

Urinary incontinence

Urinary incontinence is defined as the involuntary loss of urine from the bladder. Although it is a common condition, most women who suffer from it do not seek help. It is thought that urinary incontinence affects up to 37% of Australian adult women. Although it is commonly associated with pregnancy, childbirth and menopause, urinary incontinence affects women of all ages (although the prevalence increases with age) and is not restricted to women who have borne children – in fact, 12% of Australian women who have never had children and are aged under 30 have incontinence.

Urinary incontinence can have a significant impact on women's lives. They may avoid participating in their favourite sport or even leaving the house due to the risk of urine leakage. Urinary incontinence can also result in negative body image and/or reduced self esteem.

Despite its prevalence, about 70% of people who suffer from urinary incontinence do not seek professional help for their condition. It appears that a combination of embarrassment and the belief that urinary incontinence is a natural consequence of ageing and childbirth deters women from seeking appropriate treatments.

Although common, **urinary incontinence is not normal** and should be addressed in the same way as other health problems, by consulting a health professional. Women should not resort to simply relying on incontinence pads and pants to manage the condition. Treatment for urinary incontinence can be very effective and is often relatively simple.

The urinary system

Urine is a waste product produced by the kidneys when they filter blood. The kidneys constantly produce urine, which trickles down through two tubes (ureters) into the bladder. The bladder is able

to hold 350-500mls of urine, although this tends to reduce with age. Urine leaves the body through the urethra, a tube that leads from the bladder to the outside of the body.

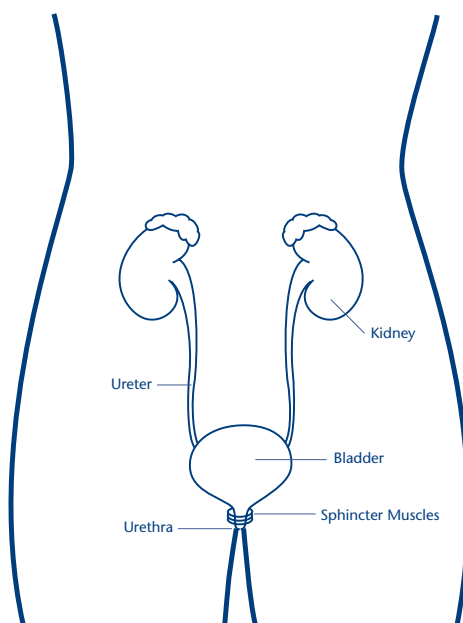


Diagram of female urinary system

Urine stays in the bladder because the muscles encircling the urethra (urethral sphincter muscles) act as a valve, keeping the urethra shut. The urethral sphincter muscles work in conjunction with the pelvic floor muscles, which stretch like a sling from the pubic bone to the base of the spine. If the pelvic floor muscles are weakened the urethral sphincter muscles may not be able to close as tightly, allowing urine to leak.

When the bladder fills, nerve endings in the bladder wall send messages to the spinal cord and then to the brain, creating a sensation to urinate. The brain then sends messages to both the urethral sphincter muscles and the pelvic floor muscles, telling them to relax. The urethral sphincter muscles and the pelvic floor muscles in turn send messages to the bladder muscle (detrusor) which contracts and pumps the urine out through the urethra.

When all the urine has been emptied from the bladder the urethral sphincter muscles and the pelvic floor muscles contract, closing the urethra, and the bladder muscle relaxes. Adults with normal bladder function, who drink two litres of fluid daily, will generally pass urine 4-7 times a day. On average, a person will pass between 250-500mls of urine each time.

Women's Health Queensland Wide Inc (Women's Health) is a not for profit, health promotion, information and education service for women and health professionals throughout Queensland.

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Diagnosis

If you are suffering from urinary incontinence, even if you consider it to be only a 'light' problem, it is important to seek medical help – urinary incontinence is not a normal part of life. Women with incontinence problems are encouraged to visit their general practitioner (GP). Your GP will assist you by providing an accurate diagnosis and by identifying the best treatment options for you. The doctor will start by taking a complete history from you, including a description of your symptoms (frequency, amount of urine lost, when it happens). They may also ask you questions about any previous pregnancies and deliveries; your surgical history; your bowel function; any previous urinary tract infections; and your medication use.

They will conduct an abdominal and pelvic examination to check for any problems in the bladder or pelvic organs, such as tumours or prolapse. You might also be asked to cough in order for them to check if increased pressure on your abdomen results in urine leakage. You might be asked to keep a bladder diary, which involves recording details such as your fluid intake, urination frequency, the degree of urgency you experience when urinating, any leakage incidents and the amount of leakage.

Your doctor may refer you to a continence nurse adviser or continence physiotherapist (you can also see these health professionals as a first point of contact, without a GP referral), a urologist (a doctor who specialises in treating problems of the urinary system) or a urogynaecologist (a gynaecologist who specialises in the female urinary system). In some areas, there are also continence clinics that provide expertise in the investigation and management of incontinence.

There are a range of other tests that may be conducted as part of a urinary incontinence diagnosis. These include:

Midstream urine sample – a urine sample may be collected to check for disease, infection or other abnormalities.

Renal ultrasound – an ultrasound of the urinary system may be performed to check the ureters and to see if there are any issues with residual urine. It may also show other problems such as bladder tumours or fibroids, which can obstruct the urinary tract.

X-ray – if you have a history of urinary tract infections, an x-ray may be performed to rule out any kidney problems. X-rays can also be useful in detecting kidney or bladder stones.

Cystoscopy – a small magnifying instrument (cystoscope) is passed up the urethra to view the inside of the bladder. The cystoscope can be used to detect any inflammation, stones or growths in the bladder or any obstructions in the urethra.

Urodynamic assessment – used to check bladder and urethra function. The assessment measures the rate and pressure of your urine flow as well as your bladder capacity. Urodynamic assessment is particularly appropriate for women who have a combination of urge and stress incontinence (see below). *Urodynamic assessment should always be performed before any surgical intervention is planned to ensure the bladder condition is suitable for surgery.*

The diagnosis will determine what type of urinary incontinence a woman has – stress, urge, a combination of stress and urge, overflow or functional.

Stress incontinence

The most common form of urinary incontinence is stress incontinence and it occurs during activities that increase abdominal pressure (e.g., while coughing, sneezing, laughing, lifting heavy objects or during physical activity). During these activities, increased abdominal pressure can bear down on the bladder, forcing the urethra to open and resulting in the loss of urine.

CAUSES

Stress incontinence most often results from weakened pelvic floor muscles and connective tissue. These structures support the bladder. Their effectiveness can be influenced by pregnancy, childbirth and menopause.

Pregnancy – during pregnancy, hormonal changes and the extra weight and pressure of the baby contribute to weakening. The pelvic floor muscles may also be weakened during childbirth, particularly in a prolonged second stage of labour, if the baby is bigger than 4kg in weight or if instruments are used in the delivery. It is common for women to experience some degree of incontinence during pregnancy and following childbirth. Women who don't experience incontinence during pregnancy may also begin to leak urine following birth – in fact, up to 30% of women who experience no continence issues during pregnancy, experience some form of bladder leakage following birth.

Menopause – at menopause, the reduction in oestrogen levels can contribute to a loss of tone in the urethra, affecting its closing pressure. Reduced oestrogen levels also cause the pelvic floor muscles to become less elastic and therefore may aggravate existing muscle weakness.

Other – being overweight or obese can lead to stress incontinence as the pelvic floor muscles are forced to carry a heavier load. Pelvic floor weakness can also be caused by the straining often associated with constipation or chronic coughing. Smoking is therefore associated with stress incontinence as smokers often suffer from chronic coughing. It has also been found that some women have a genetic predisposition to pelvic floor weakness. Also, it is important to be aware that some exercise programs place more strain on the pelvic floor than others; while it is important to exercise regularly, it is also important to know which exercise options are safe, and to seek professional guidance if you are at risk of pelvic floor problems.

TREATMENT OPTIONS

Pelvic floor exercises – also referred to as Kegel exercises, pelvic floor exercises are designed to strengthen the pelvic floor muscles through actively tightening and lifting them at intervals. Strong, well-activated pelvic floor muscles help support the bladder, uterus and bowel and allow the urethral sphincter to function properly. The exercises are designed to work these muscles and therefore help with control of the bladder and bowel.

You can perform pelvic floor exercises while you are sitting, standing or lying down. You can do them while waiting in a queue, or sitting with good posture at traffic lights or at the office desk, without anyone noticing. The number of exercises required depends on your existing pelvic floor muscle strength. It may take 2-3 months to notice a significant improvement. As with any exercise program, women should start gradually by slowly building up the number of contractions and women should perform the exercises regularly. It is also important to

activate your pelvic floor muscles as part of good sitting and standing postures and before/during activities that place downward pressure on your pelvic floor (i.e., sneezing, coughing or lifting).

To learn how to perform the exercises properly and determine an appropriate individual exercise program it is recommended that you see a physiotherapist with a special interest in pelvic floor dysfunction, who can make sure you are using the correct muscles in the right way. Regular supervision from a physiotherapist will increase the effectiveness of your pelvic floor exercise routine.

Vaginal cones – these can be used to help you identify your pelvic floor muscles. The cones come in different weights and are placed inside the vagina while you are standing up. You then contract your pelvic floor muscles to hold the cone in place and prevent it from slipping. As your pelvic floor muscles become stronger you can increase the weight of the cones you are using.

Biofeedback – biofeedback uses a sensor to measure pelvic floor muscle contractions in order to provide immediate ‘feedback’ to a woman on whether she is performing the exercises correctly. There are two types of sensor. One type is a skin patch that can be worn externally; the other is an internal sensor that is placed in the vagina.

Electrical stimulation – if a woman’s pelvic floor muscles are very weak or the nerve supply to the muscles is damaged, electrical stimulation may be an option. It consists of temporarily placing electrodes in the vagina and/or rectum. Small pulses of electricity generate muscle contractions and can help women identify how to do the contractions themselves.

Electromagnetic stimulation – during this therapy women sit, fully clothed, in a specially designed chair that produces pulsed magnetic fields. These fields cause the pelvic floor muscles to contract and relax. The medical community’s views on this treatment option are currently divided. Further studies are required to assess its long-term effectiveness.

Weight loss – achieving sensible weight loss through a combination of dietary changes and regular exercise can lead to an improvement in urinary incontinence symptoms. Weight loss can reduce the amount of pressure placed on the pelvic floor.

Pessaries – these may be an option for women who have incontinence as a result of genital prolapse, but for whom surgery or other treatments are unsuitable (e.g., elderly women). Pessaries are placed in the vagina, where they help re-position the bladder and urethra, limiting the leakage of urine. Pessaries must be fitted by a medical professional. Pessaries do not deal with the underlying cause of the incontinence and they can cause irritation and increase the risk of urinary infections.

Oestrogen therapy – there is evidence to suggest that topical oestrogen creams may improve continence in women. While oestrogen creams may be helpful, results from a recent large trial found that oral hormone replacement therapy (HRT) actually increases a woman’s risk of urinary incontinence and may worsen symptoms in women with incontinence. Oral HRT should not be used to treat urinary incontinence.

Urethral injections – substances such as collagen, fat or synthetic materials can be injected into the tissues around the urethra to ‘bulk up’ the area and tighten the seal of the urethra. Urethral injections may need to be topped up and can be costly. They do, however, provide

an alternative for women who are unable or do not wish to have surgical treatment.

SURGICAL TREATMENT OPTIONS

Generally, surgery for stress incontinence aims to reposition the bladder and urethra to their normal positions and/or provide the bladder with support. There are two main surgical approaches: colposuspension and sling procedure.

Colposuspension – this procedure involves the bladder neck being lifted back to its proper position. The front wall of the vagina (where the urethra is located) is lifted and stitched to strong ligaments near the pubic bone. The most popular type of colposuspension procedure is Burch colposuspension, which can be performed both abdominally and laparoscopically (key-hole surgery).

Sling procedure – in this procedure, a piece of fascia (strong tissue that covers the body’s muscles) or a synthetic material such as mesh tape, is placed under the urethra like a hammock to support it. Some sling procedures are performed while you are under a general anaesthetic, while others can be done using a regional anaesthetic. The procedure generally requires small incisions in the abdomen and/or vagina.

Surgery should only be considered after you have trialled conservative treatments and undergone a urodynamic assessment to ensure the diagnosis is correct and your condition is favourable to surgical correction. Success rates and risks vary for different procedures and so you should discuss this with your doctor prior to surgery. Surgery may not result in a complete resolution of incontinence symptoms. Surgery is generally not performed unless a woman is not planning any further pregnancies, as pregnancy will impact the ongoing results.

Urge incontinence

Urge incontinence consists of a sudden and urgent desire to urinate and the inability to hold the urine until a toilet is reached. It is usually caused by the bladder muscle contracting involuntarily. Urge incontinence is sometimes also referred to as overactive bladder or detrusor instability. Women with urge incontinence may have to go to the toilet very frequently.

CAUSES

Poor bladder habits – Urge incontinence can be associated with poor bladder habits. As children we are often instructed to go to the toilet when told (e.g. ‘before we leave’), rather than when there is a need. Women often continue to do this in adulthood, going to the toilet ‘just in case’. Going to the toilet when it is not really required can irritate the bladder muscle, causing it to spasm before the bladder is full. This results in the bladder becoming less able to hold a normal quantity of urine. Also, as we age our bladders are able to hold less urine.

Other – Nerve damage, neurological conditions (multiple sclerosis, Parkinson’s disease), urinary tract infections, stones in the urinary tract, tumours, prolapse and uterine fibroids can also cause urge incontinence, as can some medications and previous incontinence surgery. Interstitial cystitis, a severe and chronic pain syndrome affecting the bladder, can also result in urge incontinence. Certain food and beverages can cause irritation to the bladder, exacerbating urge incontinence. Caffeine, alcohol, artificial sweeteners, carbonated beverages, citrus juices and citrus fruit, or highly spiced foods, tomatoes

and tomato-based products are most likely to cause irritation. Similarly, a low fluid intake causes the urine to become very concentrated, which can irritate the bladder.

TREATMENT OPTIONS

Bladder retraining – a woman's control of her bladder can be improved through training it to hold more urine. Bladder retraining includes timed deferment (resisting the urge to urinate for a specific period of time) and timed voiding (urinating to a schedule and gradually increasing the length of time between toilet visits). A bladder diary is often used to assist women to keep track of their progress. It may take up to three months of bladder retraining before there is a significant improvement.

Urge control techniques – before commencing a bladder retraining program women should learn several urge control techniques to help reach the toilet dry. These include pelvic floor contraction; distraction (thinking or doing other things to take the focus away from the urge to urinate); applying pressure to the clitoris or perineum (by using hand pressure, a rolled towel, the corner of a table); toe curling; squeezing the buttocks; drawing in the lower abdomen; and breathing exercises. Women may also wish to use incontinence pads and pants during the bladder retraining phase to build confidence in their ability to defer going to the toilet.

Other options – pelvic floor exercises, electrical stimulation and electromagnetic stimulation are also used in the treatment of urge incontinence (see stress incontinence treatment section above). Women can also try limiting their intake of caffeine and other bladder irritants.

Medication – a variety of medications are used in the treatment of urge incontinence. The most widely used are anticholinergics. They work by inhibiting bladder contractions, which delays the urge to urinate. Side effects can include dry mouth, constipation, blurred vision and palpitations. Newer anticholinergics tend to have fewer side effects. These medications are often used in combination with bladder training techniques.

Botox injections – if medication has not been successful, botulinum toxin (or botox) injections may be recommended. During the procedure, botox is injected into the bladder muscle while you are under a local or general anaesthetic. A cystoscopy is performed first. This procedure enables your doctor to view the interior of your urethra and bladder. It involves the doctor inserting a thin wire-like instrument into your bladder, through your urethra. The results of botox injections generally last from 6 to 10 months, before repeat injections are required.

Combination stress and urge incontinence

Women often have a combination of both stress and urge incontinence. The contributing factors for each condition can be the same or they may be completely unrelated. Treatment options need to therefore address both forms of incontinence.

Overflow incontinence

Overflow incontinence occurs when the bladder cannot empty completely. This results in an over distended (swollen) bladder. When the bladder is swollen, the urethral sphincter muscles eventually open, causing urine to leak. Women with overflow incontinence may experience a weak, dribbling stream of urine, or feel that they need to empty their bladder but cannot. The residual urine in the bladder can cause recurrent bladder infections.

CAUSES

Overflow incontinence may occur due to an obstruction or blockage to the bladder opening (stones, tumour, uterine fibroid, prolapse or a full bowel due to constipation). Damage to the nerve supply to the bladder, medical conditions such as multiple sclerosis or diabetes, drugs and recent gynaecological surgery can also result in people being unable to sense their bladder is full.

TREATMENT

In some cases, the obstruction or blockage to the bladder opening can be corrected (i.e., removal of stone, tumour or fibroid, etc.). In cases where the cause of the overflow incontinence cannot be corrected, intermittent self catheterisation can be used to manage the condition. Intermittent self catheterisation involves inserting a catheter (small tube) through the urethra to drain the bladder several times a day. It is useful in preventing infections due to residual urine and can also stop leakage problems. It can be used on both a temporary and permanent basis.

Incontinence pads and pants

If you think you have an incontinence problem you should see a health professional before resorting to using absorbent pads and pants. These products can be expensive and cause irritation, and in many cases, women may be able to improve or even stop bladder leakage without using them. Total reliance on absorbable pads or pants should be reserved for those people whose incontinence cannot be conservatively managed and for whom surgery is not suitable or acceptable (i.e. older people or those with disabilities). There are a range of pads and pants with different levels of absorbency available to help manage urine leakage. They come in reusable and disposable forms. Some women may be eligible for financial assistance towards the cost of incontinence products. See your doctor or contact the Continence Helpline (see *Further information*, below) to find out about your eligibility.

Functional incontinence

Functional incontinence results from the inability or unwillingness to reach a toilet in time. It is more common in the elderly or disabled.

CAUSES

Restricted mobility due to arthritis or other disabilities can make it difficult for a woman to access a toilet in time. The inconvenient/unsuitable positioning of the toilet can also be a contributing factor (e.g. toilet located downstairs, not suitable for wheelchair access, etc.). In addition, a woman may have decreased awareness and/or a personal reluctance to go to the toilet (e.g., Alzheimer's disease).

TREATMENT

Relatively simple strategies such as replacing buttons and zippers on pants with velcro or press studs and improving lighting or installing hand rails may assist some people to reach the toilet in time. Intermittent self catheterisation may be an option for those people whose physical disabilities make it difficult for them to reach a toilet. For those who have decreased awareness or a personal reluctance, the use of incontinence products may be the best management strategy.

Prevention

There are a number of steps you can take to help reduce the chance of incontinence occurring:

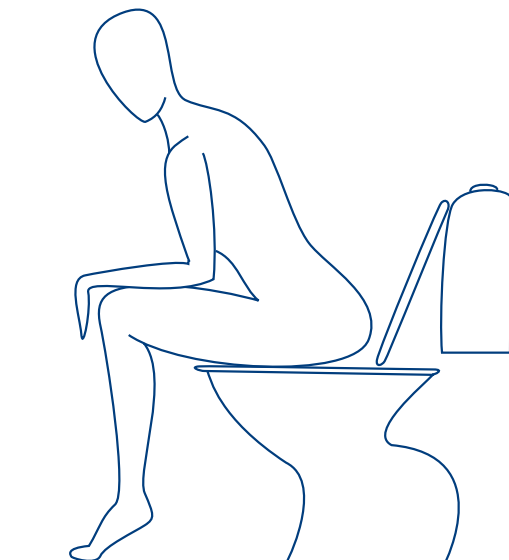
- Drink 1.5-2 litres of fluid every day (mainly water). Adequate fluid intake helps keep the urine diluted (causing less irritation to the bladder) and maintains the bladder's ability to hold urine. It also reduces the occurrence of constipation. However, women should also avoid excessive fluid intake as this can result in a worsening of symptoms.
- Maintain good bladder habits by only going to the toilet when your bladder is full. Avoid going 'just in case'. It is also important that children are educated about good bladder habits.
- Adopt a good toileting position (see diagram below). This will help you properly empty your bladder and bowel without straining. It is particularly important to avoid straining when you are emptying your bowel. Women should also avoid 'hovering' over the toilet seat, a common behaviour when using public toilets.

- Perform pelvic floor exercises and brace your pelvic floor muscles while coughing, sneezing and lifting. Perform the exercises regularly, especially during pregnancy, following childbirth and into menopause. In conjunction, strengthen deep abdominal muscles.
- Before starting a new fitness or exercise regime, seek advice about pelvic-floor-safe exercise choices (see www.womhealth.org.au/healthy-lifestyle/221-pelvic-floor for more information).
- Treat the cause of any chronic coughing or sneezing (i.e., manage asthma or hay fever and quit smoking, etc.).
- Hold a firm lower abdomen while walking and standing as this maintains pelvic floor support.
- Maintain a healthy weight and avoid smoking.

GOOD TOILETING POSITION

To ensure you empty your bladder properly without straining, adopt the following toileting position:

- Adopt a forward-leaning position by leaning forward at the hips while maintaining the natural curves in your back.
- Sit on the toilet (don't hover over it) with your knees wide apart and feet flat on the floor.
- Rest your hands on your knees.
- Relax your stomach muscles.
- Take your time to empty your bladder without straining.
- After emptying, gently draw in your lower abdominal muscles and activate your pelvic floor as you stand up and walk away.



Psychological Impact

Urinary incontinence can have a significant effect on women's social and psychological wellbeing. Feelings of embarrassment and fear of being 'caught short' can result in women restricting the activities they engage in and the amount of time they spend out of the house. It is important to recognise that even 'light' bladder leakage is a medical condition that may be able to be treated without needing to use incontinence or menstrual pads. Women should discuss their bladder issues with a health professional. Women in Queensland can call the Health Information Line on 3839 9988 or 1800 017 676 (toll free outside Brisbane) to have a confidential chat with a nurse. The Continence Helpline service (1800 33 00 66) is also available to any Australian resident.

Further information

Continence Foundation of Australia

www.continence.org.au

National Continence Helpline

1800 33 00 66

National Public Toilet Map

www.toiletmapp.gov.au

Women in Queensland can also borrow a books on a range of topics from the Women's Health library. Books can be borrowed and posted in Queensland free of charge. The library list is available at www.womhealth.org.au or by calling 3839 9962.

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For help understanding this fact sheet or for further information on incontinence, call the Health Information Line on 3839 9988 (within Brisbane) or 1800 017 676 (toll-free outside Brisbane).

This is one of a series of women's health information fact sheets available at www.womhealth.org.au.

A full list of references is available from Women's Health or on the website.

call our Health Information Line

A free information and referral service for Queensland women

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Staffed by nurse/midwives

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