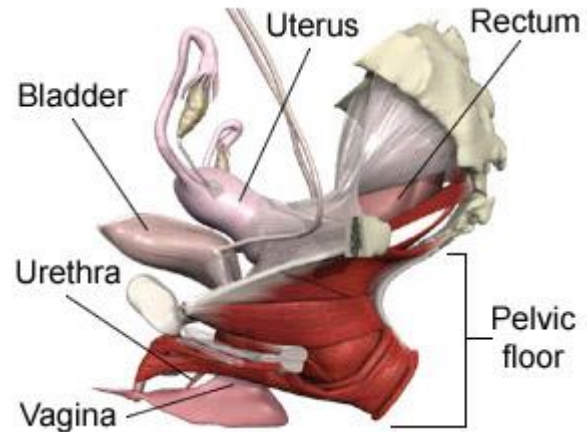


### What is the Pelvic Floor?

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 Interstitial Cystitis?

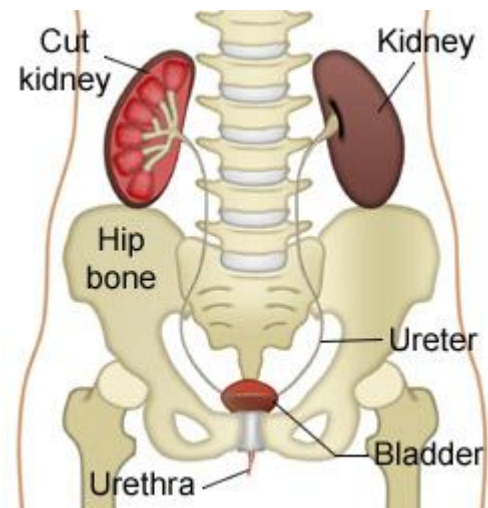
Interstitial cystitis, also called painful bladder syndrome, is a chronic inflammatory condition of the bladder.

The bladder is a hollow, muscular organ that collects and stores urine from the kidneys. Once full, the bladder releases urine through the urethra and out of the body.

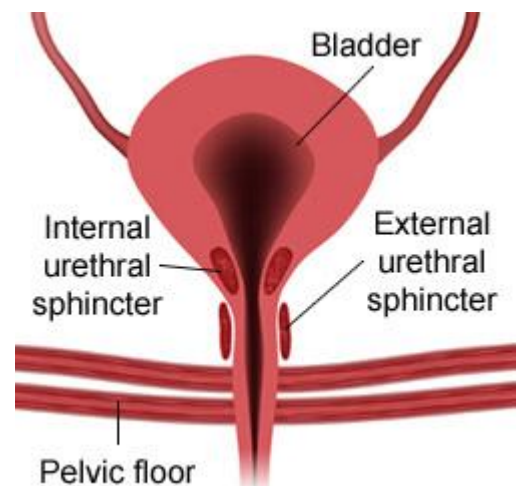
Symptoms and severity of symptoms vary between individuals but include:

- Urinary urgency- the sensation of having to urinate immediately
- Urinary frequency- many individuals will urinate 60 or more times a day and frequently at night
- Painful urination
- Pain as the bladder is filling with urine
- Pain in the lower abdomen
- Pain in the perineum
- Dyspareunia, or painful intercourse
- Symptoms may worsen with menstruation, seasonal allergies, and stress

Interstitial cystitis is a chronic condition that usually has a delayed diagnosis. With interstitial cystitis, you are in chronic pain for prolonged periods of time. This can lead to both psychological and social problems such as anxiety, depression, difficulty traveling, and decreased participation in community activities. Due to the frequent nighttime voiding, you may also suffer from chronic fatigue.



**Urinary system**



**Cross-section of the bladder**

The cause for interstitial cystitis is currently unknown. However recent research has shown that many women with interstitial cystitis have a substance in their urine that prevents growth of the cells that line the inside of the bladder. The normal bladder has a protective layer that keeps toxins in the urine from damaging it. In interstitial cystitis this layer is defective, allowing toxins to get into the wall of the bladder and cause extensive damage. The damage causes severe irritation and can result in scarring of the bladder wall, with some instances of bleeding and ulcers resulting from the irritation.

Other factors that are often discussed but not proven to contribute to interstitial cystitis include an autoimmune reaction, heredity, and allergies.

Other conditions commonly occurring with interstitial cystitis include the following:

- Irritable bowel syndrome
- Fibromyalgia
- Endometriosis
- Food allergies
- Seasonal allergies
- Asthma
- Sinusitis
- Migraines
- Lupus
- Rheumatoid Arthritis
- Incontinence
- Vulvodynia, or Vulvar Vestibulitis

### How is Interstitial Cystitis Treated?

There is not one treatment that works for all patients, however a combination of the following may help:

|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bladder distention</b>                                 | This is usually done as part of the diagnostic process, but often helps improve symptoms. The bladder wall is stretched using water or gas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Bladder instillation with dimethyl sulfoxide</b>       | A medicated solution is placed inside the bladder and held for 15 minutes before being released. This can decrease bladder inflammation and prevent muscle contractions that cause urgency, frequency and pain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Oral medications</b>                                   | Oral medications often prescribed for patient with interstitial cystitis include: <ul style="list-style-type: none"><li>• <b>Pentosan Polysulfate Sodium (Elmiron)</b>- This is the only drug approved by the FDA for the treatment of interstitial cystitis. It usually takes 2 to 4 months for pain relief to set in and 6 months before urinary frequency is decreased.</li><li>• <b>Ibuprofen and Nonsteroidal Antiinflammatories</b>- These medications can help relieve pain.</li><li>• <b>Tricyclic Antidepressants</b>- Some antidepressants can help relax the bladder and decrease pain.</li><li>• <b>Antihistamines</b>- Some types of antihistamines can decrease urinary urgency and frequency .</li></ul> |
| <b>Transcutaneous Electrical Nerve Stimulation (TENS)</b> | Mild electrical pulses are transmitted through the body for a short amount of time two times a day. Electrodes are placed either above the pubic bone, over the sacrum, or in the vagina or rectum. TENS often decreases both pain and urinary frequency.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Sacral Nerve Stimulation</b>                           | A small device is surgically implanted in the low back underneath the skin, stimulating the sacral nerves that are involved with bladder function. This often decreases urinary urgency and frequency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Diet Modifications</b>                                | <p>Eliminating foods that are bladder irritants can help decrease symptoms. Eliminating the foods for two weeks and reintroducing them one by one can help a person identify which foods are irritating their bladder. Common foods that are known to cause bladder irritation include:</p> <ul style="list-style-type: none"> <li>• <b>Carbonated beverages</b></li> <li>• <b>Caffeine</b> (all caffeine, even in teas and chocolates)</li> <li>• <b>Citrus</b></li> <li>• <b>Foods rich in Vitamin C</b></li> <li>• <b>Tomatoes</b></li> <li>• <b>Alcohol</b></li> <li>• <b>Artificial sweeteners</b></li> <li>• <b>Spices</b></li> </ul> |
| <b>Bladder Training</b>                                  | <p>Bladder training involves learning to delay the urge to urinate. You are instructed to breathe deeply and relax when you feel the urge and distract yourself with another activity. The initial goal is to delay urination by 10 minutes, increasing this in intervals. The final goal is to increase the time between trips to the toilet to every 2 to 4 hours. Bladder training also may involve learning to completely empty the bladder, for which double voiding is a technique that is often used. This consists of urinating, waiting a minute and then urinating again.</p>                                                     |
| <b>Pelvic Floor Massage</b>                              | <p>The pain from interstitial cystitis can cause the pelvic floor to spasm and develop trigger points. Massage and trigger point release to the pelvic floor muscles performed vaginally or rectally can help decrease pain.</p>                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Pelvic Floor Muscle Reeducation using Biofeedback</b> | <p>Biofeedback uses special computer equipment that measures muscle activity. You can use this feedback while doing exercises to learn to properly contract and relax the pelvic floor muscles.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Natropathic Treatment</b>                             | <p>Seeking care from a natropathic physician can also ease pain associated with interstitial cystitis. Natropathic physicians are knowledgeable in herbal and homeopathic remedies that may help.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Surgery</b>                                           | <p>Surgery is rarely performed for interstitial cystitis. It often does not decrease the pain and can worsen the symptoms.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |