I have blood in my urine

Blood in the urine is known as hematuria. It is most frequently due to a urinary tract infection, but it should always be carefully evaluated by a physician unless the reason for the bleeding is already known. This is because other causes of hematuria include serious illnesses such as cancer of the kidneys, ureters or bladder, kidney disease and stones in the urinary tract.

All the factors that cause urinary leakage and prolapse are not completely understood, so it is difficult to recommend ways to prevent these problems. Pelvic floor muscle exercises (Kegel's) are probably the best way to prevent stress incontinence and prolapse. Other things that might help include not smoking, avoiding repetitive strenuous activities that involve very heavy lifting (for example lifting 50lb boxes onto a truck several hours a day) and avoiding the use of forceps or vacuum assistance during childbirth. There is much discussion among urogynecologists about how much vaginal childbirth (as opposed to cesarean section) and pregnancy itself predisposes to the development of urinary incontinence and pelvic organ prolapse. It is clear that being pregnant and delivering babies are important contributors. However, it is important to remember that there are women who have never been pregnant who leak urine or have prolapse - and women who have delivered many times who do not. There is no clear answer to this question at this time.

If you are troubled by your uncontrolled urine loss or prolapse you should consider seeing your primary care physician or a urogynecologist who can evaluate the problem and recommend appropriate treatment. Seeing a specialist does not mean that you will have to have surgery. Other suggestions are listed below:

- Avoid heavy lifting (no more than 20 pounds).
- Watch your weight. Being overweight increases pressure on your pelvic floor.
· If you smoke, try to quit. Smoking decreases circulation to your pelvis, and a chronic cough will aggravate pelvic floor prolapse.

· Avoid constipation. Straining with bowel movements increases prolapse. If constipation is a problem for you, talk to us about treatment.

· Learn and practice pelvic floor exercise.

· Hormone replacement may be an option to increase the circulation to your pelvic, and restore some tissue tone.

**What is InterStim Therapy (neuromodulation stimulation)?**

Interstim is a surgical method to control symptoms from a hyperactive bladder. Interstim works by electrically stimulating the spinal cord nerves and causing them to relax. Although this is a surgically implanted device, it does not involve surgery on the pelvic organs or muscles. However, since it uses a permanently implanted device, it is routinely considered for women who have tried and failed all other attempts to correct their bladder spasms. In many people with a hyperactive bladder, the nerves that control the bladder are being activated on their own, without any signals from the brain. As a result, the bladder is almost always in spasm. This unrestrained noise occurs between the spinal cord and the bladder in ways that are poorly understood. Your nerves carry impulses in the form of a weak electrical signal. These signals can be interrupted by the stronger electrical signals provided by the Interstim.

The first part of the Interstim procedure is the temporary placement of a small wire near the base of the spine. We then use a temporary device, about the size of deck of cards, to stimulate the wire to see if the device is effective in decreasing or eliminating the over-activity of the bladder. If it is effective, then we implant a permanent wire and device.

(refer to InterStim website ----- medtronics.com)

**What is Painful Bladder Syndrome or Interstitial Cystitis?**

Interstitial cystitis (IC) is a condition that results in recurring discomfort or pain in the bladder and the surrounding pelvic region. The symptoms vary from case to case and even in the same individual. People may experience mild discomfort, pressure, tenderness, or
intense pain in the bladder and pelvic area. Symptoms may include an urgent need to urinate (urgency), a frequent need to urinate (frequency), or a combination of these symptoms. Pain may change in intensity as the bladder fills with urine or as it empties. Women's symptoms often get worse during menstruation. They may sometimes experience pain with vaginal intercourse (dyspareunia).

Because IC varies so much in symptoms and severity, most researchers believe that it is not one, but several diseases. In recent years, scientists have started to use the term painful bladder syndrome (PBS) to describe cases with painful urinary symptoms that may not meet the strictest definition of IC. The term IC / PBS includes all cases of urinary pain that can't be attributed to other causes, such as infection or urinary stones. The term interstitial cystitis, or IC, is used alone when describing cases that meet all of the IC criteria established by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

In IC / PBS, the bladder wall may be irritated and become scarred or stiff. Glomerulations (pinpoint bleeding caused by recurrent irritation) often appear on the bladder wall. Hunner's ulcers are present in 10 percent of patients with IC. Some people with IC / PBS find that their bladders cannot hold much urine, which increases the frequency of urination. Frequency, however, is not always specifically related to bladder size; many people with severe frequency have normal bladder capacity. People with severe cases of IC / PBS may urinate as many as 60 times a day, including frequent nighttime urination (nocturia).

IC / PBS is far more common in women than in men. Of the estimated 1 million Americans with IC, up to 90 percent are women. There is no evidence that IC / PBS increases the risk of bladder cancer. Researchers also have little information about pregnancy and IC / PBS but believe that the disorder does not affect fertility or the health of the fetus. Some women find that their IC / PBS goes into remission during pregnancy, while others experience a worsening of their symptoms. Studies have found that patients who learn about the disorder and become involved in their own care do better than patients who do not. See the Interstitial Cystitis Association of America's website under "Support Groups" to find a group near you.

(need website address...)

Some of the symptoms of IC / PBS resemble those of bacterial infection, but medical tests reveal no organisms in the urine of
patients with IC / PBS. Furthermore, patients with IC / PBS do not respond to antibiotic therapy. Researchers are working to understand the causes of IC / PBS and to find effective treatments.

In recent years, researchers have isolated a substance found almost exclusively in the urine of people with interstitial cystitis. They have named the substance antiproliferative factor, or APF, because it appears to block the normal growth of the cells that line the inside wall of the bladder. Researchers anticipate that learning more about APF will lead to a greater understanding of the causes of IC and to possible treatments.

Because symptoms are similar to those of other disorders of the urinary bladder and because there is no definitive test to identify IC / PBS, doctors must rule out other treatable conditions before considering a diagnosis of IC / PBS. The most common of these diseases in both genders are urinary tract infections and bladder cancer. IC / PBS is not associated with any increased risk in developing cancer.

The diagnosis of IC / PBS in the general population is based on presence of pain related to the bladder, usually accompanied by frequency and urgency absence of other diseases that could cause the symptoms.

Diagnostic tests that help in ruling out other diseases include urinalysis, urine culture, cystoscopy, biopsy of the bladder wall, distention of the bladder under anesthesia, or urine cytology.

**Cystoscopy Under Anesthesia With Bladder Distention**

The doctor may perform a cystoscopic examination in order to rule out bladder cancer. During cystoscopy, the doctor uses a cystoscope— an instrument made of a hollow tube about the diameter of a drinking straw with several lenses and a light—to see inside the bladder and urethra. The doctor might also distend or stretch the bladder to its capacity by filling it with a liquid or gas. Samples of the bladder and urethra may be removed during a cystoscopy. A biopsy helps rule out bladder cancer. Because bladder distention is painful in patients with IC / PBS, they must be given some form of anesthesia for the procedure.

The doctor may also test the patient's maximum bladder capacity—the maximum amount of liquid or gas the bladder can hold. This procedure
must be done under anesthesia since the bladder capacity is limited by either pain or a severe urge to urinate.

Scientists have not yet found a cure for IC / PBS, nor can they predict who will respond best to which treatment. Symptoms may disappear without explanation or coincide with an event such as a change in diet or treatment. Even when symptoms disappear, they may return after days, weeks, months, or years. Scientists do not know why.

Because the causes of IC / PBS are unknown, current treatments are aimed at relieving symptoms. Many people are helped for variable periods by one or a combination of the treatments.

**Bladder Distention**

Many patients have noted an improvement in symptoms after a bladder distention has been done to diagnose IC / PBS. In many cases, the procedure is used as both a diagnostic test and initial therapy.

Researchers are not sure why distention helps, but some believe that it may increase capacity and interfere with pain signals transmitted by nerves in the bladder. Symptoms may temporarily worsen 24 to 48 hours after distention, but should return to predistention levels or improve within 2 to 4 weeks.

**Bladder Instillation**

During a bladder instillation, also called a bladder wash or bath, the bladder is filled with a solution that is held for varying periods of time, averaging 10 to 15 minutes, before being emptied.

The only drug approved by the U.S. Food and Drug Administration (FDA) for bladder instillation is dimethyl sulfoxide (DMSO, RIMSO-50). DMSO treatment involves guiding a narrow tube called a catheter up the urethra into the bladder. A measured amount of DMSO is passed through the catheter into the bladder, where it is retained for about 15 minutes before being expelled. Treatments are given every week or two for 6 to 8 weeks and repeated as needed. Most people who respond to DMSO notice improvement 3 or 4 weeks after the first 6- to 8-week cycle of treatments. Highly motivated patients who are willing to catheterize themselves may, after consultation with their doctor, be able to have DMSO treatments at home. Self-administration is less expensive and more convenient than going to the doctor's office.
A bothersome but relatively insignificant side effect of DMSO treatments is a garlic-like taste and odor on the breath and skin that may last up to 72 hours after treatment. Blood tests, including a complete blood count and kidney and liver function tests, should be done about every 6 months.

**Oral Drugs**

**Pentosan polysulfate sodium (Elmiron)**

This first oral drug developed for IC was approved by the FDA in 1996. Doctors do not know exactly how it works, but one theory is that it may repair defects that might have developed in the lining of the bladder.

The FDA-recommended oral dosage of Elmiron is 100 mg, three times a day. Patients may not feel relief from IC pain for the first 2 to 4 months. A decrease in urinary frequency may take up to 6 months. Patients are urged to continue with therapy for at least 6 months to give the drug an adequate chance to relieve symptoms.

Elmiron's side effects are limited primarily to minor gastrointestinal discomfort. A small minority of patients experienced some hair loss, but hair grew back when they stopped taking the drug. Researchers have found no negative interactions between Elmiron and other medications.

Elmiron may affect liver function, which should therefore be monitored by the doctor.

Because Elmiron has not been tested in pregnant women, the manufacturer recommends that it not be used during pregnancy, except in the most severe cases.

**Other oral medications**

Aspirin and ibuprofen may be a first line of defense against mild discomfort.

Some patients have experienced improvement in their urinary symptoms by taking tricyclic antidepressants (amitriptyline) or antihistamines. Amitriptyline may help to reduce pain, increase bladder capacity, and decrease frequency and nocturia. Some patients may not be able to take it because it makes them too tired during the
day. In patients with severe pain, narcotic analgesics such as acetaminophen (Tylenol) with codeine or longer acting narcotics may be necessary.

**Transcutaneous Electrical Nerve Stimulation**

With transcutaneous electrical nerve stimulation (TENS), mild electric pulses enter the body for minutes to hours two or more times a day either through wires placed on the lower back or just above the pubic area, between the navel and the pubic hair, or through special devices inserted into the vagina in women or into the rectum in men. Although scientists do not know exactly how TENS relieves pelvic pain, it has been suggested that the electrical pulses may increase blood flow to the bladder, strengthen pelvic muscles that help control the bladder, or trigger the release of substances that block pain.

If TENS is going to help, improvement is usually apparent in 3 to 4 months.

**Diet**

There is no scientific evidence linking diet to IC / PBS, but many doctors and patients find that alcohol, tomatoes, spices, chocolate, caffeinated and citrus beverages, and high-acid foods may contribute to bladder irritation and inflammation. Some patients also note that their symptoms worsen after eating or drinking products containing artificial sweeteners. Patients may try eliminating various items from their diet and reintroducing them one at a time to determine which, if any, affect their symptoms. However, maintaining a varied, well balanced diet is important.

**Smoking**

Many patients feel that smoking makes their symptoms worse. How the by-products of tobacco that are excreted in the urine affect IC / PBS is unknown. Smoking, however, is the major known cause of bladder cancer. Therefore, one of the best things smokers can do for their bladder and their overall health is to quit.

**Exercise**
Many patients feel that gentle stretching exercises help relieve IC / PBS symptoms.

**Bladder Training**

People who have found adequate relief from pain may be able to reduce frequency by using bladder training techniques. Methods vary, but basically patients decide to void (empty their bladder) at designated times and use relaxation techniques and distractions to keep to the schedule. Gradually, patients try to lengthen the time between scheduled voids. A diary in which to record voiding times is usually helpful in keeping track of progress.

**Surgery**

Surgery should be considered only if all available treatments have failed and the pain is disabling. Your doctor may recommend consulting another surgeon for a second opinion before taking this step. Most doctors are reluctant to operate because the outcome is unpredictable: Some people still have symptoms after surgery.

Two procedures—**fulguration** and **resection** of ulcers—can be done with instruments inserted through the urethra. Fulguration involves burning Hunner's ulcers with electricity or a laser. When the area heals, the dead tissue and the ulcer fall off, leaving new, healthy tissue behind. Resection involves cutting around and removing the ulcers. Both treatments are done under anesthesia and use special instruments inserted into the bladder through a cystoscope.

Another surgical treatment is **augmentation**, which makes the bladder larger. In most of these procedures, scarred, ulcerated, and inflamed sections of the patient's bladder are removed, leaving only the base of the bladder and healthy tissue. A piece of the patient's colon (large intestine) is then removed, reshaped, and attached to what remains of the bladder. After the incisions heal, the patient may void less frequently. The effect on pain varies greatly; IC / PBS can sometimes recur on the segment of colon used to enlarge the bladder.

Even in carefully selected patients—those with small, contracted bladders—pain, frequency, and urgency may remain or return after surgery, and patients may have additional problems with infections in the new bladder and difficulty absorbing nutrients from the shortened colon. Some patients are incontinent, while others cannot void at all and must insert a catheter into the urethra to empty the bladder.
A surgical variation of TENS, called InterStim, involves permanent implantation of electrodes and a unit emitting continuous electrical pulses. Many studies of this procedure are now under way.

Bladder removal, called a cystectomy, is another, very infrequently used, surgical option. Once the bladder has been removed, different methods can be used to reroute the urine. Serious potential complications may result from this procedure which may include kidney infection and small bowel obstruction.

Even after total bladder removal, some patients still experience variable IC / PBS symptoms in the form of phantom pain. Therefore, the decision to undergo a cystectomy should be made only after testing all alternative methods and after seriously considering the potential outcome.