Urinary Incontinence in Men

National Kidney and Urologic Diseases Information Clearinghouse

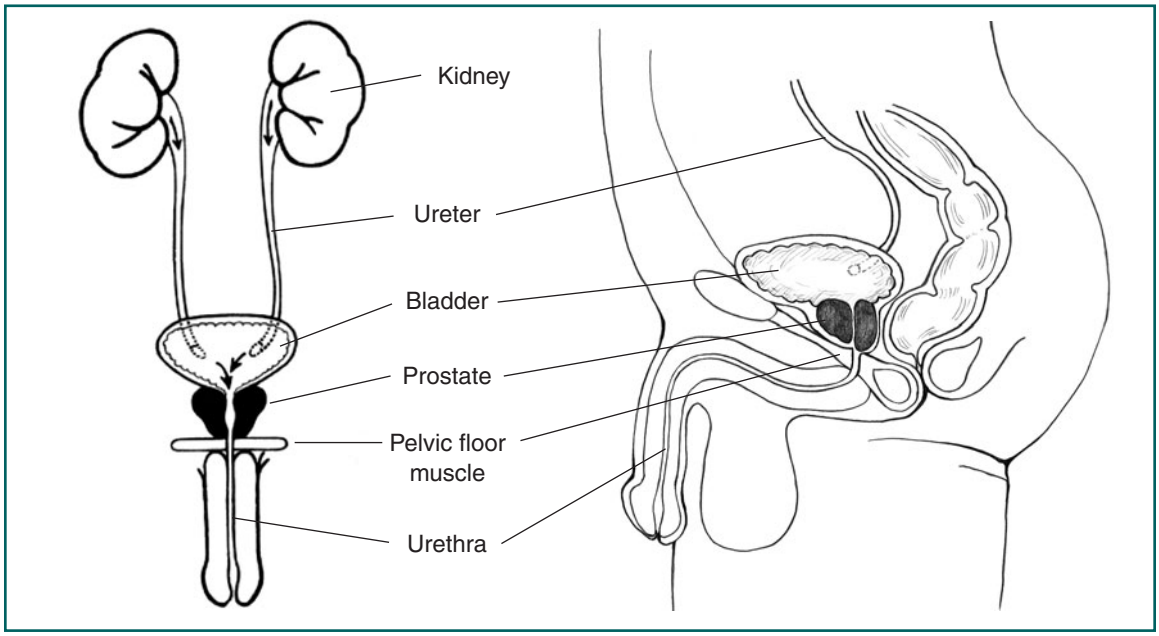
National Institute of Diabetes and Digestive and Kidney Diseases

NATIONAL INSTITUTES OF HEALTH

Urinary incontinence (UI) is the accidental leakage of urine. At different ages, males and females have different risks for developing UI. In childhood, girls usually develop bladder control at an earlier age than boys, and bedwetting—or nocturnal enuresis—is less common in girls than in boys. However, adult women are far more likely than adult men to experience UI because of anatomical differences in the pelvic region and the changes induced by pregnancy and childbirth. Nevertheless, many men do suffer from incontinence. Its prevalence increases with age, but UI is not an inevitable part of aging.

UI is a treatable problem. To find a treatment that addresses the root of the problem, you need to talk with your health care provider. The three forms of UI are

- stress incontinence, which is the involuntary loss of urine during actions—such as coughing, sneezing, and lifting—that put abdominal pressure on the bladder
- urge incontinence, which is the involuntary loss of urine following an overwhelming urge to urinate that cannot be halted
- overflow incontinence, which is the constant dribbling of urine usually associated with urinating frequently and in small amounts



Male urinary tract, front and side views.

U.S. Department of Health and Human Services

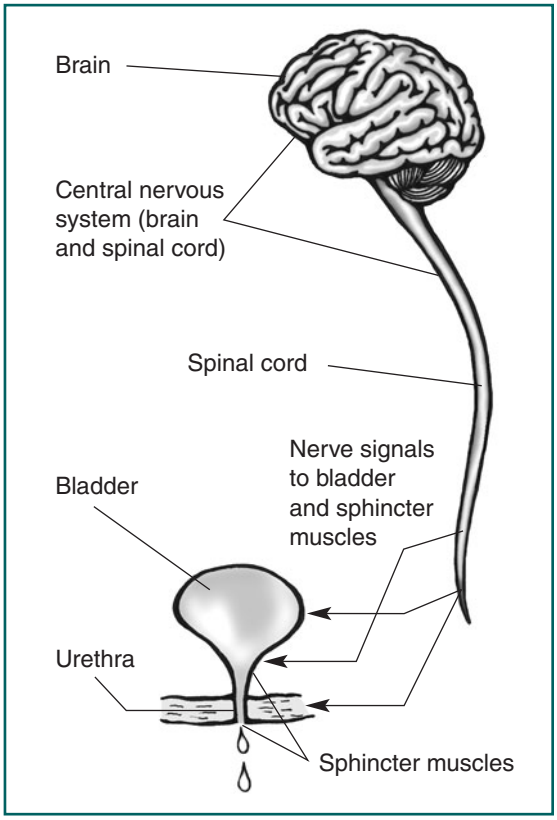
What causes UI in men?

For the urinary system to do its job, muscles and nerves must work together to hold urine in the bladder and then release it at the right time.

Nerve Problems

Any disease, condition, or injury that damages nerves can lead to urination problems. Nerve problems can occur at any age.

- Men who have had diabetes for many years may develop nerve damage that affects their bladder control.
- Stroke, Parkinson's disease, and multiple sclerosis all affect the brain and nervous system, so they can also cause bladder emptying problems.
- Overactive bladder is a condition in which the bladder squeezes at the wrong time. The condition may be caused by nerve problems, or it may occur without any clear cause. A person with overactive bladder may have any two or all three of the following symptoms:
  - *urinary frequency*—urination eight or more times a day or two or more times at night
  - *urinary urgency*—the sudden, strong need to urinate immediately
  - *urge incontinence*—urine leakage that follows a sudden, strong urge to urinate
- Spinal cord injury may affect bladder emptying by interrupting the nerve signals required for bladder control.

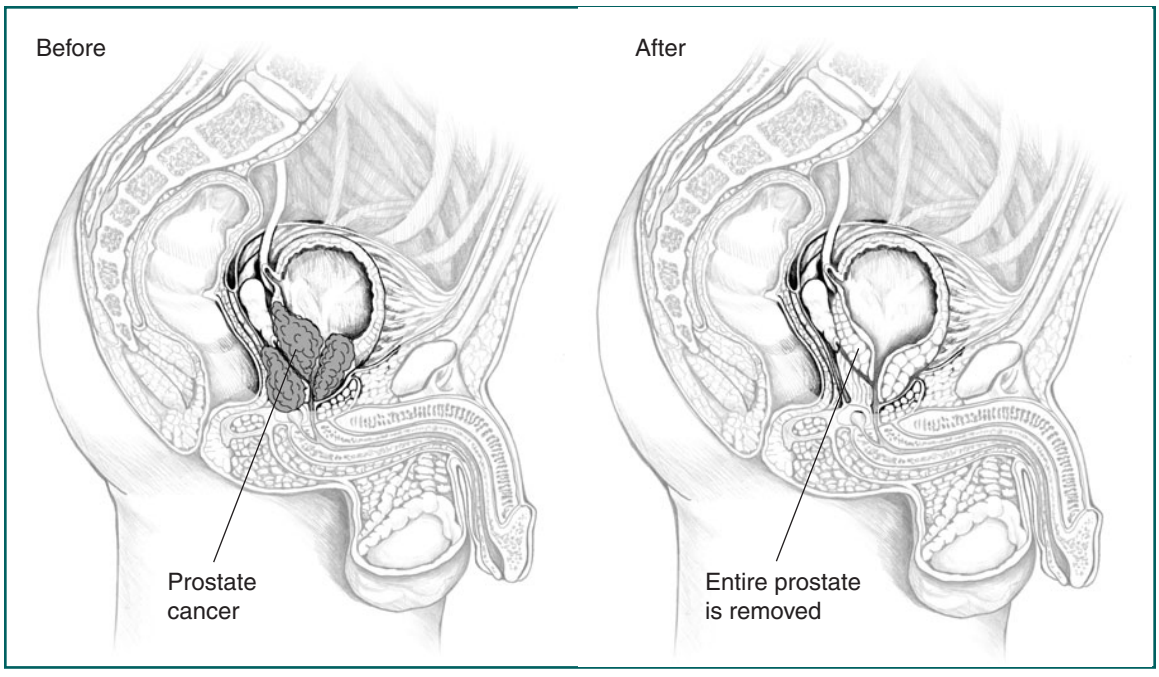


Nerves carry signals from the brain to the bladder and sphincter. Any disease, condition, or injury that damages nerves can lead to urination problems.

Prostate Problems

The prostate is a male gland about the size and shape of a walnut. It surrounds the urethra just below the bladder, where it adds fluid to semen before ejaculation.

- **BPH:** The prostate gland commonly becomes enlarged as a man ages. This condition is called benign prostatic hyperplasia (BPH) or benign prostatic hypertrophy. As the prostate enlarges, it may squeeze the urethra and affect the flow of the urinary stream. The lower urinary tract symptoms (LUTS) associated with the development of BPH rarely occur before age 40, but more than half of men in their sixties and up to 90 percent in their seventies and eighties have some LUTS. The symptoms vary, but the most common ones involve changes or problems with urination, such as a hesitant, interrupted, weak stream; urgency and leaking or dribbling; more frequent urination, especially at night; and urge incontinence. Problems with urination do not necessarily signal blockage caused by an enlarged prostate. Women don't usually have urinary hesitancy and a weak stream or dribbling.
- **Radical prostatectomy:** The surgical removal of the entire prostate gland—called radical prostatectomy—is one treatment for prostate cancer. In some cases, the surgery may lead to erection problems and UI.
- **External beam radiation:** This procedure is another treatment method for prostate cancer. The treatment may result in either temporary or permanent bladder problems.



Radical prostatectomy.

Prostate Symptom Scores

If your prostate could be involved in your incontinence, your health care provider may ask you a series of standardized questions, either the International Prostate Symptom Score or the American Urological Association (AUA) Symptom Scale. Some of the questions you will be asked for the AUA Symptom Scale will be the following:

- Over the past month or so, how often have you had to urinate again in less than 2 hours?
- Over the past month or so, from the time you went to bed at night until the time you got up in the morning, how many times did you typically get up to urinate?
- Over the past month or so, how often have you had a sensation of not emptying your bladder completely after you finished urinating?
- Over the past month or so, how often have you had a weak urinary stream?
- Over the past month or so, how often have you had to push or strain to begin urinating?

Your answers to these questions may help identify the problem or determine which tests are needed. Your symptom score evaluation can be used as a baseline to see how effective later treatments are at relieving those symptoms.

How is UI diagnosed?

Medical History

The first step in solving a urinary problem is talking with your health care provider. Your general medical history, including any major illnesses or surgeries, and details about your continence problem and when it started will help your doctor determine the cause. You should talk about how much fluid you drink a day and whether you use alcohol or caffeine. You should also talk about the medicines you take, both prescription and nonprescription, because they might be part of the problem.

Voiding Diary

You may be asked to keep a voiding diary, which is a record of fluid intake and trips to the bathroom, plus any episodes of leakage. Studying the diary will give your health care provider a better idea of your problem and help direct additional tests.

Physical Examination

A physical exam will check for prostate enlargement or nerve damage. In a digital rectal exam, the doctor inserts a gloved finger into the rectum and feels the part of the prostate next to it. This exam gives the doctor a general idea of the size and condition of the gland. To check for nerve damage, the doctor may ask about tingling sensations or feelings of numbness and may check for changes in sensation, muscle tone, and reflexes.

EEG and EMG

Your doctor might recommend other tests, including an electroencephalogram (EEG), a test where wires are taped to the forehead to sense dysfunction in the brain. In an electromyogram (EMG), the wires are taped to the lower abdomen to measure nerve activity in muscles and muscular activity that may be related to loss of bladder control.

Ultrasound

For an ultrasound, or sonography, a technician holds a device, called a transducer, that sends harmless sound waves into the body and catches them as they bounce back off the organs inside to create a picture on a monitor. In abdominal ultrasound, the technician slides the transducer over the surface of your abdomen for images of the bladder and kidneys. In transrectal ultrasound, the technician uses a wand inserted in the rectum for images of the prostate.

Urodynamic Testing

Urodynamic testing focuses on the bladder's ability to store urine and empty steadily and completely, and on your sphincter control mechanism. It can also show whether the bladder is having abnormal contractions that cause leakage. The testing involves measuring pressure in the bladder as it is filled with fluid through a small catheter. This test can help identify limited bladder capacity, bladder overactivity or underactivity, weak sphincter muscles, or urinary obstruction. If the test is performed with EMG surface pads, it can also detect abnormal nerve signals and uncontrolled bladder contractions.

How is UI treated?

No single treatment works for everyone. Your treatment will depend on the type and severity of your problem, your lifestyle, and your preferences, starting with the simpler treatment options. Many men regain urinary control by changing a few habits and doing exercises to strengthen the muscles that hold urine in the bladder. If these behavioral treatments do not work, you may choose to try medicines or a continence device—either an artificial sphincter or a catheter. For some men, surgery is the best choice.

Behavioral Treatments

For some men, avoiding incontinence is as simple as limiting fluids at certain times of the day or planning regular trips to the bathroom—a therapy called timed voiding or bladder training. As you gain control, you can extend the time between trips. Bladder training also includes Kegel exercises to strengthen the pelvic muscles, which help hold urine in the bladder. Extensive studies have not yet conclusively shown that Kegel exercises are effective in reducing incontinence in men, but many clinicians find them to be an important element in therapy for men.

How do you do Kegel exercises?

The first step is to find the right muscles. Imagine that you are trying to stop yourself from passing gas. Squeeze the muscles you would use. If you sense a "pulling" feeling, those are the right muscles for pelvic exercises.

Do not squeeze other muscles at the same time or hold your breath. Also, be careful not to tighten your stomach, leg, or buttock muscles. Squeezing the wrong muscles can put more pressure on your bladder control muscles. Squeeze just the pelvic muscles.

Pull in the pelvic muscles and hold for a count of 3. Then relax for a count of 3. Repeat, but do not overdo it. Work up to 3 sets of 10 repeats. Start doing your pelvic muscle exercises lying down. This position is the easiest for doing Kegel exercises because the muscles then do not need to work against gravity. When your muscles get stronger, do your exercises sitting or standing. Working against gravity is like adding more weight.

Be patient. Do not give up. It takes just 5 minutes, three times a day. Your bladder control may not improve for 3 to 6 weeks, although most people notice an improvement after a few weeks.

Medicines

Medicines can affect bladder control in different ways. Some medicines help prevent incontinence by blocking abnormal nerve signals that make the bladder contract at the wrong time, while others slow the production of urine. Still others relax the bladder or shrink the prostate. Before prescribing a medicine to treat incontinence, your doctor may consider changing a prescription you already take. For example, diuretics are often prescribed to treat high blood pressure because they reduce fluid in the body by increasing urine production. Some men may find that switching from a diuretic to another kind of blood pressure medicine takes care of their incontinence.

If changing medicines is not an option, your doctor may choose from the following types of drugs for incontinence:

- **Alpha-blockers:** Terazosin (Hytrin), doxazosin (Cardura), tamsulosin (Flomax), and alfzosin (Uroxatral) are used to treat problems caused by prostate enlargement and bladder outlet obstruction. They act by relaxing the smooth muscle of the prostate and bladder neck, allowing normal urine flow and preventing abnormal bladder contractions that can lead to urge incontinence.
- **5-alpha reductase inhibitors:** Finasteride (Proscar) and dutasteride (Avodart) work by inhibiting the production of the male hormone DHT, which is thought to be responsible for prostate enlargement. These 5-alpha reductase inhibitors may help to relieve voiding problems by shrinking an enlarged prostate.
- **Imipramine:** Marketed as Tofranil, this drug belongs to a class of drugs called tricyclic antidepressants. It relaxes muscles and blocks nerve signals that might cause bladder spasms.
- **Antispasmodics:** Propantheline (Pro-Banthine), tolterodine (Detrol LA), oxybutynin (Ditropan XL), darifenacin (Enablex), trospium chloride (Sanctura), and solifenacin succinate (VESIcare) belong to a class of drugs that work by relaxing the bladder muscle and relieving spasms. Their most common side effect is dry mouth, although large doses may cause blurred vision, constipation, a fast heartbeat, headache, and flushing.

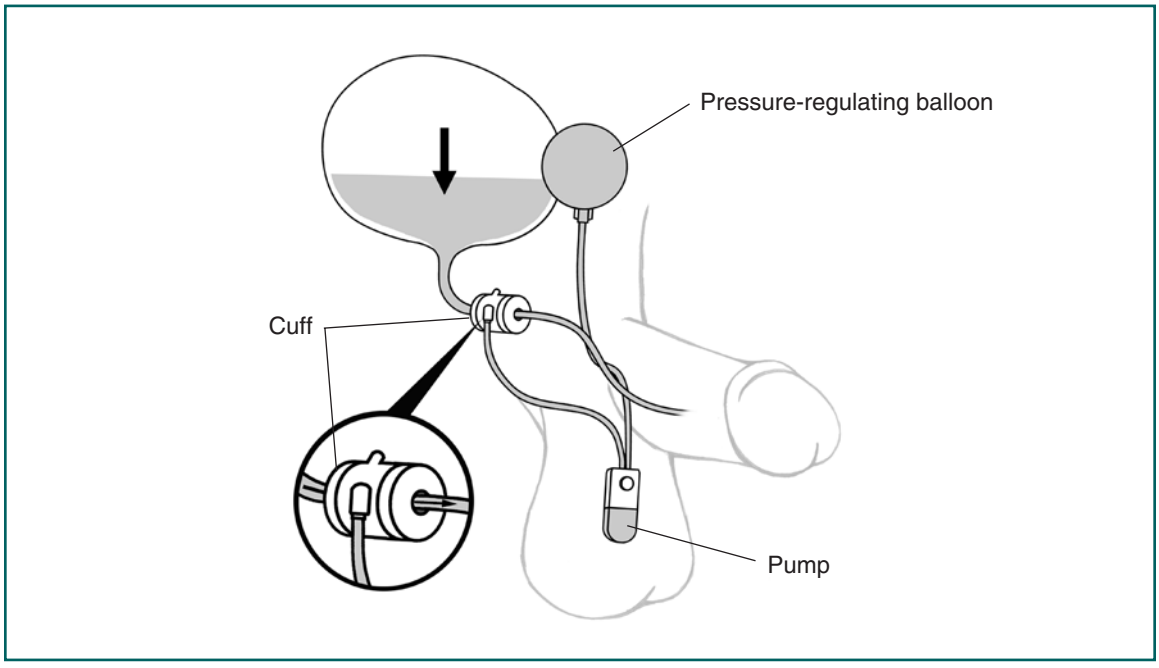
Surgical Treatments

Surgical treatments can help men with incontinence that results from nerve-damaging events, such as spinal cord injury or radical prostatectomy.

- **Artificial sphincter:** Some men may eliminate urine leakage with an artificial sphincter, an implanted device that keeps the urethra closed until you are ready to urinate. This device can help people who have incontinence because of weak sphincter muscles or because of nerve damage that interferes with sphincter muscle function. It does not solve incontinence caused by uncontrolled bladder contractions.

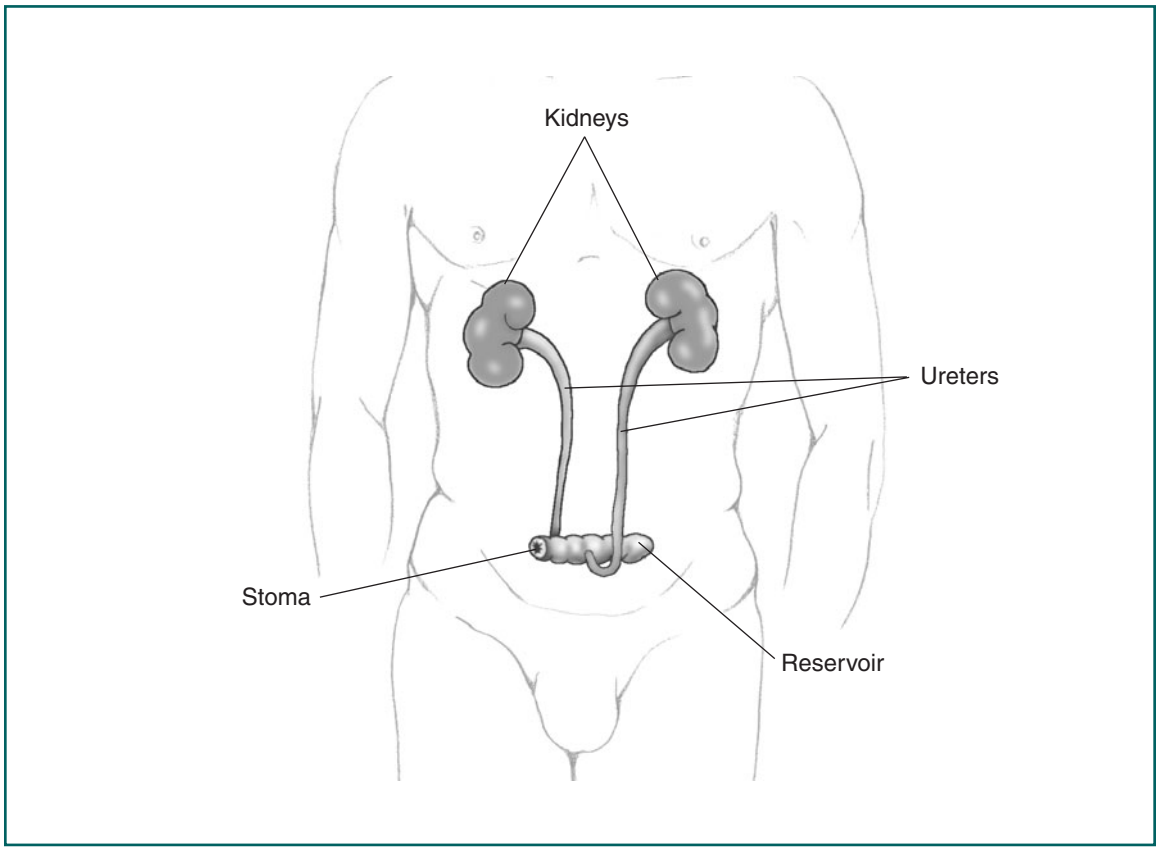
  Surgery to place the artificial sphincter requires general or spinal anesthesia. The device has three parts: a cuff that fits around the urethra, a small balloon reservoir placed in the abdomen, and a pump placed in the scrotum. The cuff is filled with liquid that makes it fit tightly around the urethra to prevent urine from leaking. When it is time to urinate, you squeeze the pump with your fingers to deflate the cuff so that the liquid moves to the balloon reservoir and urine can flow through the urethra. When your bladder is empty, the cuff automatically refills in the next 2 to 5 minutes to keep the urethra tightly closed.

- **Male sling:** Surgery can improve some types of urinary incontinence in men. In a sling procedure, the surgeon creates a support for the urethra by wrapping a strip of material around the urethra and attaching the ends of the strip to the pelvic bone. The sling keeps constant pressure on the urethra so that it does not open until the patient consciously releases the urine.



Artificial sphincter.

- **Urinary diversion:** If the bladder must be removed or all bladder function is lost because of nerve damage, you may consider surgery to create a urinary diversion. In this procedure, the surgeon creates a reservoir by removing a piece of the small intestine and directing the ureters to the reservoir. The surgeon also creates a stoma, an opening on the lower abdomen where the urine can be drained through a catheter or into a bag.



Urinary diversion.

Social Support

UI should not cause embarrassment. It is a medical problem, like arthritis and diabetes. Your health care provider can help you find a solution. You may also find it helpful to join a support group. In many areas, men dealing with the aftereffects of prostate cancer treatment have organized support groups. Other organizations to help people with incontinence exist as well. See the For More Information section.

Hope Through Research

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) has many research programs aimed at finding treatments for urinary disorders. The Medical Therapy of Prostate Symptoms trial, completed in 2003, focused on drug therapies to treat BPH. The NIDDK has also formed a consortium of seven collaborative Prostate Evaluation Treatment Centers and a Biostatistical Coordinating Center to develop and conduct randomized, controlled clinical trials looking at surgical and drug therapies.

For More Information

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or 630–795–1002
Internet: www.ustoo.org

You may also find additional information on this topic using the following databases:

The NIDDK Reference Collection is a collection of thousands of materials produced for patients and health care professionals, including fact sheets, brochures, and audiovisual materials. Visit *www.catalog.niddk.nih.gov/resources.*

MedlinePlus brings together a wealth of information from the National Library of Medicine, the National Institutes of Health, and other government agencies and health-related organizations. MedlinePlus offers easy access to medical journal articles, a medical dictionary and medical encyclopedia, health information in Spanish, hospital and physician directories, drug and supplement lists, interactive patient tutorials, links to hundreds of clinical trials, and the latest health news. Visit *www.medlineplus.gov.*

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Publications produced by the Clearinghouse are carefully reviewed by both NIDDK scientists and outside experts. This publication was originally reviewed by Edward J. McGuire, M.D., University of Michigan Medical Center, and Philippe E. Zimmern, M.D., the University of Texas Southwestern Medical Center at Dallas.

This fact sheet is also available at *www.urologic.niddk.nih.gov.*

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