

NON-SURGICAL MANAGEMENT OF STRESS URINARY INCONTINENCE (SUI): PATIENT INFORMATION

Definitive treatment of stress urinary incontinence is a *mid-urethral sling*, an outpatient surgical procedure to provide support to the urethra. In the following situations surgical therapy may not be the option of choice:

- Mild stress incontinence
- Patients who are poor surgical risks
- Women who are considering having more children

The following recommendations can help manage stress urinary incontinence:

1) TREATMENT OF THE INCITING CONDITIONS - SUI is often provoked by increases in abdominal pressure, particularly when asthma causes wheezing, seasonal allergies cause sneezing, or cigarette smoking, bronchitis, sinusitis, or post-nasal drip cause coughing. By properly managing the provoking condition, SUI can be avoided.

2) FLUID MODERATION - Stress incontinence often will not occur until a "critical" urinary volume is reached and, by moderating fluid intake, it will take a longer time to achieve this critical volume. Try to limit your fluid intake to four 8-ounce glasses per day if possible. This will not always be feasible, but any restriction in fluid intake will decrease the volume of urine output. Caffeine and alcohol increase urinary output so it is best to limit intake of these beverages. Caffeine is present in tea, coffee, cola, and chocolate. Additionally, many foods—particularly fruits and vegetables—have a generous amount of hidden water content, so moderation applies best here as well.

3) TIMED VOIDING - Urinating by the "clock" and not by your own sense of urgency will keep your bladder as empty as possible. By emptying the bladder before the "critical" volume (at which SUI occurs) is reached, the incontinence can be controlled. Voiding on a two-hour basis is usually effective, although the specific timetable has to be tailored to the individual. Such "preemptive" voiding has been proven to be a very useful technique insofar as *voluntary* urinary frequency is more desirable than *involuntary* incontinence.

4) WEIGHT LOSS - The burden of extra pounds can worsen SUI by increasing abdominal pressure. Even a modest loss of excess weight may improve SUI.

5) USE OF A TAMPON PRIOR TO ENGAGING IN ACTIVITIES THAT PROVOKE SUI - If your SUI only occurs with predictable vigorous activities such as aerobics, tennis, or golf, you may notice improvement by placing a tampon immediately prior to the performance of such activities. The tampon, when placed in the vagina directly under the urethra, acts a strut to provide urethral

support and can often improve SUI. The thicker tampons are best suited for this purpose, such as the “OB tampon”.

6) PELVIC FLOOR MUSCLE EXERCISES (PFM EXERCISES) - In the 1940's, Dr. Arnold Kegel described exercises of the pubococcygeus and perineal muscles. He found that by increasing the strength of these muscles, urinary control could be improved. The pubococcygeus muscle (the levator ani muscle), present in both men and women, is a muscle that provides support to the bladder, vagina, and rectum.

By contracting this muscle, you can interrupt your urinary stream completely. This muscle is also the muscle that is used to tighten up the vagina and rectum. You must first learn awareness of this muscle and after this step is achieved, exercise it to increase its strength. This is not the muscle of the abdominal wall (rectus abdominus), the muscle of the buttocks (gluteals), or the muscles that bring the thighs together (adductors). A simple means of recognizing the pubococcygeus muscle for females is to put a finger inside your vagina and to squeeze down until the vagina tightens around your finger. A simple means of identifying this muscle for both genders is to start urinating and when about half completed, to abruptly stop the stream.

Once you are fully aware of the location and nature of this muscle, you can then exercise it at times when you are not urinating. These exercises can be done anywhere and at any time and in various positions such as lying down, sitting, or standing. These exercises can be integrated into your daily activities. "Down times", such as sitting in your car at red lights or waiting in line at the supermarket checkout are convenient times to exercise your pelvic floor muscles. For maximum benefit, three sets of these exercises should be done over the course of the day. During each set, 25 repetitions should be performed. If possible, this muscle should be contracted for 5 seconds and then relaxed for 5 seconds. After completion of 25 repetitions of alternating "squeeze, relax" etc., the set is completed. Gradually, the strength of the pubococcygeus muscle will increase.

Given the potential success of these exercises, they are well worth your effort. Please attend closely to those activities and events that previously have resulted in incontinence. By actively squeezing the pelvic floor muscles just before and during these activities, the incontinence can often be avoided. You may notice some soreness in the pelvic floor muscles once you start exercising regularly. Do not worry about this—it is only soreness associated with increased muscle activity. The benefits of these exercises will continue only so long as you do them. "Use it or lose it" applies here. As in any muscle-conditioning program, it may take 6 to 12 weeks of exercising before noting an improvement in urinary incontinence.

7) HORMONAL REPLACEMENT THERAPY - Replacement estrogen therapy in women after menopause with urogenital "atrophy" is often successful in restoring suppleness and tissue integrity to the vagina and the urethra, that may improve stress incontinence.

8) WEIGHTED VAGINAL CONES Weighted vaginal cones are an adjunct to PFM exercises for women using a set of cones that are of identical shape and volume but of increasing weight. You insert the weighted cone into the vagina like a tampon and attempt to retain it for 15 minutes twice daily while walking. As the PFM becomes stronger, the heavier cones can be used.

9) BIOFEEDBACK Biofeedback is an adjunct to PFM exercise in which electronic instrumentation is used to relay auditory and visual feedback information about your PFM contractions. This can enhance your awareness and strength of the PFM. Biofeedback can be obtained at the physical therapy department under the guidance of a physical therapist.

Andrew Siegel, M.D.
May 2014