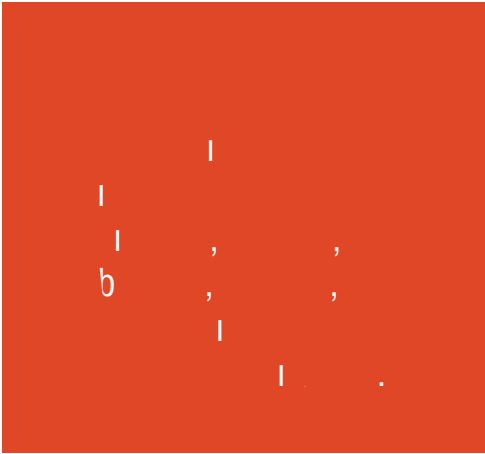




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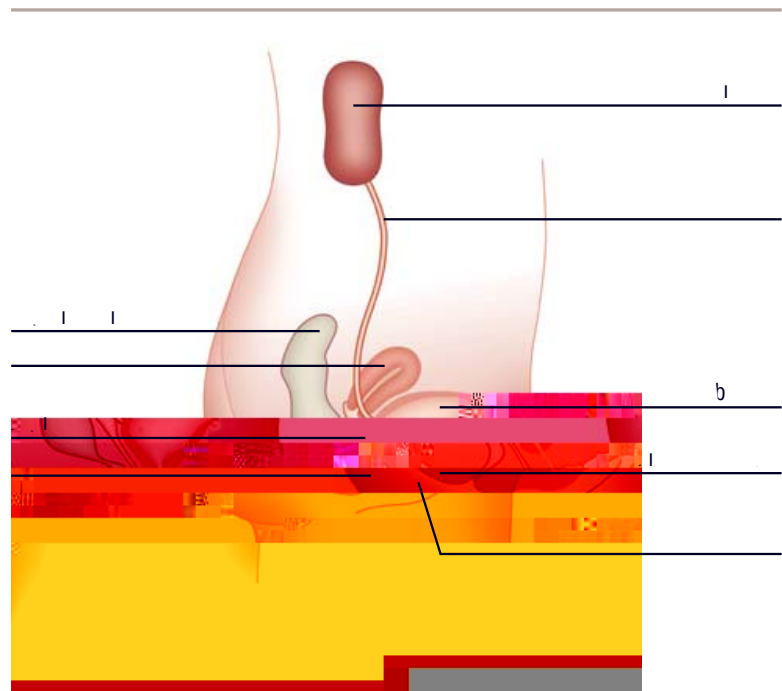
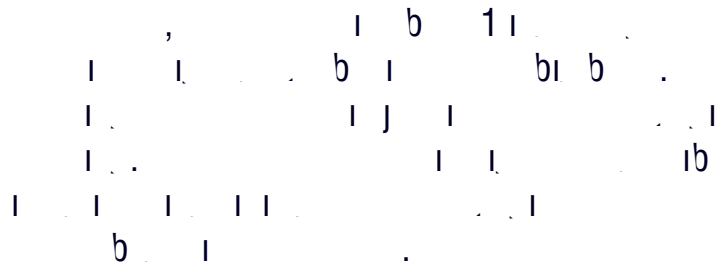
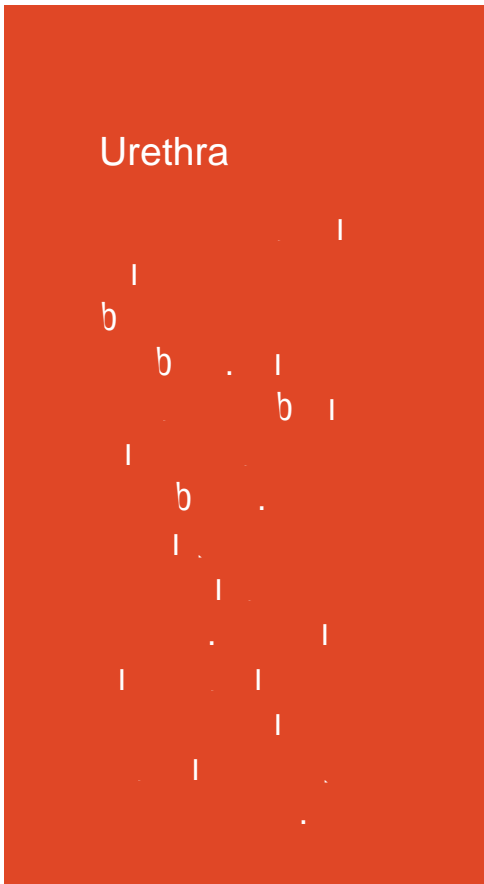
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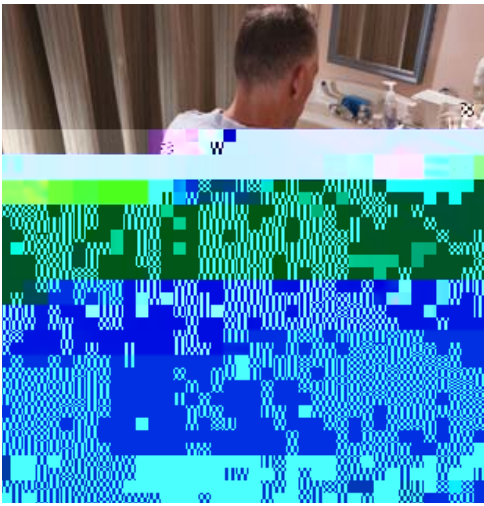
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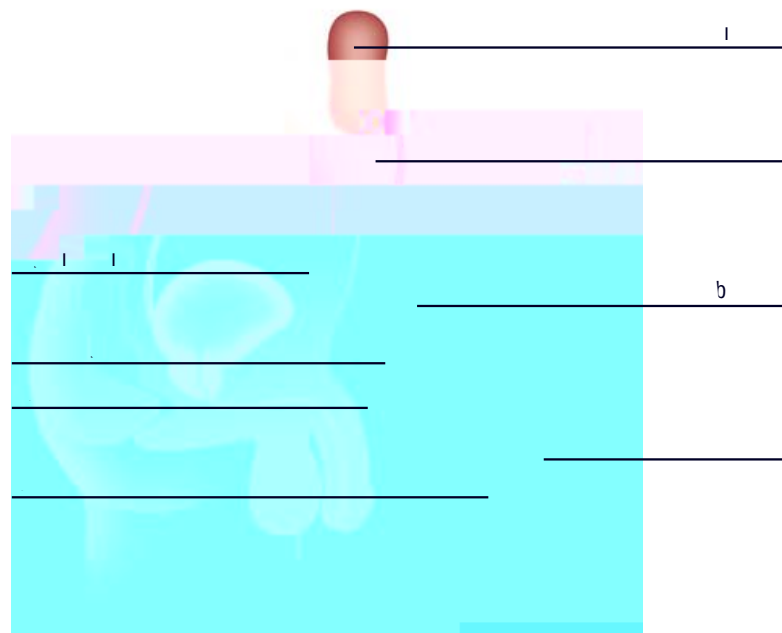
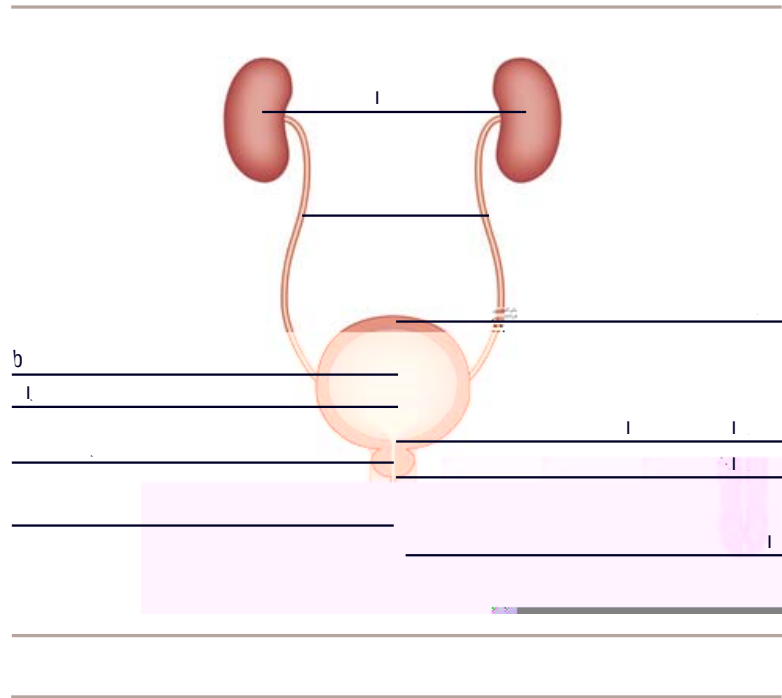
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## Common Issues

## Neurogenic Bladder Disorder

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## Urinary Tract Infections

You may experience these signs if you have a urinary tract infection:

• Pain

• Burning

• Frequency

• Cloudy urine

• Hematuria

• Urinary urgency

• Suprapubic pain

• Painful urination (dysuria).  
• Frequent urination (polyuria).  
• Cloudy urine.  
• Blood in the urine (hematuria).  
• Urinary urgency.  
• Urinary frequency.  
• Suprapubic pain.  
• Hematuria.  
• Urinary urgency.  
• Urinary frequency.  
• Suprapubic pain.  
• Hematuria.

### Timely Recognition

• Timely recognition of urinary tract infections is essential for effective treatment.  
• Early diagnosis and treatment can prevent complications.  
• Symptoms such as pain, burning, and frequency should be recognized promptly.  
• Cloudy urine and hematuria are also signs of infection.  
• Urinary urgency and frequency are common symptoms.  
• Suprapubic pain is a sign of infection in the bladder.  
• Hematuria is a sign of infection in the bladder or kidneys.  
• Urinary urgency and frequency are common symptoms.  
• Suprapubic pain is a sign of infection in the bladder.  
• Hematuria is a sign of infection in the bladder or kidneys.





## Medications

1. The patient is on a low-sodium diet. The nurse should monitor for signs of fluid overload, such as edema and weight gain, as well as symptoms of hyponatremia, such as headache, nausea, and confusion.

2. The patient is on a low-potassium diet. The nurse should monitor for signs of hypokalemia, such as muscle weakness, fatigue, and constipation, as well as symptoms of hyperkalemia, such as muscle numbness and tingling.

3. The patient is on a low-phosphorus diet. The nurse should monitor for signs of hypophosphatemia, such as muscle weakness, fatigue, and respiratory distress, as well as symptoms of hyperphosphatemia, such as itching and confusion.

4. The patient is on a low-protein diet. The nurse should monitor for signs of uremia, such as nausea, vomiting, and confusion, as well as symptoms of malnutrition, such as weight loss and muscle wasting.

5. The patient is on a low-fat diet. The nurse should monitor for signs of malnutrition, such as weight loss and muscle wasting, as well as symptoms of deficiency of fat-soluble vitamins, such as night blindness and bone pain.

## Fluids

1. The patient is on a low-sodium diet. The nurse should monitor for signs of fluid overload, such as edema and weight gain, as well as symptoms of hyponatremia, such as headache, nausea, and confusion.

2. The patient is on a low-potassium diet. The nurse should monitor for signs of hypokalemia, such as muscle weakness, fatigue, and constipation, as well as symptoms of hyperkalemia, such as muscle numbness and tingling.

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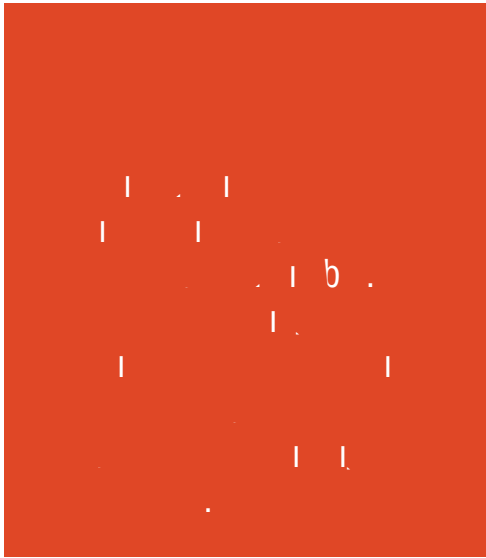
4. The patient is on a low-protein diet. The nurse should monitor for signs of uremia, such as nausea, vomiting, and confusion, as well as symptoms of malnutrition, such as weight loss and muscle wasting.

5. The patient is on a low-fat diet. The nurse should monitor for signs of malnutrition, such as weight loss and muscle wasting, as well as symptoms of deficiency of fat-soluble vitamins, such as night blindness and bone pain.

## Catheters



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(Cont'd)

### Clean technique

### Sterile Technique

## Other Types of Catheters

If you are unable to insert and remove a catheter to drain your bladder, you may need to use an indwelling catheter. This type of catheter is held in the bladder by an inflatable balloon and it provides continuous drainage. Complications of indwelling catheters may include urinary tract infections, blood infections (septicemia), urethral injury, bladder stones, and/or blood in the urine (hematuria)\*. Long-term indwelling catheters are replaced once a month or as recommended by your healthcare professional.

A suprapubic catheter is an alternative for individuals who have difficulty managing intermittent catheterization, such as those with paralysis of the arms or those for whom a urethral indwelling catheter is not an option. A suprapubic catheter is an indwelling catheter that is placed directly into the bladder through the skin above the pubic bone. This catheter must be placed by a urologist during outpatient surgery or an office procedure. The tube must be changed periodically as recommended by your healthcare professional.

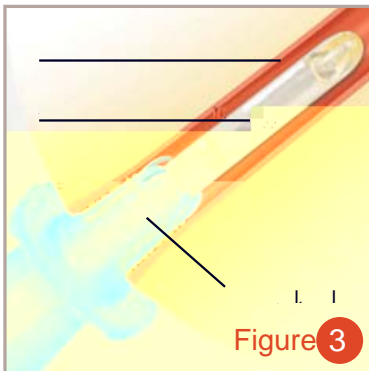
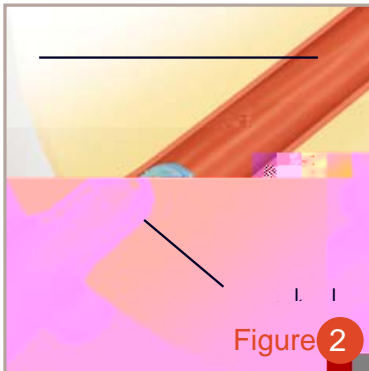
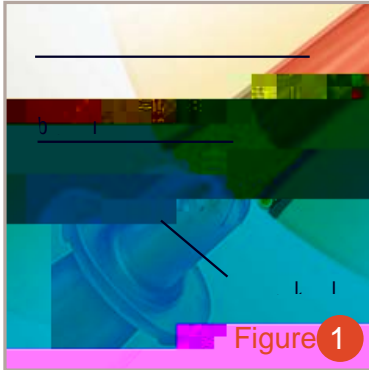
With indwelling catheters, a drainage bag is required. There are two main types of drainage bags. One type is a leg bag that attaches by straps to the leg. A leg bag is usually worn during the day since it fits discreetly under pants or skirts, and is easily emptied into the toilet. The other type of drainage bag is larger. It may be used during the night and is usually hung on the bedside.

\*Citation:

AU Hollingsworth JM, Rogers MA, Krein SL, et al. Determining the noninfectious complications of indwelling urethral catheters: a systematic review and meta-analysis. *Annals of Internal Medicine* 2013;159:401-410.



## Size and Design



The size and design of the instrument are important factors in determining its effectiveness. The size of the instrument is determined by the length of the handle and the length of the shaft. The design of the instrument is determined by the shape of the working end.

The size of the instrument is determined by the length of the handle and the length of the shaft. The length of the handle is determined by the length of the patient's arm and the length of the instrument. The length of the shaft is determined by the length of the instrument and the length of the patient's arm.

The design of the instrument is determined by the shape of the working end. The working end of the instrument is the part of the instrument that is used to perform the procedure. The shape of the working end is determined by the type of procedure that is being performed.

The size and design of the instrument are important factors in determining its effectiveness. The size of the instrument is determined by the length of the handle and the length of the shaft. The design of the instrument is determined by the shape of the working end.

## Protective Tip

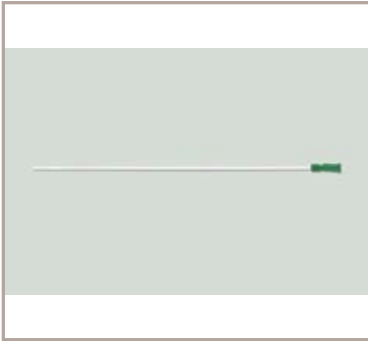
The protective tip is a feature of the instrument that is designed to protect the patient's soft tissue. The protective tip is located at the end of the instrument and is made of a soft material.

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Catheter made from PVC

## Catheter Materials



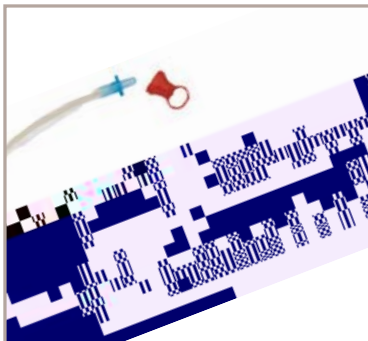
Hydrophilic catheter

## Lubrication

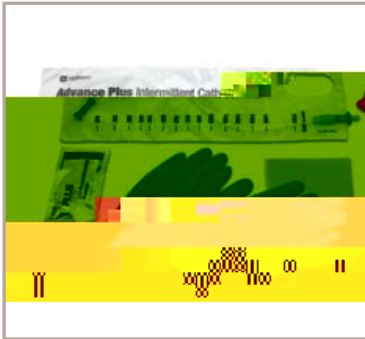


Closed system catheter

## Closed System Catheters



No Touch System



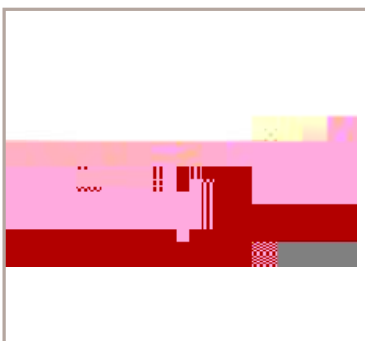
Catheter kit

## Catheter Kits

Catheter kits are pre-packaged sets of supplies used for intermittent catheterization. They typically include a catheter, a collection bag, and other necessary components. These kits are designed for convenience and ease of use, often being single-use and disposable. They are commonly used in home care and clinical settings for patients who require intermittent catheterization.

## No Touch Systems

No touch systems are designed to minimize the risk of contamination during catheterization. These systems often feature closed, pre-sterilized components that are used without the need for manual contact with the catheter or collection bag. This design helps to reduce the risk of infection and is particularly beneficial for patients who are at a higher risk of urinary tract infections. No touch systems are typically used in clinical settings and are often preferred for long-term use.



Straight Catheter

## Straight Catheter

A straight catheter is a single-use, disposable catheter used for intermittent catheterization. It consists of a long, thin tube with a bulbous end and a collection bag attached. The catheter is inserted into the bladder, and the urine is collected in the bag. Straight catheters are typically used in clinical settings and are often preferred for long-term use. They are designed to be easy to use and are often used in home care settings as well.

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**Q: What is intermittent catheterization?**

Intermittent catheterization is a procedure in which a catheter is inserted into the bladder to drain urine. It is used for people who have a neurogenic bladder, meaning that the nerves that control the bladder are not working properly. This can happen in people with spinal cord injury, multiple sclerosis, or other conditions that affect the nervous system. Intermittent catheterization is typically done several times a day, and it allows people to maintain a more normal bladder function and avoid the complications of long-term indwelling catheters.

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**Q: How do I learn intermittent catheterization?**

Learning intermittent catheterization is a process that involves several steps. First, you should consult with a healthcare professional, such as a urologist or a physical therapist, to determine if you are a candidate for this procedure. They will provide you with instructions and may refer you to a specialist who can teach you the technique. This training typically includes learning how to insert the catheter, how to drain the bladder, and how to care for the catheter. It is important to practice the technique regularly to become comfortable and proficient. Additionally, you may need to learn how to recognize signs of infection or other complications, and how to seek medical help if they occur.

---

**Q: How often should I catheterize?**

The frequency of intermittent catheterization depends on several factors, including the individual's bladder capacity, the severity of their neurogenic bladder, and their overall health. Generally, most people are advised to catheterize 4-6 times per day. It is important to follow the specific instructions provided by your healthcare provider, as they will know your individual needs best. Some people may need to catheterize more frequently if they have a smaller bladder capacity or if they are experiencing more frequent urinary retention. Conversely, some people may be able to catheterize less frequently if they have a larger bladder capacity. It is also important to monitor for signs of urinary retention, such as a feeling of fullness or discomfort in the bladder, and to catheterize as soon as these symptoms appear to prevent complications.

---

**Q: What size catheter should I use?**

**A:** The size of the catheter should be determined by the patient's anatomy and the type of procedure being performed. For example, a 16-gauge catheter is typically used for central venous access, while a 20-gauge catheter is used for peripheral venous access. The size of the catheter should also be determined by the patient's age and weight.

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**Q: What features should a catheter have?**

**A:** A catheter should have several key features to ensure safety and effectiveness. These include:

- Biocompatibility:** The catheter should be made of a material that is safe for use in the body and does not cause an allergic reaction.
- Flexibility:** The catheter should be flexible enough to be inserted into the vein without causing damage.
- Strength:** The catheter should be strong enough to withstand the pressure of the blood flow.
- Flowability:** The catheter should have a smooth interior surface to allow for easy flow of blood.
- Secure Attachment:** The catheter should have a secure attachment to the vein to prevent dislodgement.
- Clearance:** The catheter should have a clear lumen to allow for easy monitoring of the patient's condition.
- Portability:** The catheter should be easy to handle and transport.
- Visibility:** The catheter should be visible to the user during insertion and removal.
- Compatibility:** The catheter should be compatible with the patient's medical equipment.
- Durability:** The catheter should be durable enough to last for the duration of the procedure.
- Accuracy:** The catheter should be accurate in its placement.
- Comfort:** The catheter should be comfortable for the patient.
- Convenience:** The catheter should be easy to use.
- Reliability:** The catheter should be reliable in its performance.
- Cost-effectiveness:** The catheter should be cost-effective.
- Availability:** The catheter should be readily available.
- Regulatory Compliance:** The catheter should comply with all applicable regulatory requirements.

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Q: Can I perform catheterization during pregnancy?

A: Yes, you can perform catheterization during pregnancy. However, you should be aware of the following risks:

- Infection
- Bleeding
- Pain
- Injury to the bladder or ureters
- Injury to the fetus

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**Q: Why do I have large amounts of urine when I catheterize at night?**

**A:** If you have a urinary tract infection (UTI), you may have a large amount of urine when you catheterize at night. This is because the infection causes the bladder to produce more urine. You may also have a large amount of urine when you catheterize at night if you have a urinary tract obstruction. This is because the obstruction causes the bladder to produce more urine.



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**Q: How do I catheterize on a trip?**

**A:** If you have a urinary tract infection (UTI), you may have a large amount of urine when you catheterize at night. This is because the infection causes the bladder to produce more urine. You may also have a large amount of urine when you catheterize at night if you have a urinary tract obstruction. This is because the obstruction causes the bladder to produce more urine.

Aseptic Intermittent  
Catheterization

Bladder

Bladder Control

Bladder Neck





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## Overactive Bladder

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**Underactive Bladder**    b      I      .      .      I  
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**Ureters**                            b      .      I      I  
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**Urinary Incontinence**    I      .      I      .      I      .

**Urinary Tract Infection (UTI)**    I      .      b      .      b      I      I  
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**Urodynamic**                            I      .      I      .      I      I  
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**Voiding (      I      )**

The American Urological Association

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Christopher and Dana Reeve Foundation

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The Miami Project to Cure Paralysis

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National Association for Continence (NAFC)

1. 00.  
(1. 00.252.3337)

National Rehabilitation Information Center

1. 00.346.2742

Paralyzed Veterans of America

1. 00.232.17 2

The Simon Foundation for Continence

1. 00.23  
(1. 00.237.4666)

National Multiple Sclerosis Society

1. 00.344.4 67

Spina Bi"da Association of America

1. 00.621.3141

Spinal Cord Injury Information Network

1.205. 34.32 3

Seekwellness

1. 00. 40. 301

United Spinal Association

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Wheel:Life

