In women with urinary incontinence, which management strategies are effective?

**METHODS**

66 studies were included, of which 34 were treatment studies. A Cochrane review of trials in stress, urge, and mixed incontinence reported that pelvic floor muscle training (PFMT) increased self reported cure or improvement more than no treatment (relative risk [RR] 23.0, 95% CI 7.6 to 70.2) or placebo (RR 1.5, CI 1.3 to 1.9). 1 RCT reported cure or improvement more than no treatment (relative risk 1.41, CI 1.29 to 1.54) and in improvement in leakage episodes in 24 hours (WMD −0.56, CI −0.73 to −0.39), but a common adverse effect was dry mouth.

**Surgery.** Several surgical interventions including open retropubic colposuspension and the suburethral sling procedure may be effective for stress incontinence.

**CONCLUSIONS**

In women with urinary incontinence, non-pharmacological treatments including pelvic floor muscle training, electrical stimulation, bladder training, and prompted voiding may be effective. Anticholinergic drugs are effective for urge incontinence, and several surgical interventions (eg, open retropubic colposuspension and the suburethral sling procedure) may be effective for stress incontinence.

**Commentary**

Urinary incontinence has 2 main physiological mechanisms. In urge incontinence, the bladder muscle itself (detrusor) is unstable and starts to contract with small volumes of urine (0.5 cup) without activating the internal sphincter or having the reflex urge to void ignored. Specific anticholinergic drugs and anticholinergic side effects of other drugs are effective in increasing both the detrusor tone and urethral sphincter tone. In stress incontinence, the urethral sphincter has lost its muscle tone, and small bladder volume or pressures allow urine to leak. Surgical interventions altering the shape of the urethra to the bladder may be helpful.

The review by Holroyd-Leduc and Straus shows that evidence for primary prevention of urinary incontinence is for the woman never to deliver any infants; however, if pregnant, delivering by prophylactic cesarean section for infants who are average to large weight appears helpful so that the pelvic muscles are not overstretched for prolonged periods of time. Hysterectomies, medicines, comorbid diseases, age, and race are other factors evaluated independently in the literature and show association with incontinence development.

The non-pharmacological, non-surgical treatments reviewed in this article address general pelvic floor muscle weakness as 1 physiological deficit function in urinary incontinence. This review omitted some methods to improve incontinence that include physical activities such as yoga and Pilates, which can dramatically increase pelvic floor muscle tone, and local oestrogen treatment to increase sphincter tone. Methods that strengthen the pelvic floor muscles are effective if well taught and the patient is motivated to participate. However, often 1 or both components are missing. Primary care clinics may have limited referral capacity for these types of educational services; women may have little or no health insurance to pay for them; and well educated women may weigh the risks and benefits of pelvic floor muscle exercises compared with drug or surgery interventions and decide that the incremental gain from the exercise will not change their improvement with drug or surgical therapy. When possible, these methods should be developed and expertly taught. When not possible, drugs and surgery are the mainstay of treatment options.

Diane M Harper, MD, MPH, MS
Dartmouth Medical School
Hanover, New Hampshire, USA