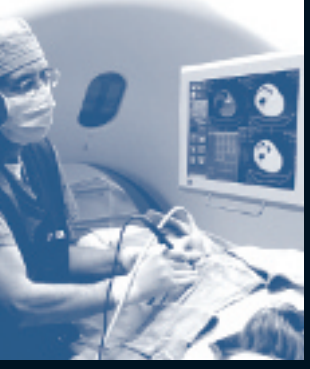


MAYO CLINIC

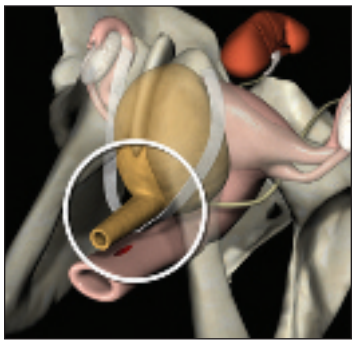
CLINICAL UPDATE

CURRENT TRENDS IN THE PRACTICE OF MEDICINE

SUPPLEMENT

FOCUS ON UROGYNECOLOGY

Outpatient Pubovaginal Surgical Sling for Female Stress Urinary Incontinence



Pubovaginal surgical sling. After sedating the patient, the surgeon makes a small incision in the vagina to access the periurethral area. The sling is placed under the urethra, like a hammock, where it supports the urethra to help stop leaks. The procedure generally takes less than 30 minutes. Patients may resume activities 2 to 6 weeks after the procedure.

Stress urinary incontinence is caused by damaged or weakened muscle of the urethra and bladder neck, sometimes caused during childbirth, and worsened with strenuous sneezing, coughing, exercise, or other daily activities. It is the most common form of incontinence—an estimated 13 million people in the United States experience some degree of loss of bladder control, and women experience it twice as often as men.

In women, stress urinary incontinence may occur simultaneously with pelvic organ prolapse. Patients are generally reluctant to volunteer information about their loss of bladder control to their physicians, out of embarrassment or from the mistaken belief that the condition is both an inevitable consequence of aging and untreatable. Therefore, during routine physicals, physicians should explicitly inquire about the patient's ability to control urination. Extreme cases that interfere with quality of life—and don't respond to more conservative measures—benefit from a safe and effective surgically placed pubovaginal sling to help support the urethra.

At Mayo Clinic, urogynecologists operate on an outpatient basis using a minimally invasive sling procedure that takes about 30 minutes (Figure). Approximately 85% of Mayo Clinic patients experience vast improvement in urine control with a sling. All patients undergo a comprehensive preoperative examination that includes a physical examination, review of voiding diary, urodynamic studies, and cystoscopy. Several types of sling material may be used, including the patient's own fascia, xenograft material, or synthetic material. All have unique risks and benefits for the patient.

Benefits of the Sling

When correctly placed, a sling can restore comfortable and consistent control of the bladder and a sense of personal freedom to patients. Studies show quality-of-life improvements in an estimated 85% of patients from 1 to 5 years postoperatively, although there is some variation in results, depending on the type of sling used.

Possible Complications

Occasionally, voiding problems result from improper sling placement, and a de novo sense of urinary urgency persists. Synthetic slings are associated with a higher rate of erosion or extrusion into the vagina. Perforation of the bladder is uncommon, and perforation of the small bowel is rare. Complications can be avoided or minimized by choosing an experienced surgery team.

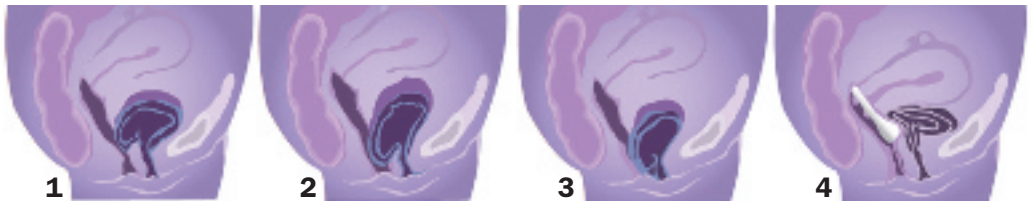
For More Information

To learn more about the treatments described here or to refer a patient for evaluation by a consultant in the Mayo Clinic Urogynecology Clinic, please call 507-266-8680.

Vaginal Pessaries for Pelvic Organ Prolapse

Pelvic organ prolapse refers to the descent and protrusion of the uterus, anterior or posterior vaginal wall, bladder, or rectum into or out of the vaginal canal because of failure of supporting tissues of the vagina and pelvic floor. About half of all women who have given birth vaginally experience some degree of prolapse. Urinary incontinence is frequently associated with this common disorder. With age and advancing prolapse, the severity of urinary incontinence may increase, progressing from an inconvenient leak of urine to a socially limiting and often embarrassing inability to control the bladder.

To meet the needs of these women—a growing number of patients as baby boomers mature—use of a time-tested device is being revived: the pessary. A pessary is a vaginally inserted therapeutic support that rests under the symphysis and sacrum to elevate prolapsing organs or to fill vaginal space. The goal of pessary placement is to stabilize pelvic



A pessary is a vaginally inserted therapeutic support that rests under the symphysis and sacrum to elevate prolapsing organs or to fill the vaginal space. The goal of pessary placement is to stabilize pelvic organ prolapse. 1) Mild prolapse; 2) moderate prolapse; 3) severe prolapse; 4) pessary in place providing support.

organ prolapse and to improve voiding dysfunction and urinary incontinence (Figure).

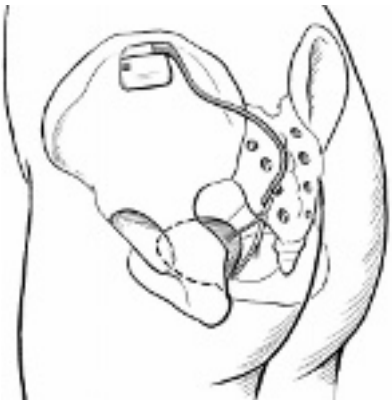
Mayo Clinic urogynecologists emphasize 2 key points for successful management of pelvic organ prolapse by pessary: 1) both physician and nurse practitioner receive training aimed at the correct choice of a pessary style and the fit of the device and 2) patients receive education about pessary insertion, use, care, and maintenance.

Indications for Pessary Use

Surgical solutions such as sacrocolpopexy and colposuspension have traditionally been used to anchor the vagina and may be required in some patients. However, in many patients, pessary use is recommended as first-line therapy. It also is indicated for women who are not surgical candidates or want to delay surgery. Pessaries are not recommended for patients who cannot follow care and maintenance procedures.

Minimally Invasive Neurostimulation Implant to Treat Common Refractory Bladder Control Dysfunctions

When first-line management strategies—medical therapy, lifestyle modification, and pelvic floor and bladder retraining—fail to restore bladder control, a minimally invasive surgical implant procedure for electrical sacral nerve stimulation may be indicated (Figure).



In the 2-stage neurostimulation process, a 4-week trial is performed before the device is permanently implanted. On an outpatient basis, with the patient under IV sedation, an electrical lead is placed near the sacral nerve through the sacral foramen. It is attached to a cable that connects to an external simulator about the size of a stopwatch, which is worn on a belt or waistband. The device provides gentle, painless electrical stimulation of the sacral nerve that normalizes communication between the bladder and the spinal cord, thus restoring balance between facilitatory and excitatory control systems. If the patient's symptoms improve during the course of the trial, the implant follows. Minimally invasive surgery to implant the device also is performed on an outpatient basis. The lead runs under the patient's skin to connect to the battery-operated stimulator implanted in a surgically created pocket just under the patient's skin. Several follow-up appointments may be necessary to check the adequacy of electrical impulses in correcting the problem. Battery life is up to 10 years.

At Mayo Clinic, urogynecologic surgeons see increasing evidence that neurostimulation produces excellent and durable results, with minimal complications. Since US Food and Drug Administration approval in 1997 for 3 types of bladder control problems—urinary urge incontinence, urinary urgency and frequency, and urinary retention—sacral nerve stimulation is becoming the standard of care in medically refractory cases.

Neurostimulation Results

Results from an early large, randomized trial in 1992 of the effectiveness of neurostimulation in controlling refractory urge incontinence showed that, at 6 months after neurostimulator implant, 76% of patients' urge incontinence was improved, as judged by either elimination of incontinence or reduction of leakage events. Nearly half (47%) were completely dry, compared with none in the control group. Preliminary data from Mayo Clinic urogynecologists support this finding.

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