

Stress and Urge Urinary Incontinence in Women

Normal bladder function is represented by:

- a frequency 4-6 per day (0-1 at night);
- 1-2 cups of urine (250-500mls) are passed;
- voiding can be deferred until convenient;
- urine is passed in a steady continuous stream until bladder is empty; and
- no leakage between visits to the toilet.

There are two main types of urinary incontinence: stress and urge incontinence. In some instances, both types of incontinence can occur though the cause for each is different.

Stress incontinence leads to leakage of urine when the pressure in the abdomen is higher than the sphincter (muscle closing the bladder outlet) pressure. Normally, contraction of the pelvic floor muscles compresses the urethra [bladder outlet] and prevents loss of urine when situations of raised intra-abdominal pressure occur thus preventing urine loss and stress incontinence (1). Urine loss from stress incontinence can happen with sneezing, coughing and during exercise such as lifting, jumping and walking.

Urge incontinence occurs when an uncontrollable need to void urine occurs due to overactivity of the bladder wall muscle. Typically, this occurs as you put the key in the front door or when water is running. There is generally no weakness in the pelvic floor muscles or muscles controlling the bladder outlet. This is also known as overactive bladder syndrome.

Mixed incontinence occurs when there is muscle weakness and uncontrollable need to void.

There is a high incidence of stress and urge incontinence in the presence of chronic low back pain. This has been shown to be due to poor motor control in the local low back and pelvic floor muscles that work together to control continence as well as to support the spine. Both problems are often treated with transverses abdominus exercises otherwise known as core stabilising exercises.

Prevalence of incontinence

Incontinence is a problem to 35.3% of women. Stress Urinary Incontinence is a problem to 20.8%; urge 2.9% and mixed 11.6%. 10.9% of women who have not had babies find stress incontinence a problem and after their first baby 37.4% of women acquire the problem. 51.9% of women aged over 70 have some form of incontinence.

Management of Stress Incontinence:

Pelvic floor muscle exercises are the most effective method of treating stress incontinence (2). The efficiency of the pelvic floor muscle training can be improved with biofeedback (3) that assists in gaining a stronger contraction of the muscles through visual feedback from real time ultrasound imaging of the pelvic floor muscles or a dial or lights indicating increased pressure on a vaginal probe from pelvic floor muscle contraction. Physiotherapists can assist with achieving pelvic floor muscle contractions which many women find hard to localise. Control of continence is not achieved if all the muscles around the abdomen, pelvic floor and hips are contracted during the pelvic floor exercise so localised muscle training is needed to gain effect.

How to Contract the Pelvic Floor Muscles:

When lying on your back or sitting upright and not slumped; to contract the pelvic floor muscles you should gently draw up the muscles of your pelvic floor. The contraction should mainly be felt around the bladder opening. Placing the fingers over that area will allow you to feel the pelvic floor draw up and away from your fingers. During the slow gentle contraction keep breathing normally in and out. Once you can feel the contraction try holding the contraction with the pelvic floor drawn up away from your fingers. Keep breathing. Gradually increase the number of times as well as the duration of holding the contraction (where 10 second holds are recommended) when you practice the PFM contractions each day. Gradually you will be able to do these contractions at any time and when standing as the muscles strengthen. If you can't get a contraction in this way in lying, try blowing a tissue held about 6 inches in front of your mouth so that it flutters a little. Feel the gentle tightening of the muscles with your other hand. Alternately when sitting very upright on a firm chair, lift your arms above your head. Feel the area around the bladder outlet pull up and away from the chair. See if you can hold that pelvic floor contraction when you lower your arms.

To prevent the stress episodes actively contract the pelvic floor before you do a movement that increases your abdominal pressure that leads to leakage. That is before you cough, sneeze, jump or pick up an object. Now you are using the 'knack' to control and prevent incontinence episodes.

By focusing on the anal area when contracting the pelvic floor muscles control of flatus and anal incontinence can be achieved.

Other approaches to treating stress incontinence

There are many types of surgery for stress incontinence and the cause of incontinence determines which surgery is undertaken so accurate diagnosis of cause of stress incontinence is vital. Around 80-90% of women will be cured by their operation. Unfortunately, as time goes by a number of women will get a return of their urine leakage. This is most noticeable 5 to 10 years after surgery. Surgical intervention has been shown to be slightly better than medication management but has not been compared to exercise nor has the long-term effect been investigated (4).

Medications [adrenergic agonists] have limited effect over placebo and have many adverse responses reported in these drug trials (5). Oestrogen used locally as a cream has been reported to provide some control of incontinence but the effect is not long lasting (6).

Management of Urge Incontinence:

- Bladder retraining (7) - deferment to gradually increase bladder capacity;
- Urge control strategies (Pelvic Floor muscle contraction with a hold of the contraction, perineal pressure over the urethral outlet, toe pressure (grip floor with toes), distraction strategies);
- Pelvic floor exercises;
- Remove irritants eg alcohol & tea & coffee;
- Anticholinergic medication to decrease detrusor [bladder wall muscle] over activity (vesicare, ditropan, oxytrol); and
- Neuromodulation S2,3,4 dermatome via Sacral Nerve stimulation implants.

Prolapse – Pooling of urine in the bladder is often a problem where there is a cystocele due to poor bladder support underneath. Leaning the trunk forwards at the hips and not straining to empty the bladder when urinating will help empty the bladder more completely and reduce leakage when standing up after going to the toilet. Success rates for prolapse surgery vary and up to 20-30% of women will require a second operation to treat prolapse in the future. This may be due to the recurrence of an old prolapse or development of a new prolapse.

Pelvic floor muscle exercises also help reduce prolapse in mild to moderate cases. Some adaptation of lifestyle to reduce problem of raised intra-abdominal pressure such as reducing lifting also helps.

Avoiding straining to defecate is also suggested.

Rare causes of incontinence are due to neurological disorders such as multiple sclerosis or spinal cord injury and management in these instances are tailored to the individual woman's needs.

Where to seek further help/ information:

- Australian Physiotherapy Association website: <http://physiotherapy.asn.au>
Then go to Find a Physio and choose a Women's Health & Continence physio close to you.
- Urogynaecology clinic or Physiotherapy Department in a public hospital.

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