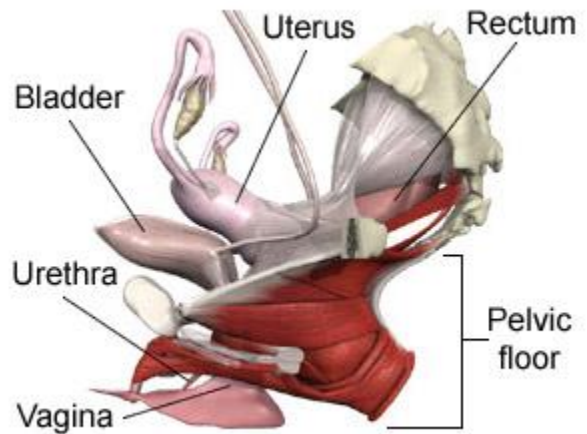


What is the Pelvic Floor?

The pelvic floor is a set of muscles that spread across the bottom of the pelvic cavity like a hammock. The pelvic floor has three openings that run through it, the urethra, the vagina, and the rectum. The functions of the pelvic floor include:

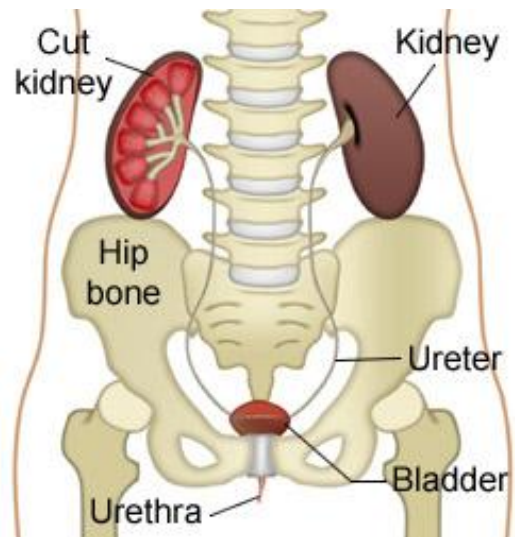
- To support the pelvic organs, specifically the uterus, the bladder, and the rectum
- To help provide sphincter control for the bladder and bowel
- To withstand increases in pressure that occur in the abdomen such as coughing, sneezing, laughing, straining, and lifting
- To enhance the sexual response



What is Urinary Retention?

Urinary retention is the inability to urinate completely, or at all.

Urine is composed of water, electrolytes, and other waste material that has been filtered out of the blood in your kidneys. Urine is then transported via the ureters to your bladder, where it is stored. Once full, the muscles in the wall of your bladder contract forcing urine through the urethra and out of your body. Sphincter muscles and pelvic floor muscles keep the urethra closed to avoid leakage of urine. These muscles relax at the same time the bladder contracts in order to allow urine to exit your body.



Urinary system

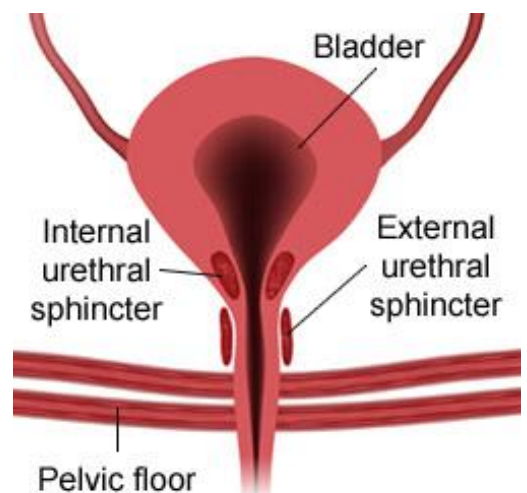
Symptoms of urinary retention vary depending on whether your condition is acute or chronic.

Symptoms of acute urinary retention include:

- Strong urge to urinate but cannot when attempted
- Discomfort or pain in lower abdomen
- Bloated belly

If you suffer from chronic urinary retention you may not always experience symptoms. However, if you do these include the following:

- Mild constant discomfort in lower abdomen
- Difficulty starting urinary stream
- Weak urinary stream
- Increased frequency of needing to urinate
- Your bladder still feels full after urinating
- Overflow incontinence, or when a small amount of urine leaks due to your bladder being full.



Cross-section of the bladder

What Causes Urinary Retention?

There are several causes for urinary retention, these include:

Medications	Many medicines work by lowering nerve signals. These medications can also result in urinary retention. Common examples of medications that may result in urinary retention include: • Antihistamines - used to treat allergies • Anticholinergics and antispasmodics - used to treat stomach cramps, muscle spasms, and urinary incontinence • Tricyclic antidepressants - used to treat anxiety and depression
Surgery	Urinary retention is common after surgery. This is a result of anesthesia being used. Anesthesia is used to block pain signals, but can interfere with the function of your bladder. Additionally, some surgical procedures to the pelvic area may cause swelling of your urinary tract that may interfere with normal urination.
Nerve damage	Urinary retention can result from damage to the nerves between your bladder and brain or to the nerves that supply the muscles of the bladder wall, urinary sphincter or pelvic floor. Some children are born with nerves that do not function properly causing urinary retention. However, other specific causes of nerve damage that can result in urinary retention include: • Spinal cord injury • Vaginal delivery • Multiple sclerosis • Heavy metal poisoning • Pelvic injury • Infections to the brain or spinal cord • Stroke • Diabetes
Obstruction	Urinary retention may result from a blockage anywhere along your urinary tract. Common causes of obstruction resulting in urinary retention include: • Bladder stones • Constipation leading to hard stools pushing into your urethra • Urethral stricture, or scarring in your urethra causing it to close off
Infection	Infection may lead to urinary retention by various methods. A urinary tract infection may cause urinary retention if your urethra becomes inflamed and swells shut. Herpes infections in the pelvic area can interfere with nerve signals, causing urinary retention. Infection at the spinal cord may also cause urinary retention by pressing on the spinal cord and blocking nerve signals.
Weak bladder	If your bladder muscle is weak it may have difficulty squeezing urine out, leading to urinary retention.
Cystocele	A cystocele, or prolapsed bladder, may result in urinary retention. When the bladder falls into the vagina, the abnormal position makes it difficult for all of the urine to leave the bladder, leading to urinary retention.

What are the Complications of Urinary Retention?

Urinary retention can have some negative complications including:

Urinary tract infection	Your urine is normally sterile. However, if it stays in the bladder too long bacteria may grow, causing a urinary tract infection.
Bladder damage	If your bladder is stretched out too much due to urinary retention, then its muscular walls can be damaged causing it to lose its ability to contract.
Kidney damage	If urine backs up to your kidneys, then permanent damage can result.

How is Urinary Retention Treated?

Treatment for urinary retention consists of draining a full bladder in order to prevent permanent damage. This is done by:

Catheterization	A catheter is a small flexible tube that is inserted into your urethra and up to the bladder where it drains the urine out of your body and is collected in a bag. The catheter can be placed for short periods of time or remain inserted for continuous drainage. You may be taught to catheterize yourself if urinary retention is a chronic problem.
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If the catheter cannot reach your bladder via your urethra due to an obstruction, other methods may be used. These methods include:

- **Urethral sounds and dilators:** Sounds and dilators are small instruments that are inserted into the urethra to widen the canal by stretching or by removing extra tissue. Once your urethra is wide enough a catheter will be inserted to drain the bladder.
- **Suprapubic catheterization:** If the catheter cannot reach your bladder via your urethra, one can be placed through the skin and the abdominal wall into your bladder. This will drain the bladder until a procedure can be done to open the urethra.

For chronic problems, the cause of urinary retention must also be addressed. Treatments addressing the cause include:

Surgery	If a cystocele or prolapsed bladder is the cause of urinary retention, then surgery to correct the position of the bladder will help alleviate the problem.
Procedures to correct urethral stricture	Sounds, dilators, and catheters with small balloons on the tip can be used to open urethral strictures by inserting them into the urethra to widen it. Wire stents can be placed into the urethra to keep it open. Another method to open the urethra is a urethrotomy. This is when your surgeon uses a catheter to find the stricture, and then uses a laser or small knife inserted through the catheter to open the stricture.
Addressing constipation	If the cause for urinary retention is due to an obstruction by impacted stool then dietary changes consisting of an increased daily intake of fiber rich foods coupled with plenty of fluids may help.