

PHYSICIAN / HEALTH CARE
PROVIDER POCKET GUIDE

Stress Urinary Incontinence

Urology Care
FOUNDATION™
*The Official Foundation of the
American Urological Association*

1 in 3 women experience Stress Urinary Incontinence.

This pocket guide is intended as a resource for physicians on the complex issue of Stress Urinary Incontinence (SUI). This guide focuses on diagnosis and treatment and is derived from *Stress Urinary Incontinence: A Monograph from the Urology Care Foundation (2011)*, as well as the *AUA Guideline for the Surgical Management of Female Stress Urinary Incontinence: 2009 Update (Appell 2009)*.

The Monograph was developed by the Stress Urinary Incontinence (SUI) Panel chaired by Kathleen Kobashi, MD. Panel members included female incontinence experts Deborah Lightner, MD; Elizabeth R. Mueller, MD; Harriette Miles Scarpero, MD; E. Ann Gormley, MD; Diane Newman, MSN; and Kathryn L. Burgio, PhD. This easy-to-use reference tool will enable busy health care providers to access information on SUI and provide quality care to their patients.

DEFINING STRESS URINARY INCONTINENCE

Definition of SUI

Stress Urinary Incontinence (SUI) is a symptom that refers to leakage of urine during events that result in increased abdominal pressure, such as sneezing, coughing, physical exercise, lifting, bending and even changing positions. There are two principal causes of this urine leakage: Stress Urinary Incontinence and, more rarely, stress-induced detrusor overactivity, which involves involuntary detrusor contractions that are caused by sudden increase in abdominal pressure (AUA SUI Guideline for the Surgical Management of Female Stress Urinary Incontinence).

There are other types of urinary incontinence: mixed incontinence, overflow incontinence, urge incontinence (also known as overactive bladder). However, this guide does not address these types of incontinence.

Symptoms

- Mild incontinence is light leakage with vigorous activity such as exercise or from sneezing, laughing, coughing or lifting.
- Moderate/more severe incontinence is leakage with any movement such as standing up, walking, or bending over.

Risk Factors

Risk factors for SUI include:

- Age
- Caucasian or Hispanic race
- Obesity
- Smoking
- Chronic cough
- Pregnancy and childbirth
- Nerve injuries to the lower back
- Pelvic surgery

Prevalence

The involuntary loss of urine is a common medical condition occurring in about one out of every three women at some time in their lives. Among these women, about six in ten have both SUI and overactive bladder. Of this group, about one in three has SUI. Approximately one-third of women age 30 to 60, and one-third of women under the age of 30 experience urinary incontinence (Hunnskaar 2000). A large meta-analysis supports this estimate, reporting a prevalence for urinary incontinence of approximately 30% in women aged 30 to 60 years, with about half of the cases attributed to SUI (Hampel 1997); another study reported the prevalence of SUI at 5% to 30% in European women (Hampel 2004).

Quality of Life

Stress Urinary Incontinence can have a significant impact on a patient's quality of life, affecting day to day activities, participation in sports, and sexual activity, and can result in embarrassment and isolation. Consequently, it is important for the health care provider to discuss these issues with the patient to determine how bothered she is by the condition and to dispel some common myths associated with SUI. There are many treatment options, and the health care provider should have an in-depth conversation with the patient to counsel her on what the evaluation will entail, the various treatment options, outcomes, and risk of adverse events.

HOW IS SUI DETERMINED?

Initial Evaluation

The initial evaluation should include:

- **Focused history** – the health care provider should ask the patient about duration of incontinence, frequency and intensity of the incontinence, use of protective pads, impact of symptoms on lifestyle, degree of bother experienced by the patient, and patient's expectations of treatment.
- **Focused physical exam** – includes a pelvic exam and assessment of strength of the sphincter or pelvic floor muscles.
- **Assessment of post-void residual urine volume**
- **Focused stress test** – the clinician should ask the patient to cough to demonstrate involuntary urine loss from the urethral meatus. Once the increase in abdominal pressure has subsided, flow through the urethra should subside. Rarely, one may witness urine loss after increases in intra-abdominal pressure. In this scenario, one should suspect that the incontinence is, at least in part, due to an abnormal detrusor contraction (stress-induced detrusor over-activity).
- **Urinalysis, and culture if indicated** – these can rule out infection.

Additional diagnostic studies may be ordered such as urodynamics, pad test, cystoscopy, or imaging. The clinician may request that the patient keep a bladder diary to record urinary leakage episodes to determine the extent of the incontinence.

NON-SURGICAL MANAGEMENT OF SUI

Pelvic floor muscle exercises – vaginal palpation can be used to assist patients in isolating the correct muscles to use in daily exercise. In addition, biofeedback can be helpful for patients. These special computerized devices teach patients how to strengthen the pelvic floor muscles.

Pelvic floor stimulation – through the controlled delivery of stimulation to the nerves and muscles of the pelvic floor and bladder, this treatment can help patients strengthen their pelvic floor.

Lifestyle changes – patients should be counseled about lifestyle changes that can positively impact their Stress Urinary Incontinence. Maintaining a healthy weight and good overall health can improve urinary incontinence. Additionally, smoking cessation is critical in reducing chronic cough which results in pressure on the pelvic floor muscles.

Urinary devices or inserts – occlusive devices include urethral inserts and patches, inserted into the urethra, which absorb pressure inside the pelvis; these may be used during significant activity in order to minimize the risk of urethral irritation and urinary tract infections. A pessary is a small silicone ring inserted into the vagina and held in place by pelvic floor muscles and the pelvic bone. It provides pressure to the urethra which results in better closure at the bladder neck; these can be used as a long-term alternative with few complications.

Medications – there are currently no FDA-approved medications for SUI.

Topical estrogen – this treatment aids post-menopausal women by addressing thinning of the vaginal lining. However, it is not a curative therapy; once the treatment is discontinued, SUI will recur.

SURGICAL MANAGEMENT OF SUI

Commonly recommended surgical options include:

Urethral bulking – in this procedure, biologic or synthetic bulking materials are injected into the layers of the urethra to “bulk” it up and help tighten up the valve muscle. A cystoscope and local anesthesia are used for this office procedure. It is less invasive but also less effective than other surgical options and is typically not used for women who plan to become pregnant in the future or younger women since it does not last long and must be repeated multiple times over the course of one’s life.

Bladder neck suspension – a retropubic suspension suspends the neck of the bladder behind the pubic bone. This is a more invasive surgical procedure that has become less popular with the advent of the less invasive sling procedures.

Sling procedure – slings are the most common surgery for SUI. Strips of material made of biologic or synthetic materials are placed beneath the bladder neck or urethra. After making an incision on the anterior vaginal wall, the sling is placed beneath the urethra to increase bladder outlet resistance, making it more difficult for urine to leak.

Complications from surgery may include:

- Urinary retention
- Gastrointestinal complications
- Infectious complications
- Perioperative genitourinary complications
- Vascular complications
- General medical complications
- Neurological complications

The health care provider should discuss the risk of complications associated with each treatment modality to ensure the patient understands and can make a well-informed decision about the treatment option that is best for her.

SUI Evaluation

If the patient elects surgery, the urinary incontinence specialist will then perform a more complete evaluation to confirm SUI:

- **Validated questionnaire** – one or more validated questionnaires that ask about lifestyle and medical history (Donovon 2005), such as the Incontinence Quality of Life (I-QOL) questionnaire (Patrick 1997), should be completed.
- **Urodynamics** – this is a function test of the lower urinary tract that assesses the storage and emptying ability of the bladder. The basic study involves evaluation of bladder capacity, filling pressures, urethral function, bladder outlet resistance, and bladder emptying ability (post-void residual). Additional parameters that might add to the basic study to provide further information include pressure-flow analysis, electromyelogram, and fluoroscopic/visual imaging of the bladder.
- **Physical exam** – the exam includes a pelvic exam and assessment of the strength of the pelvic floor muscles and to determine the presence and degree of pelvic organ prolapse. Prolapse includes cystocele and uterine prolapse.
- **Pad test** – the patient wears an absorbent pad while exercising, and the weight of the pad is measured.
- **Stress test** – demonstration of leakage with increasing abdominal pressure.

- **Sphincter function** – diagnosed by examination, Valsalva leak point pressure, urethral pressure profile.
- **Degree of urethral mobility** – diagnosed by estimation at time of physical examination, cotton-swab test, or imaging.

The health care provider may perform further testing if there are indications such as concomitant overactive bladder symptoms, prior lower urinary tract surgery, including failed anti-incontinence procedures, known or suspected neurogenic bladder, a negative stress test, abnormal urinalysis such as unexplained hematuria or pyuria, excessive residual urine volume, grade III or greater pelvic organ prolapse, or any evidence of dysfunctional voiding.

Assessment Symptoms

Further examination needs to occur if your patient exhibits any of these symptoms:

- Leaking urine when coughing, laughing, sneezing, exercising or walking
- Leaking on the way to the toilet
- Expressing being bothered by urine leakage
- Ceasing activities because of urine leakage

ONLINE RESOURCES

Additional information on SUI can be found at:

American Urological Association:

www.AUAnet.org

Urology Care Foundation:

www.UrologyHealth.org

It's Time to Talk About SUI:

www.UrologyHealth.org/SUI

NIDDK:

kidney.niddk.nih.gov/kudiseases/pubs/uiwomen/

American Urogynecologic Society:

www.augs.org

National Association For Continence:

www.NAFC.org

Society for Urodynamics & Female Urology:

www.sufuorg.com

The Simon Foundation for Continence:

www.simonfoundation.org

American Congress of Obstetricians and Gynecologists:

www.acog.org

The Urology Care Foundation is committed to advancing urologic research and education. We work with researchers, health care professionals, patients and caregivers to improve patients' lives. The Urology Care Foundation is the official foundation of the American Urological Association (AUA) and was formerly known as the AUA Foundation.

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**IT'S TIME
TO TALK
ABOUT SUI**

Patients and providers can visit **UrologyHealth.org/SUI** for information on SUI and the *It's Time to Talk About SUI* campaign.

To order copies of patient education materials about SUI, incontinence and other urologic conditions, visit **UrologyHealth.org/Order**.

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