

## UNCOVERING HIDDEN INCONTINENCE

Many women are ashamed of the problem – and thus do not often tell their health care providers.

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Urinary incontinence is not a life-threatening condition. Yet, it taxes a person's social, emotional and physical life. Defined as the accidental, involuntary and unintentional loss of urine, urinary incontinence adversely affects as many as 25 million Americans, an estimated three-fourths of whom are women. These numbers, however, may be much higher because incontinence goes unreported by the women who experience it. In fact, an astounding 50 percent of women never mention the problem to their doctors.

Unfortunately, women and their doctors assume that urinary incontinence is inevitable and irreversible. As a result, most cases of incontinence remain untreated. But conservative approaches can dramatically restore a woman's outcomes and quality of life.

### **Position is Everything**

To correctly diagnose incontinence and recommend appropriate treatment, physicians must understand the physiology of lower urinary-tract function. The bladder and urethra form a functioning unit that comprises the lower urinary-tract system. Their combined function is to store urine in the bladder as it slowly fills and to empty the bladder through the urethra at convenient and appropriate times.

Urine that's been filtered through the kidneys travels through the ureters to fill the bladder. The urethras squirt urine into the bladder at a drop or two per minute and fill the bladder to capacity around 500 ml (around two cups). The bladder is unlike other structures in the body because it's free-floating, attached to pelvic area by strings of ligaments that act as guy wires to stabilize it. This flexibility allows for the constant changes in size and shape the bladder undergoes daily. The ureters are attached to the lower portion (base) of the bladder and fill the bladder from the bottom up, expanding the flexible bladder upward. Like a hot-air balloon, the normal bladder lies in folds when empty and stretches and rises as it slowly fills

The bladder and urethra are supported by the levator ani, which are called the pelvic-floor muscles. This group of muscles acts like a hammock to cradle the bladder. Some of these muscles form a u-shaped sling that attaches to the pubic bone in front and extends to the coccyx in back. How securely the bladder rests in this sling depends on the tone and strength of the muscles that hold it.

These muscles also stabilize the urethra and help keep it closed when the muscles contract, preventing leaking. When the bladder is properly positioned in the abdominal cavity, both it and the bladder neck are above the pelvic-floor muscles. As the sling stretches with conditions such as pregnancy, the support provided by the bladder decreases and the base of the bladder and bladder neck fall below the pelvic floor, causing a change in the relationship of the bladder and urethra to their surrounding structures.