

## Interstitial Cystitis - Painful Bladder Syndrome

Interstitial cystitis (in-tur-STISH-ul sis-TIE-tis) — also called painful bladder syndrome — is a chronic condition in which you experience bladder pressure, bladder pain and sometimes pelvic pain, ranging from mild discomfort to severe pain.

Your bladder is a hollow, muscular organ that stores urine. The bladder expands until it's full and then signals your brain that it's time to urinate, communicating through the pelvic nerves. This creates the urge to urinate for most people. With interstitial cystitis, these signals get mixed up — you feel the need to urinate more often and with smaller volumes of urine than most people.

Interstitial cystitis most often affects women and can have a long-lasting impact on quality of life. Although there's no treatment that reliably eliminates interstitial cystitis, medications and other therapies may offer relief.

The signs and symptoms of interstitial cystitis vary from person to person. If you have interstitial cystitis, your symptoms may also vary over time, periodically flaring in response to common triggers, such as menstruation, sitting for a long time, stress, exercise and sexual activity.

Interstitial cystitis signs and symptoms include:

- Pain in your pelvis or between the vagina and anus in women or between the scrotum and anus in men (perineum).
- Chronic pelvic pain.
- A persistent, urgent need to urinate.
- Frequent urination, often of small amounts, throughout the day and night. People with severe interstitial cystitis may urinate as often as 60 times a day.
- Pain or discomfort while the bladder fills and relief after urinating.
- Pain during sexual intercourse.

The severity of symptoms caused by interstitial cystitis often varies, and some people may experience periods during which symptoms disappear.

Although signs and symptoms of interstitial cystitis may resemble those of a chronic urinary tract infection, urine cultures are usually free of bacteria. -However, symptoms may worsen if a person with interstitial cystitis gets a urinary tract infection.

### When to see a doctor

If you're experiencing chronic bladder pain or urinary urgency and frequency, contact your doctor.

The exact cause of interstitial cystitis isn't known, but it's likely that many factors are at play. For instance, people with interstitial cystitis may also have a defect in the protective lining (epithelium) of the bladder. A leak in the epithelium may allow toxic substances in urine to irritate your bladder wall.

Other suggested but unproven factors that may contribute to interstitial cystitis include an autoimmune reaction, heredity, infection or allergy.

These factors are associated with a higher risk of interstitial cystitis:

- **Your sex.** Women are diagnosed with interstitial cystitis more often than men. Men can have nearly identical symptoms to those of interstitial cystitis, but they're more often associated with an inflammation of the prostate gland (prostatitis).
- **Your age.** Most people with interstitial cystitis are diagnosed during their 30s or older.
- **Having a chronic pain disorder.** Interstitial cystitis may be associated with having another chronic pain disorder, such as irritable bowel syndrome or fibromyalgia.

Interstitial cystitis can result in a number of complications, including:

- **Reduced bladder capacity.** Interstitial cystitis can lead to a stiffening of the wall of your bladder and reduced bladder capacity, meaning your bladder holds less urine.
- **Lower quality of life.** Frequent urination and pain may interfere with social activities, work and other activities of daily life.
- **Sexual intimacy problems.** Frequent urination and pain may strain your personal relationships, and sexual intimacy is commonly affected.
- **Emotional troubles.** The chronic pain and interrupted sleep associated with interstitial cystitis may cause emotional stress and can lead to depression.

The following may be helpful in diagnosing interstitial cystitis:

- **Medical history and bladder diary.** Your doctor will ask you to describe your symptoms and may also request that you keep a bladder diary, recording the volume of fluids you drink and the volume of urine you pass.
- **Pelvic exam.** During a pelvic exam, your doctor examines your external genitals, vagina and cervix and feels your abdomen to assess your internal pelvic organs. Your doctor may also examine your anus and rectum.
- **Urine test.** A sample of your urine will be analyzed for evidence of a urinary tract infection.
- **Potassium sensitivity test.** In this test, your doctor places two solutions — water and potassium chloride — into your bladder, one at a time. You're asked to rate on a scale of 0 to 5 the pain and urgency you feel after each solution is instilled. If you feel noticeably more pain or urgency with the potassium solution than with the water, your

doctor may diagnose interstitial cystitis. People with normal bladders can't tell the difference between the two solutions.

- **Cystoscopy.** With cystoscopy, your doctor inserts a thin tube with a tiny camera (cystoscope) through the urethra, which allows your doctor to see the lining of your bladder. Along with cystoscopy, your doctor may inject liquid into your bladder to measure your bladder capacity. Your doctor may perform this procedure, known as hydrodistention, after you've been numbed with an anesthetic medication to make you more comfortable.
- **Biopsy.** During cystoscopy under anesthesia, your doctor may remove a sample of tissue (biopsy) from the bladder and the urethra for examination under a microscope. This is to check for bladder cancer and other rare causes of bladder pain.

No simple treatment exists to eliminate the signs and symptoms of interstitial cystitis, and no one treatment works for everyone. You may need to try various treatments or combinations of treatments before you find an approach that relieves your symptoms.

## Physical therapy

Working with a physical therapist may relieve pelvic pain associated with muscle tenderness, restrictive connective tissue or muscle abnormalities in your pelvic floor.

## Oral medications

Oral medications that may improve the signs and symptoms of interstitial cystitis include:

- **Nonsteroidal anti-inflammatory drugs**, such as ibuprofen (Advil, Motrin IB, others) or naproxen (Aleve), to relieve pain.
- **Tricyclic antidepressants**, such as amitriptyline or imipramine (Tofranil), to help relax your bladder and block pain.
- **Antihistamines**, such as loratadine (Claritin, others), which may reduce urinary urgency and frequency and relieve other symptoms.
- **Pentosan (Elmiron)**, which is approved by the Food and Drug Administration specifically for treating interstitial cystitis. How it works is unknown, but it may restore the inner surface of the bladder, which protects the bladder wall from substances in urine that could irritate it. It may take two to four months before you begin to feel pain relief and up to six months to experience a decrease in urinary frequency.

## Nerve stimulation

Nerve stimulation techniques include:

- **Transcutaneous electrical nerve stimulation (TENS).** With TENS, mild electrical pulses relieve pelvic pain and, in some cases, reduce urinary frequency. TENS may work by increasing blood flow to the bladder, strengthening the muscles that help control the bladder or triggering the release of substances that block pain. Electrical wires placed on your lower back or just above your pubic area deliver electrical pulses — the length of time and frequency of therapy depends on what works best for you.
- **Sacral nerve stimulation.** Your sacral nerves are a primary link between the spinal cord and nerves in your bladder. Stimulating these nerves may reduce urinary urgency associated with interstitial cystitis. With sacral nerve stimulation, a thin wire placed near the sacral nerves delivers electrical impulses to your bladder, similar to what a pacemaker does for your heart. If the procedure decreases your symptoms, you may have a permanent device surgically implanted.

## Bladder distention

Some people notice a temporary improvement in symptoms after undergoing cystoscopy with bladder distention. Bladder distention is the stretching of the bladder with water or gas. The procedure may be repeated as a treatment if the response is long lasting.

## Medications instilled into the bladder

In bladder instillation, your doctor places the prescription medication dimethyl sulfoxide (Rimso-50) into your bladder through a thin, flexible tube (catheter) inserted through the urethra. The solution sometimes is mixed with other medications, such as a local anesthetic, and remains in your bladder for 15 minutes. You urinate to expel the solution.

You might receive dimethyl sulfoxide — also called DMSO — treatment weekly for six to eight weeks, and then have maintenance treatments as needed — such as every couple of weeks, for up to one year.

A newer approach to bladder instillation uses a solution containing the medications lidocaine, sodium bicarbonate, and either pentosan or heparin.

## Surgery

Doctors rarely use surgery to treat interstitial cystitis because removing part or all of the bladder doesn't relieve pain and can lead to other complications. People with severe pain or those whose bladders can hold only very small volumes of urine are possible candidates for surgery, but usually only after other treatments have failed. Surgical options include:

- **Fulguration.** This minimally invasive method involves insertion of instruments through the urethra to burn off ulcers that may be present with interstitial cystitis.
- **Resection.** This is another minimally invasive method that involves insertion of instruments through the urethra to cut around any ulcers.
- **Bladder augmentation.** In this procedure, surgeons remove the damaged portion of the bladder and replace it with a piece of the colon, but the pain still remains and some people need to empty their bladders with a catheter many times a day.

Some people with interstitial cystitis find symptom relief from these strategies:

- **Dietary changes.** Eliminating or reducing foods in your diet that are potential bladder irritants may help to relieve the discomfort of interstitial cystitis. Common bladder irritants — known as the "four Cs" — include: carbonated beverages, caffeine in all forms (including chocolate), citrus products and food containing high concentrations of vitamin C. Also consider avoiding similar foods, such as tomatoes, pickled foods, alcohol and spices. Artificial sweeteners may aggravate symptoms in some people.

If you think certain foods may irritate your bladder, try eliminating them from your diet. Reintroduce them one at a time and pay attention to which, if any, affect your signs and symptoms.

- **Bladder training.** Bladder training involves timed urination — going to the toilet according to the clock rather than waiting for the need to go. You start by urinating at set intervals, such as every half-hour — whether you have to go or not. Then you gradually wait longer between bathroom visits. During bladder training, you may learn to control urinary urges by using relaxation techniques, such as breathing slowly and deeply or distracting yourself with another activity.

These self-care measures also may help:

- **Wear loose clothing.** Avoid belts or clothes that put pressure on your abdomen.
- **Reduce stress.** Try methods such as visualization and biofeedback.
- **If you smoke, stop.** Smoking may worsen any painful condition, and smoking contributes to bladder cancer.
- **Exercise.** Easy stretching exercises may help reduce your interstitial cystitis symptoms.

Two complementary and alternative therapies that have shown some promise in treating interstitial cystitis include:

- **Guided imagery.** This type of therapy employs visualization and direct suggestions using imagery to help you imagine healing, with the hope that the body will follow the mind's suggestions.

- **Acupuncture.** During an acupuncture session, a practitioner places numerous thin needles in your skin at specific points on your body. According to traditional Chinese medicine, precisely placed acupuncture needles relieve pain and other symptoms by rebalancing the flow of life energy. Western medical practitioners tend to believe that acupuncture boosts the activity of your body's natural painkillers.

These treatments have not been well-studied for interstitial cystitis, so be sure to discuss the use of these therapies with your doctor.