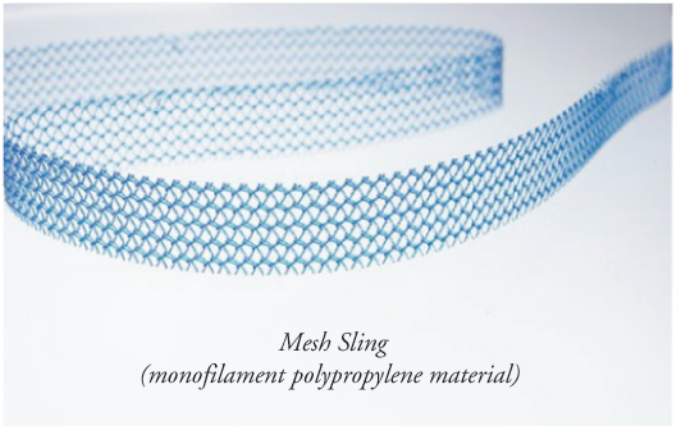
Female Urinary Incontinence

Barry Schlafstein, M.D.

The urinary bladder functions to contain and store urine until there is a convenient time to void or expel this fluid waste from the body. Regular leakage of urine prior to such appropriate time is universally undesired, and is referred to as urinary incontinence. Urinary incontinence is at minimum a nuisance, but quite often it can be distressing, disabling, and can in some instances lead to severe infection. While the problem is costly to society as a whole, it is particularly difficult for the individual patient and her family, and is a leading cause of nursing home admission in the elderly.

In the female there are two main categories of urinary incontinence: genuine stress urinary incontinence (GSUI), and overactive bladder (OAB). GSUI is characterized by leakage of urine with laugh, cough, sneeze, running, jumping, and exercise. OAB is generally distinguished by urinary urgency, leaking on the way to the bathroom; frequency, voiding more than seven times during the day; and nocturia, getting up more than two times at night to void. Along with a thorough history and a focused physical examination, a special office test called urodynamics can help distinguish between these two main causes of urinary stress incontinence. Although some women will have a combination, it is indeed important to distinguish between these two causes of incontinence because treatment will differ.

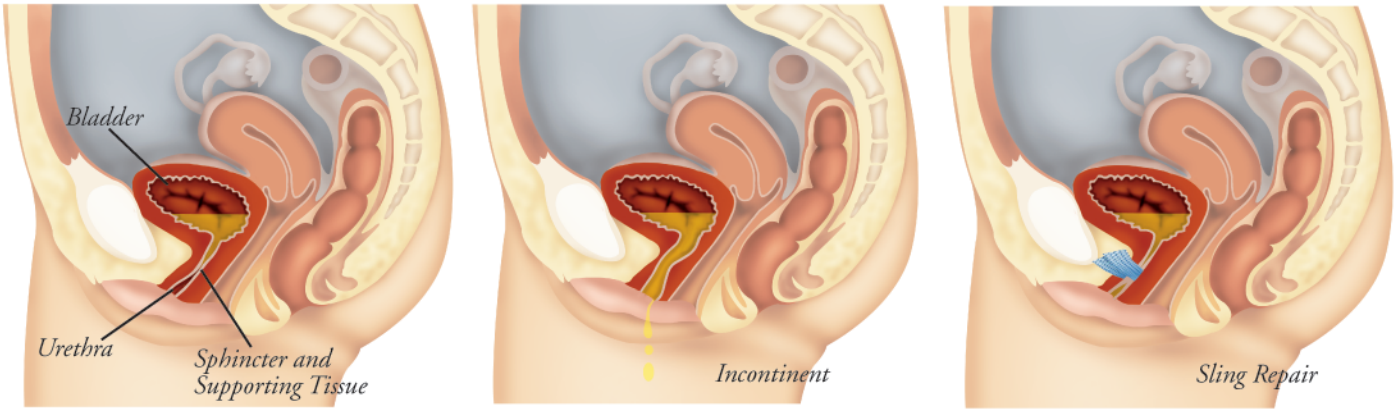
Barry Schlafstein, M.D.



Mesh Sling
(monofilament polypropylene material)

GSUI is caused by weakness of the sub-urethral support structures, an acquired anatomic defect. This can occur as a result of childbirth, menopause, aging, and genetic factors. Treatment is surgical, as is typical with other anatomic defects in the body such as hernias. From the early 1900's to the mid 1990's over 100 different operations had been described in the medical literature to treat GSUI, none of which ever provided consistently excellent, gold standard results. Fortunately we do now have a gold standard procedure, the sub-urethral tension free sling.

First described in Europe in the 1990's, this procedure involves placement of a thin mesh sling under the urethra, allowing restoration of the sub-urethral anatomical support. The technique is minimally invasive, takes less than 30 minutes to perform, is very safe, and remarkably effective in



restoring urinary continence to the female. It is extremely important for the surgeon to be skilled in this procedure, as proper tensioning of the mesh sling is paramount for success. Indeed over-tensioning of the sling can cause urinary retention, a problem potentially worse than incontinence. The monofilament polypropylene mesh used in this procedure is strong, permanent, pre-sterilized, and virtually inert to infection.

I recommend evaluation and treatment for the stress incontinent patient who complains of regularly wearing a pad, is limiting her daily activities, or is carrying extra clothes and undergarments in her purse; preferably fixing the problem before the patient is reduced to wearing adult diapers. Our patients have expressed extreme satisfaction after sub-urethral sling placement, and not infrequently the procedure has been described as 'life-changing'.

OAB is due to spasm of the bladder wall muscle (detrussor muscle). Normally when the bladder is full a signal is sent to the brain along a nerve fiber that responds to stretch only after the bladder reaches its storage capacity (i.e. 'full'). The brain then signals back initiating contraction of the detrussor muscle, allowing the bladder to empty. If the bladder is irritated by noxious stimuli, such as with a bacterial infection, a separate signal is sent to the brain along a different nerve fiber. The brain again responds by sending a signal to contract the detrussor muscle, in this case as an attempt to evacuate the irritating substance, regardless of urine volume. Occasionally this latter type of nerve fiber becomes overactive and fires in response to stretch instead of irritation. In such cases small amounts of urine in the bladder will trigger contraction and cause the sensation of constantly having 'to go'. Although the exact etiology of OAB is uncertain, such up-regulation of nerve fiber activity is a plausible explanation, and may result from bladder prolapse, aging, or lack of hormones.

Kegel's exercise, biofeedback, and behavior modification have been attempted as first line therapy, but most patients will require medication to treat OAB. There are several effective antispasmodic bladder medications available in oral, patch, and gel forms. With subtle differences that can be tailored to the individual patient, all of these medications can have common side effects including dry mouth, blurred vision, and constipation, as well as rare but serious cardiac side effects.

In more difficult OAB cases a virtual bladder pace maker, called Interstim, can be positioned to block the overactive nerve fibers. While reasonable success has been reported with this treatment, this procedure involves implanting a battery under the skin which can be uncomfortable and can get infected. Diagnostic MRI imaging is strictly prohibited after such treatment, and these patients must avoid metal detectors. The most extreme cases of OAB have been treated with complex surgery to enlarge or divert the urinary bladder, the latter requiring an external urine ostomy-bag. We have had success treating the intractable overactive bladder patient with a minimally invasive acupuncture-like technique called Urgent PC. This procedure involves a series of twelve 30-minute office treatments, during which stimulation of a nerve near the ankle reflexively blocks the overactive bladder nerve fibers. Our patients have reported excellent results, and often say that they even enjoy the quiet relaxing time during their treatment visits!

As a patient, it is most important to freely express your symptoms and concerns to your physician. We now have the tools to properly diagnose and treat urinary incontinence. Fortunately, with these medical and surgical advances, women no longer need suffer from inconvenient, embarrassing and potentially debilitating urinary incontinence.

Dr. Barry Schlafstein is a board certified Obstetrician/ Gynecologist. He completed his internship and residency training at The Johns Hopkins Hospital in Baltimore, Maryland. His special interests include minimally invasive gynecologic and pelvic reconstructive surgery, female urinary incontinence, and menopausal hormone replacement. He instructs the 'tension free mesh repair' to gynecologic and urologic surgeons nationally. Dr. Schlafstein can be reached at 912-355-5755.