

# Urinary Incontinence (Women)

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## Background

### About urinary incontinence in women

- *Urinary incontinence is the involuntary or accidental leakage of urine.*
- *Affects 30% to 50% of women.*
- *Pregnancy, childbirth, and ageing are common causes of urinary incontinence. Rates increase with age, but can occur at a young age.*
- *Other factors can cause urinary incontinence, e.g., some types of medication, or a chronic cough.*

### What are the different types of urinary incontinence?

- *Stress incontinence is most common. Urine leakage occurs with increases in abdominal pressure i.e., physical stress from activities such as coughing, sneezing, and exercising.*
- *Urge incontinence, also called 'overactive bladder' or 'detrusor overactivity', is usually associated with a strong desire to pass urine, and patients cannot hold urine long enough to reach the toilet in time.*
- *Mixed urinary incontinence, a combination of stress and urge incontinence.*
- *Uncommon causes include overflow incontinence, functional incontinence, fistula, and urethral diverticulum.*

### Red flags

- Unexplained acute onset urinary incontinence
- Symptoms suggestive of neurological emergency
- Urinary retention

## Assessment

1. Provide [Urinary Incontinence Questionnaire](#). Ask any **additional questions** to help identify other contributors.

### Additional assessment questions

- *How often is there leakage of urine?*
  - *< once a week*
  - *> once a week*
  - *≥ once a day*
- *How long have symptoms of urinary leakage been present?*
- *Do they have to use pads, or change clothes when they have leakage? If so, how often?*
- *Do they experience any difficulties with bladder emptying e.g., difficulties starting a stream, a poor stream, or one that stops and starts on its own accord, a sensation of incomplete emptying, needing to strain to empty?*
- *Does the patient have recurrent urinary tract infections? If so, how frequently?*
- *Does the patient experience pain in the bladder or pain on passing urine without an infection?*
- *Has the patient noticed blood in their urine, or is there persistent microscopic haematuria on testing?*
- *Does the patient experience any bowel problems such as constipation?*

## 2. Take a **history**.

### History

- *Medical history – Conditions causing chronic cough may contribute to incontinence.*
- *Past surgical history*
- *Obstetric history*
- *Menopausal status*
- *Drug history:*
  - *diuretics, prazosin, cholinergics, angiotensin converting enzyme inhibitors (chronic cough) may contribute to incontinence.*
- *Social history:*
  - *smoking history, occupational history and exposure to carcinogens, alcohol consumption, whether patient plans any further pregnancy.*

## 3. Discuss **drinking habits**

### Assess drinking habits

- *How many cups of fluid does the patient drink per day?*
- *How many cups of tea, coffee, or other caffeinated beverages does the patient drink a day.*
- *How many standard alcoholic drinks does the patient consume a day?*

## 4. Perform a **clinical examination**

### Clinical examination

- *Body mass index (BMI) and general observations.*
- *Genital examination.*
- *Vaginal epithelial atrophy.*
- *Urethral caruncle.*
- *Sub-urethral cysts or masses (urethral diverticulum).*
- *Check patient's ability to perform a pelvic floor muscle squeeze and evaluate strength of contraction.*
- *Signs of vaginal or uterine prolapse:*
  - *Ask the patient to cough or strain (Valsalva manoeuvre), and observe if there is there leakage of urine. Check if any leakage can be stopped if the prolapse is supported or reduced.*
  - *If the patient has a prolapse, treat as per Prolapse guidelines, and continue with incontinence pathway.*

### Peripheral examination

- *Significant peripheral oedema, musculoskeletal, or neurological deficits.*

## 5. Complete **investigations**.

### Investigations

- *Urinalysis by dipstick, or send mid-stream urine (MSU) for laboratory testing to confirm if infection or [haematuria](#).*
- *Ultrasound for all patients being referred for specialist management.*
- *Ask patients to keep a [bladder diary](#) over at least 3 days.*

## Conservative Management for all patients

1. Advise on weight loss if BMI is > 30.
2. Treat urinary tract infection (UTI), as appropriate.
3. Advise on **good drinking habits**.
  - **Good drinking habits**
    - A healthy fluid intake is 6 to 8 cups (1.5 to 2.0 L) per day. This includes all fluids. Advise to drink at least 4 glasses of water per day.
    - Avoid caffeine (tea, coffee, energy drinks, cola).
    - Avoid alcohol.
    - Space drinks throughout the day.
4. Recommend [supervised pelvic floor muscle exercises](#) for 4 months.
5. Consider **vaginal oestrogens** for post-menopausal women.
  - **Vaginal oestrogens**
    - Oestrinol (Ovestin) 0.1% cream applied topically to the urethra daily for 2 weeks, then twice weekly.
    - Effective treatment for moderate to severe symptoms of vaginal atrophy.
    - May improve continence by increasing periurethral soft tissue and improving coaptation of the tissues.
    - No added progestin is required for endometrial protection.
    - Contraindicated when there is undiagnosed vaginal or uterine bleeding, or endometrial cancer.
    - Use of low-dose vaginal oestrogens in women who have had breast cancer is considered safe due to negligible systemic absorption, and generally the oestrinol preparations are preferred.
6. Treat medical conditions that cause chronic cough.
7. Publicly-funded [continence service](#) is available for:
  - continence management.
  - Information on [Funding schemes for continence products](#) and [Continence Aids Payments Scheme](#).
  - specialised continence appliance trials, product, and supplier information.

## Stress incontinence

1. After conservative management, consider referral for **incontinence surgery**.
  - **Incontinence surgery**
    - Mid-urethral slings
    - Burch colposuspension
    - Pubovaginal fascial slings
    - Urethral injectable bulking agents
2. If stress incontinence occurs after previous incontinence surgery, refer to specialist or specialist outpatient clinics.
3. If there is a concurrent symptomatic vaginal prolapse, refer to gynaecology to consider surgical correction of prolapse and incontinence.

## Urge incontinence

1. Recommend [bladder retraining](#), in addition to supervised pelvic floor exercises for 4 months.
2. If little improvement, consider combining with **antimuscarinic medications** or **beta 3 adrenoceptor agonist mirabegron** provided there are no contraindications e.g., closed angle glaucoma or myasthenia gravis.

- **Beta-receptor agonist**

- [Mirabegron](#), marketed as *Betmiga*.
- Approved indication for overactive bladder.
- Beta 3 adrenergic receptor agonist. It works by activating these receptors in the detrusor muscle of the bladder that relaxes the muscle and increases bladder capacity. It is used in conjunction with bladder retraining.
- Starting dose is 25 mg then increasing to 50 mg if little or no response.
- Side effects: hypertension, nasopharyngitis, UTI, tachycardia headache, dry mouth and constipation but these were all only slightly higher than placebo. The dry mouth is much less than with drugs acting on muscarinic receptors.
- Caution in patients with prolonged QT interval, patients on digoxin and with hypertension.

- **Common antimuscarinic medications**

<b>Medication (Brand name)</b>	<b>Dose</b>	<b>Advantages</b>	<b>Disadvantages</b>
Oxybutynin (Ditropan)	Tablets  2.5 to 5 mg, twice a day, titrating dose up to maximum of 5 mg, three times a day	<ul style="list-style-type: none"> <li>• PBS listed</li> <li>• Rapid action – can be used intermittently</li> </ul>	<ul style="list-style-type: none"> <li>• Higher prevalence of dry mouth</li> <li>• Dry eyes</li> <li>• Dry mouth</li> <li>• Constipation</li> <li>• Blurred vision</li> <li>• Impaired alertness</li> <li>• Voiding difficulty</li> </ul>
Transdermal oxybutynin (Oxytrol)	3.9 mg patch twice weekly	<ul style="list-style-type: none"> <li>• PBS listed</li> <li>• Dry mouth may be less common than with oral oxybutynin</li> <li>• Good for patients who don't like tablets</li> </ul>	<ul style="list-style-type: none"> <li>• Application site reaction</li> </ul>
Imipramine (Tofranil)	10 to 25 mg at night	<ul style="list-style-type: none"> <li>• PBS listed, useful for nocturia</li> </ul>	<ul style="list-style-type: none"> <li>• Hypotension, sedation and anticholinergic effects.</li> <li>• Long-acting (3 weeks)</li> </ul>
Darifenacin (Enablex)	7.5 to 15 mg daily	<ul style="list-style-type: none"> <li>• Daily dosing</li> <li>• M3-selective</li> <li>• Minimal effect on cognition</li> </ul>	<ul style="list-style-type: none"> <li>• Non-PBS listed</li> </ul>
Solifenacin (Vesicare)	5 to 10 mg daily	<ul style="list-style-type: none"> <li>• Daily dosing, reduced side-effects</li> </ul>	<ul style="list-style-type: none"> <li>• Non-PBS listed</li> <li>• May increase the QT interval, especially at high doses</li> </ul>
Tolterodine (Detrusitol)	1 to 2 mg, twice a day	<ul style="list-style-type: none"> <li>• More selective for detrusor muscle than oxybutynin</li> </ul>	<ul style="list-style-type: none"> <li>• Non-PBS listed, twice daily dose</li> </ul>

3. Consider referral to urology for **botulinum neurotoxin type A treatment**.
  - **Botulinum neurotoxin type A treatment**
    - *Can be injected into the detrusor muscle as an option for women where urge incontinence symptoms are refractory to anticholinergic therapy or bladder retraining.*
    - *Can be repeat every 6 to 9 months if necessary.*
    - *Done as a day procedure.*
4. If these treatments are unsuccessful, or side-effects are experienced, consider referral for further investigations (e.g., urodynamics studies) and more advanced treatments such as **sacral nerve stimulator (SNS)**.
  - **Sacral nerve stimulator (SNS)**
    - *This procedure involves stimulation of the S3 nerve root via an implantable neuromodulator, similar to a pacemaker for the heart.*
    - *It is used for refractory urge incontinence and can also be used where anticholinergic medications or botulinum toxin are not suitable or contraindicated, or if these treatments have failed.*
    - *The procedure can be performed under local anaesthetic and sedation.*

### Mixed incontinence

Treat the most predominant symptoms first according to the above advice for urge and stress incontinence.

### Overactive bladder syndrome

Defined as any combination of urinary urgency, frequency, or nocturia with or without urge incontinence. Manage patients as for urge incontinence.

## Referral

Always include any relevant investigations and previous treatments.

- For all patients, consider referral to a [continence service](#) or [specialist physiotherapist](#) for supervised pelvic exercises or bladder training.
- Arrange [urgent or routine urology referral](#) if:
  - not responding to conservative measures over 3 months.
  - inadequate response to medication.
  - severe incontinence e.g., from sitting to standing.
  - difficulty emptying bladder.
  - bladder pain.
  - recurrent UTIs, haematuria, sterile pyuria.
- Arrange [urgent or routine gynaecology referral](#) if:
  - concurrent symptomatic pelvic organ prolapse stage 3 or 4.
  - previous prolapse or pelvic floor surgery.
  - complicated or complex delivery preceding incontinence.
- If significant peripheral oedema, musculoskeletal, or neurological deficits, refer to a medical specialist.
- Consider referral to a dietitian if BMI is > 30.

## Information

### For health professionals

- Australian Family Physician – [Overactive Bladder Syndrome](#)
- Australian Prescriber – [Management of Urinary Incontinence in Adults](#)
- Continence Foundation Australia – [Bladder Diary](#)
- Pharmacy and Therapeutics – [Management of Urinary Incontinence](#)

### For patients

- Australian Commission on Safety and Quality in Health Care – [Treatment Options for Stress Urinary Incontinence](#)
- [Continence Foundation of Australia](#)
- Department of Human Services – [Continence Aids Payment Scheme](#)
- Pelvic Floor First – [Working Your Pelvic Floor: Women](#) (exercises)
- The Royal Women's Hospital:
  - [Bladder Training](#)
  - [Pelvic Floor Exercises](#)

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