAL CATHETER

1. Gather equipment-gloves, towel or bath blanket, towel or bed protector, washcloth, basin of warm water, soap, skin barrier if used, external catheter, plastic bag, urinary leg, or drainage bag.
2. Provide privacy.
3. Explain what you are going to do.
4. Wash your hands and put on gloves.
5. Fold back bed linens and cover the client with a towel or bath blanket.
6. Place a towel or bed protector under the client and expose the genital area.

#### To Apply an External Catheter:

7. Provide perineal care with mild soap and warm water. Rinse and pat the area dry.
8. Observe the skin for redness, irritation or open areas.
9. If used, apply skin barrier to the shaft of the penis and allow to dry for approximately 30 seconds. Do not apply skin barrier to the head of the penis.
10. Place the external catheter over the head of the penis leaving approximately ½" between the tip of the penis and the end of the catheter sheath.
11. Gently roll the catheter sheath onto the shaft of the penis, moving pubic hair away from the sheath.
12. Press the catheter sheath with your hand to make sure it is secure.
13. Attach the catheter tubing to a urinary leg or drainage bag.
14. Remove gloves and wash hands.
15. Make client comfortable.
16. Report any unusual findings the supervisor/nurse.

### To Remove an External Catheter:

Follow steps 1-6 above and:

7. Using warm water and wash cloth wet the penis.
8. Gently roll the catheter sheath down the shaft of the penis.
9. Disconnect the catheter from the tubing and discard in a plastic bag. Set the catheter bag and tubing aside for cleaning according to agency policy.
10. Provide perineal care with mild soap and warm water. Rinse and pat the area dry.
11. Observe the skin for redness, irritation, or open areas.
12. Remove gloves and wash hands.
13. Make client comfortable.
14. Report any unusual findings the supervisor/nurse.

### Chapter Review

1. What age-related changes affect the urinary system?
2. What factors help maintain normal urine elimination?
3. What are characteristics of normal urine?
4. What conditions may cause abnormal urine elimination?
5. What factors can lead to urinary incontinence?
6. How do you care for a client with a urinary catheter?
7. How do you care for a client with an ureterostomy?
8. How should you help a client use a bedpan, urinal, or bedside commode?
9. What observations can you make about the urinary system?
10. How do you give perineal care with catheter according to proper procedure?
11. How do you change a urinary drainage bag according to proper procedure?
12. How do you empty a urinary drainage bag according to proper procedure?
13. How do you assist a client in using urinal according to proper procedure?



14. How do you assist a client in using bedpan according to proper procedure?
15. How do you care for an ureterostomy according to proper procedure?
16. How do you care for a suprapubic catheter according to proper procedure?
17. How do you apply and remove an external catheter according to proper procedure?

## **Student Exercise**

**Complete the following short-answer questions.**

1. List two factors that help to maintain urine elimination.
  - a.
  - b.
2. List two age-related changes factors that affect the urinary system.
  - a.
  - b.
3. Describe three characteristics of normal urine.
  - a.
  - b.
  - c.
4. List three conditions that may result in abnormal urinary eliminations.
  - a.
  - b.
  - c.

**Circle the letter of the correct answer.**

5. Conditions that may cause abnormal urine elimination are:
  - a. bladder infection and constipation.
  - b. incontinence and kidney infection.
  - c. excessive fluids and catheters.
  - d. voiding once daily and piles.
6. Urinary incontinence may be caused by \_\_\_\_\_.
  - a. overmedication
  - b. blood in urine
  - c. burning sensation
  - d. retention

7. When caring for the client who uses a bedpan, the In-Home Aide should:
- a. place it on the nightstand when it is not in use.
  - b. keep in on the floor in between uses.
  - c. ensure it is marked with the client's name.
  - d. empty it once per shift.