

Loss of Bladder Control



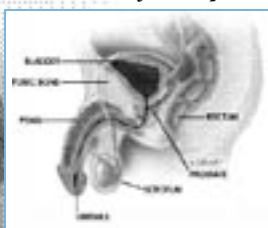
**TEST YOUR
KNOWLEDGE
ABOUT URINARY
INCONTINENCE**

If you are reading this booklet because you or someone you love is affected by the loss of bladder control, a condition called urinary incontinence, you are not alone. Millions of Americans have such a condition, which causes them to leak urine. Reading this booklet can provide you with some knowledge about urinary incontinence. Most importantly, this information can help you become an educated and confident health care consumer.

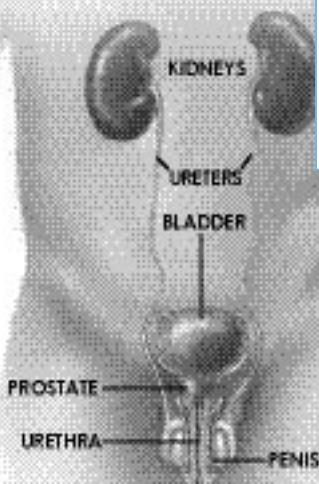
Because incontinence is a symptom, it is important to report this condition to your health care provider or a **urologist**. A urologist is a doctor who specializes in diseases of the male and female urinary tracts and male reproductive system. A

MALE

*Side view,
interior of male pelvis*



*Front view,
interior of male
urinary system*



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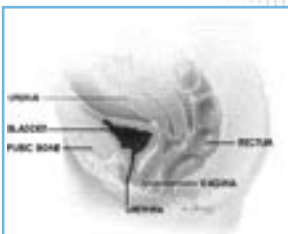
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thorough evaluation can help determine the cause of your incontinence. The information on the following pages will help you describe your symptoms and will direct you to additional educational resources.

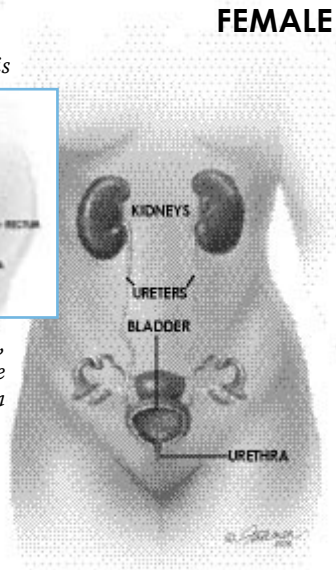
This booklet briefly describes the different types of incontinence. You will learn about the steps that may be taken to determine the reason for your incontinence. Finally, treatments for the problem will be discussed. The diagrams below depict the urinary tracts for the male and female and may help you understand the material that follows.

Today, more than ever before, help is available. Incontinence usually can be cured, treated or adequately managed so that bladder control problems need not interfere with a healthy, productive and active lifestyle.

*Side view,
interior of female pelvis*



*Front view,
interior of female
urinary system*



WHAT IS URINARY INCONTINENCE?

Urinary incontinence is the involuntary loss of urine. It is not a disease but rather a symptom that can be caused by a wide range of conditions.

FACTS ABOUT URINARY INCONTINENCE

- Incontinence is a top reason people enter a nursing home and costs the health care system several billion dollars each year.
- Urinary incontinence is treatable and generally does not require surgery.

WHO IS AFFECTED?

Millions of Americans, mostly women, suffer from incontinence. Although it is more common in women over 60, incontinence affects all ages, both sexes and people of every social and economic level.

SOME POSSIBLE CAUSES AND CONTRIBUTING FACTORS OF INCONTINENCE

- urinary tract or vaginal infections
- effects of medications
- constipation
- weakness of certain muscles in the pelvis
- blocked urethra due to an enlarged prostate

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- diseases and disorders involving the nervous system
- some types of surgery
- diabetes
- delirium
- dehydration
- pregnancy and childbirth

Other causes can be longer lasting, even permanent. These include such conditions as an overactive bladder, weakness of the muscles holding the bladder in place, weakness of the sphincter muscles surrounding the urethra, birth defects, an enlarged prostate, spinal cord injuries, surgery or diseases involving the nerves and/or muscles (e.g., multiple sclerosis, Parkinson's Disease, spinal cord injury and stroke). In some cases, more than one factor causes incontinence in a single individual.

For millions of Americans, incontinence is not just a medical problem. It is a problem that also affects emotional, psychological and social well-being. Many people are afraid to participate in normal daily activities that might take them too far from a toilet. So it is particularly important to note that the great majority of incontinence causes can be treated successfully.

HOW DO THE TYPES OF INCONTINENCE DIFFER?

Incontinence is classified by the symptoms or circumstances occurring at the time of the urine leakage:

Urgency incontinence, often referred to as overactive bladder (OAB), occurs when the bladder contracts without you wanting it to. You may feel as if you can't wait to reach a toilet and you may lose urine on the way. At times, you may leak urine without any warning at all. A bladder can become overactive because of infection that irritates the bladder lining. The nerves that normally control the bladder can also be responsible for an overactive bladder. In other cases, the cause may be unclear. Risk factors include aging, obstruction of urine flow, inconsistent emptying of the bladder and a diet high in bladder irritants (e.g., coffee, tea, cola, chocolate and acidic fruit juices).

Stress incontinence or effort related incontinence may be due to weakened pelvic floor muscles as well as a weak or damaged sphincter or an abnormal urethra. This condition allows urine to leak when you do anything that strains or stresses the abdomen, such as coughing, sneezing, laughing, exercising, lifting, straining, getting out of chair, bending over or even walking. The major risk factor for stress incontinence in women is damage to pelvic muscles that may occur during pregnancy or childbirth. The major risk factor for men is prostate surgery with damage to the sphincter.

Mixed incontinence is a combination of urge

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and stress incontinence.

Overflow incontinence occurs when the bladder does not empty properly and the amount of urine produced exceeds the capacity of the bladder. It is characterized by frequent urination and dribbling and happens when bladder weakness or a blockage prevents normal emptying. An enlarged prostate (the male gland surrounding the urethra) can result in such blockage. For this reason, overflow incontinence is more common in men than in women.

Bladder weakness can develop in both men and women, but it happens most often in people with diabetes, heavy alcohol use or decreased nerve function. It is also seen in women who have a “dropped” (prolapsed) bladder or uterus.

Environmental incontinence (sometimes called functional incontinence) occurs when people cannot get to the toilet or get a bedpan when they need it. The urinary system may work well, but physical or mental disabilities or other circumstances prevent normal toilet use.

Nocturnal enuresis (called bedwetting in children) is incontinence that occurs during sleep and is common in children. For adults, this is usually but not always associated with daytime incontinence.

Transient incontinence is leakage that occurs because of a temporary condition (e.g. medication, infection).

When individuals have two or more types of incontinence, the causes of each must be found and considered in planning appropriate treatment.

Bladder Diary

Name:	Amount Urinated (in ounces)	Amount of Leakage (small, medium, large)	Was Urge to Urinate Present?	Activity Engaged in When Leakage Occurred?	Type and Amount of Fluid Intake
Date: Time of Day:					
6:00 – 8:00 a.m.					
8:00 – 10:00 a.m.					
10:00 a.m. – 12:00 p.m.					
12:00 – 2:00 p.m.					
2:00 – 4:00 p.m.					
4:00 – 6:00 p.m.					
6:00 – 8:00 p.m.					
8:00 – 10:00 p.m.					
10:00 p.m. – 12:00 a.m.					
Overnight					
Other					

WHAT TESTS HELP TO CHARACTERIZE THE DIFFERENT TYPES OF INCONTINENCE?

The first step is to locate a urologist, a specialist who treats such problems. Urologists are interested in and well-informed about treating incontinence. They will want to become familiar with your medical and surgical history, habits and fluid intake and the way in which incontinence affects you.

Be sure to come prepared for your visit with: (1) a list of all the medications you are currently taking, including those you purchase without a prescription; (2) the dates and outcomes of any bladder-related tests or surgical procedures you may have had; and (3) a bladder diary (see page 6) that records information about your urination patterns, urine volume, incontinence episodes, presence of urgency and fluid intake for at least a three-day time period.

Depending upon the type and suspected causes of your particular incontinence, some of the following tests may be performed to help your health care provider choose a treatment that is right for you.

Urinalysis. You will be asked to collect a sample of your urine, which will be examined for the presence of infection, bacteria, blood or other abnormalities.

Post-void residual measurement. This test may be performed to see whether any urine

remains after you have attempted to empty your bladder completely. No more than one or two ounces should remain after urinating (voiding). Measurements may be made by inserting a small, soft tube, called a catheter, into the bladder to drain the remaining urine or by using sound waves, called ultrasound, to look at the bladder. When these special sound waves are directed at an organ, such as the bladder, shadow-like images are produced. These images can determine the amount of urine present in the bladder.

Stress test. While your bladder is full, you may be asked to cough, stand and do other activities to find out whether these stresses on the bladder cause leakage.

Urodynamic testing. Urodynamic tests examine bladder and sphincter muscle function. Using several such tests, your health care provider can find out whether you have normal bladder sensations and capacity and whether your bladder fills and empties in a normal manner. An X-ray test may be used to establish the degree of change in the position of the bladder and urethra during normal urination, coughing or straining.

Cystoscopy. A thin telescope-like instrument, called a cystoscope, is inserted into the bladder through the urethra. This test allows a view of the inside of the bladder and visually checks for problems and rules out cancer and stones.

Ultrasound. This technique can be used to determine the size and shape of the kidneys, bladder and prostate.

If your health care provider suggests testing, he

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or she can describe the exact procedures to be followed. They can also explain how the results will help evaluate and determine appropriate treatment for your specific incontinence.

IS THERE HELP FOR A PERSON WHO LEAKS URINE?

Yes. Many types of treatment are available for incontinence. Your health care provider or a urologist can recommend the treatment that is best for your condition.

Fluid and diet management: This option consists of increasing or reducing your daily fluid intake. Incontinent patients may need to reduce the amount of caffeine or other dietary irritants (e.g., as acidic fruit juices, colas, coffee and tea), while at the same time increase water intake to produce an adequate amount of non-irritating, non-concentrated urine. A recommended water intake is six to eight glasses per day. Reducing or eliminating certain foods (e.g., chocolate, citrus fruits) may also help.

Bladder training: A diary is the starting point for bladder training. You will be instructed to record fluid intake, urination times and when your urinary accidents occur. The diary allows you to see how often you actually urinate and when incontinence occurs. The diary is also used to set time intervals for urination. If you urinate infrequently you will be told to do “timed urination” where you urinate by the clock every one to two hours during waking hours. By achieving regular bladder emptying you should have fewer incontinent episodes. Timed urination

may be effective in patients with both urge and stress incontinence.

Bladder retraining: Bladder retraining is used for patients with urinary frequency. The goal of retraining is to increase the amount of urine that you can hold within your bladder. You will be told to keep a diary to determine your urination interval. You will be asked to gradually increase your urination interval by 15 to 30 minutes. The goal is to have you urinating every two to four hours while awake with less urgency and less incontinence. You can use things like deep breathing at the time of urgency to relax your bladder. This will allow you more time to get to the bathroom.

Pelvic floor muscle exercises: Also known as Kegel exercises, this type of treatment focuses on strengthening the external sphincter muscle and the pelvic muscles. If you are able to contract and relax your pelvic floor muscles, you can improve your strength by doing the exercises regularly. You may require help from a health care provider to learn how to contract those muscles. Biofeedback and electrical stimulation can be used to aid you in doing these exercises. During electrical stimulation, a small amount of stimulation from a sensor placed in the vagina or rectum is delivered to the muscles of the pelvic floor. Like any exercise program, you must continue to do the exercises to maintain the benefit. Patients with stress incontinence benefit from pelvic floor muscle exercises by increasing the closure of the urethra and by increasing the strength of the pelvic floor muscles. You can contract the pelvic muscles with certain activities like coughing and prevent stress incontinence.

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Pelvic floor muscle exercises are effective for urge incontinence, since a contraction of the pelvic floor can interrupt a contraction of the bladder smooth muscle and stop or delay a urinary “accident” or leakage.

Drug therapy: Stress incontinence may be treated with drugs that tighten the bladder neck.

Urgency incontinence is most commonly treated with drugs that have anticholinergic properties. Anticholinergics allow for relaxation of the bladder smooth muscle. A commonly used anticholinergic is oxybutynin chloride. This drug works well to treat urge incontinence but has side effects including dry mouth, confusion, constipation, blurred vision and an inability to urinate. New drugs or new formulations of older drugs have been developed in an effort to reduce side effects. Oxybutynin is newly formulated in a slow-release tablet taken once a day. The slow release of this new drug allows for a steady level of the drug in your blood and fewer side effects. Oxybutynin also comes in a skin patch where the drug is delivered through the skin. Tolterodine tartrate is another anticholinergic that is different than the older ones in that it has less effect on the salivary glands and therefore causes less dry mouth. It is also available in a slow-release, one-a-day form. Three more anticholinergics drugs are now available. They include trospium chloride, solifenacin and darifenacin. All of these drugs have various side effects.

Surgical treatment: In most cases of incontinence, minimally-invasive management (fluid management, bladder training, pelvic floor muscle exercises and medication) is prescribed.

The best results are when these treatments are used together. However, if that fails, surgical treatment may be necessary.

One of the surgical treatments for stress incontinence in men and women is the use of urethral injections of bulking agents to improve the function of the sphincter. The injections are done under local anesthesia and can be repeated. Unfortunately, the cure rate is only 20 to 50 percent and may require multiple injections.

Another surgical alternative for men is to perform a urethral compression procedure with the use of a vascular graft or a segment of cadaveric tissue to compress the urethra in the area between the scrotum and the rectum. The results are preliminary, meaning this has been done only in the last few years. However, the most effective treatment for male incontinence is implantation of an artificial sphincter—it can cure or greatly improve more than 70 to 80 percent of the patients. The device is inserted under the skin and consists of a cuff around the urethra, a fluid-filled, pressure-regulating balloon in the abdomen and a pump in the scrotum which is controlled by the man. The fluid in the balloon is transferred to the cuff, closing the urethra and preventing leakage of urine. Prior radiation, bladder malfunction and/or scar tissue in the urethra may result in a deterioration of the results. Being a mechanical device, it may also require modification over time.

In women, surgery for urinary incontinence (stress incontinence) is generally very successful, but choosing the proper procedure is important.

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Many women with stress incontinence also have other conditions like bladder prolapse, rectocele or uterine prolapse that must be treated at the same time. The procedure of choice will depend on multiple factors, like the need for abdominal surgery for other conditions, the degree of incontinence, the degree of mobility of the urethra and bladder and the surgeon's personal experience.

Anterior repair (Kelly plication) is a common option used by gynecologists but has not given good long-term results. Another option is abdominal surgery (Burch suspension) in which the vaginal tissues are affixed to the pelvic side wall or a Marshall-Marchetti procedure in which the bladder neck area is affixed to the underside of the pelvic bone. The long-term results are good but the surgery requires longer recuperation time and is generally only used when other abdominal surgeries are also required. The most common and most popular surgery for stress incontinence is the sling procedure—which has more than 80 to 90 percent cure or greater improvement. In this operation a strip of tissue is applied under the urethra to provide compression and improve urethral closure. The operation is minimally invasive and patients recuperate very quickly. The tissue used to create the sling can be a segment of the patient's abdominal wall, specially treated fascia, skin from a cadaver or a synthetic material.

For urge incontinence a new and exiting technology is the use of a bladder pacemaker to control bladder function. This technology consists of a small electrode that is inserted in the patient's back, close to the nerve that controls

bladder function. The electrode is connected to a pulse generator and the electrical impulses control bladder function.

In more difficult cases, the bladder can be made bigger using a segment of small intestine. This operation, called augmentation cystoplasty, is very successful in curing incontinence—more than 80 percent of the cases—but its main drawback is the need in 10 to 30 percent of the patients to perform self-catheterization to empty their bladder.

The goal of any treatment for incontinence is to improve your quality of life. In most cases, great improvements and even cure of the symptoms are possible. Medical therapy is usually effective, but not if the patient sips fluids all day and does not time their urination. Similarly, large shifts in weight gain and activities that promote abdominal and pelvic straining put any surgery to the test and cannot be expected to stand the test of time. Positive, long-term outcomes can almost be assured with common sense, proper body mechanics and care.

ABSORBENT PRODUCTS AND DEVICES

For people who are currently participating in a treatment program or whose incontinence cannot be cured, many absorbent products and devices are available to wear. There are also devices for women, called pessaries, placed in the vagina to support the bladder and improve control.

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Many people are being helped every day. No matter how serious the problem, incontinence is a medical condition that can be treated. Each year, tens of thousands of people find the solution that works best for them.

You may wish to ask your urologist for more information on these treatment options.

To find a urologist in your area, visit http://www.UrologyHealth.org/find_urologist/.

Also a number of organizations and associations provide information about diagnosis, treatment and management of urinary incontinence. Two that you may wish to contact for more information are:

National Association for Continence

P.O. Box 1019

Charleston, SC 29402-1019

1-800-BLADDER (1-800-252-3337)

www.nafc.org

The Simon Foundation for Continence

P.O. Box 815

Wilmette, IL 60091

1-800-23SIMON (1-800-237-4666)

www.simonfoundation.org

GLOSSARY

bladder: the hollow, balloon-shaped organ in which urine is temporarily stored before being discharged through the urethra.

bladder diary: a helpful record of how often you pass urine, how much you pass each time and how often you leak urine.

catheter: a thin tube that is inserted through the urethra into the bladder to allow urine to drain or for performance of a procedure or test, such as insertion of a substance during a bladder X-ray.

infection: a condition resulting from the presence of bacteria or other germs.

kidneys: two bean-shaped organs that remove waste from the blood.

pelvic floor muscles: the hammock or sling of muscles in the pelvic floor that normally assists in maintaining continence by supporting the pelvic organs (bladder, uterus and rectum).

prolapse: when the bladder moves from its correct position.

prostate: in men, a walnut-shaped gland that surrounds the urethra at the neck of the bladder. The prostate supplies fluid that forms semen.

sphincter: a circular muscle at the bottom of the bladder which normally prevents urine leakage.

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ultrasound: also referred to as a sonogram. A technique that bounces painless sound waves off organs to create an image of their structure to detect abnormalities.

ureters: two thin tubes that carry urine downward from the kidneys to the bladder.

urethra: a thin tube that carries urine from the bladder out of the body (In men, it also carries semen, and it exits through the end of the penis).

urinary incontinence: a condition in which a person is unable to hold urine and prevent its leakage.

urinary tract (urinary system): the system that makes, stores and releases urine.

urine: a liquid, which is produced by the kidneys, containing waste and water from the blood.

urogynecologist: a doctor who specializes in problems of the lower urinary tract in women.

urologist: a doctor who specializes in diseases of the male and female urinary tracts and the reproductive system in men.

vaginal: relating to the vagina, the female sexual and reproductive opening.

voiding: urinating; often referred to as “peeing” or “passing water.”

The American Urological Association Foundation was established to support and promote research, patient/public education and advocacy to improve the prevention, detection, treatment and cure of urologic disease.

The American Urological Association Foundation provides this information based on current medical and scientific knowledge. This information is not a tool for self-diagnosis or a substitute for professional medical advice. It is not to be used or relied on for that purpose. Please see your urologist or other health care provider regarding any health concerns and always consult a health care professional before you start or stop any treatments, including medications.

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