# OVERACTIVE BLADDER: URGENCY

**Ashley Kenny**
Women's Health Physiotherapist
*B. Physio (Hons)*
*APA Level 2 Women's Health Physio*

Overactive bladder refers to symptomatic urgency to pass urine, with or without urge incontinence, usually with high frequency and nocturia. It has been found that urinary urgency appears to create the largest impact on quality of life of all the urinary symptoms[1].

Urgency refers to the inability to delay voiding by 5 minutes from initial sensation to void. Alternatively, 'strong urge' is regarded as a normal sensation which occurs as a result of the bladder gradually becoming full over a period, typically experienced once the bladder has filled with 400-550mls.

Patients with urgency will report feeling like they cannot delay toileting and they may have incontinence secondary to this urgency. They may also report that it occurs frequently or as a response to different stimuli or triggers.

## Common Triggers

- Thinking about going to the toilet
- Seeing the toilet
- Hearing running water
- Arriving home after being out
- Putting your key in the front door

## Causes

There are three main causes of overactive bladder:

- **Idiopathic detrusor overactivity** – heightened bladder sensitivity triggering spontaneous detrusor (the muscular component of the bladder) spasms during the storage phase. Heightened bladder sensitivity may occur due to recurrent urinary tract infections and/or exposure to bladder irritants (caffeine, carbonated drinks, artificial sweeteners). These spams may be spontaneous or provoked by exposure to triggers.
- **Neurogenic detrusor overactivity** – disruption to the normal neural mechanisms that enable both bladder relaxation and storage of urine. There are two main categories for neurogenic detrusor overactivity.
  - *Spinal cord damage* which interrupts the afferents sent from the sacral micturition centre to the midbrain, which activates storage or voiding reflexes.
  - *Supraspinal damage (Stroke, Parkinson's Disease, MS)* which inhibits the prefrontal cortexes capacity to modulate storage reflex in the pontine continence centre (PCC) within the brain.
- **Decreased bladder compliance** – reduced compliance reduces the bladder's capacity to expand during filling, even when the muscular components are relaxed. This may be due to pressure from another structure i.e. fibroids, pregnancy, constipation, prolapse or post radiation therapy. This type of urgency occurs as a storage issue, rather than an issue with detrusor spasms.

Patient's may have more than one cause to their urinary urgency and treatment needs to be specific to their cause.

## Assessment Tools

Establishing the cause of the patient's urgency is essential to delivering appropriate intervention. The most common assessment tools used by women's health physiotherapists include;

- **Sensation related bladder diary;** A 48 hour patient reported diary measuring fluid intake, urinary frequency, urine volume and sensation of urge associated with passing urine. A bladder diary quantifies the amount of urge relative to the volume of urine passed and is very useful for identifying the cause of the urgency and guiding treatment techniques. A bladder diary may also assess fluid intake.

- **Vaginal examination;** involves both visual and digital assessment of the pelvic floor through the vagina to assess the position of the pelvic organs and the presence and/or strength and endurance of a pelvic floor contraction. The position of the bladder can be useful in identifying if there is an issue with prolapse reducing bladder compliance, or incomplete bladder emptying.

## Treatment

A combination of behavioural interventions have been shown to enhance the effectiveness of pharmacotherapy for urinary urgency[3]. Interventions will vary depending on the cause of urinary urgency, and most patients will require a combination of interventions.

- **Bladder relaxation strategies** - Deconditions the nervous system in response to different triggers or stimuli, and to assist in down training detrusor overactivity.

- **Lifestyle modification** - Modifying fluid intake (volume and timing) to reduce stretch on bladder and reducing bladder irritants (. e.g. caffeine, artificial sweeteners, smoking and carbonated drinks). Managing constipation is another important factor as rectal distension can contribute to stronger bladder sensations at smaller volumes of urine[2]. Raised BMI is another modifiable factor which may contribute to bladder overactivity.

- **Pelvic floor muscle training** - Strengthening pelvic floor muscles increases urethral closing pressure and improves upward support of the bladder and bladder neck. Pelvic floor contractions during detrusor spasm may have a relaxation effect on the bladder[4]. Down training pelvic floor muscles is important if there is an issue with hypertonic pelvic floor causing obstructed voiding.

- **Bladder drills** - Bladder training involves a pre-determined scheduled voiding regime starting with small intervals and gradually increasing the duration between voids. This technique is effective for reducing the increased nerve signalling that often occurs in idiopathic detrusor overactivity. This allows the bladder to desensitise and not fill to the thresholds that trigger detrusor spasm. Over 3-6 weeks the patient will gradually tolerate storing larger volumes of urine[5].

- **Support pessary** – In the presence of bladder prolapse and incomplete bladder emptying the use of a vaginal pessary may be effective in splinting the bladder in a more optimal position for complete emptying.

- **Electrical nerve stimulation** – Vaginal electrical stimulation (E-stim) or transcutaneous tibial nerve stimulation (TTNS) are effective in treating urge and mixed urinary incontinence. E-Stim may be particularly effective for neurogenic detrusor overactivity in patients who are unable to complete other interventions.

## References


[1] Coyne, K. S., Kvasz, M., Ireland, A. M., Milsom, I., Kopp, Z. S., & Chapple, C. R. (2012). Urinary incontinence and its relationship to mental health and health-related quality of life in men and women in Sweden, the United Kingdom, and the United States. European urology, 61(1), 88-95.

[2] Panayi, D. C., Khullar, V., Digesu, G. A., Spiteri, M., Hendricken, C., & Fernando, R. (2011). Rectal distension: the effect on bladder function. Neurourology and urodynamics, 30(3), 344-347.

[3] Wyman, J. F., Burgio, K. L., & Newman, D. K. (2009). Practical aspects of lifestyle modifications and behavioural interventions in the treatment of overactive bladder and urgency urinary incontinence. International journal of clinical practice, 63(8), 1177-1191.

[4] Yüce, T., Dökmeci, F., & Çetinkaya, Ş. E. (2016). A prospective randomized trial comparing the use of tolterodine or weighted vaginal cones in women with overactive bladder syndrome. European Journal of Obstetrics & Gynecology and Reproductive Biology, 197, 91-97.

[5] Abrams, P., Andersson, K. E., Apostolidis, A., Birder, L., Bliss, D., Brubaker, L., ... & Wein, A. (2018). 6th International Consultation on Incontinence. Recommendations of the International Scientific Committee: evaluation and treatment of urinary incontinence, pelvic organ prolapse and faecal incontinence. Neurourology and urodynamics, 37(7), 2271-2272.

[6] Ugurlucan, F. G., Onal, M., Aslan, E., Erkan, H. A., Beji, N. K., & Yalcin, O. (2013). Comparison of the effects of electrical stimulation and posterior tibial nerve stimulation in the treatment of overactive bladder syndrome. Gynecologic and obstetric investigation, 75(1), 46-52.



physiozest Women's Health

**P: 02 4384 3395**
**F: 02 4311 2345**
**E: admin@physiozest.com.au**
**W: www.physiozest.com.au**

**1/185 The Entrance Road**
**ERINA NSW 2250**