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Pharmacy Pearls

Medication Treatment Considerations for Urinary Incontinence

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What do the guidelines say?[1]

- **First-Line Treatments: Non-Pharmacological Management** ***should be used in combination with pharmacologic treatment***
  - Bladder training, bladder control strategies, pelvic floor muscle training, fluid management (Evidence Strength Grade B)
- **Second-Line Treatments: Pharmacologic Management** ****see below for review of medications***
  - Initial treatment
    - Oral anti-muscarinic OR oral B_3-agonist is preferred (Evidence Strength Grade B)
      - Both medication classes have similar clinical efficacy
      - B_3-agonists are more expensive but have reduced risk of anticholinergic adverse effects
      - Anti-muscarinic agents are less expensive but have increased risk of anticholinergic adverse effects
        - Use caution when prescribing in frail patients and those who are using other medications with anticholinergic properties (Clinical Principle)
  - Mitigating unacceptable adverse effects (i.e., dry mouth, constipation, urinary retention, drowsiness)
    - Consider switching anti-muscarinic to an ER formulation (Evidence Strength Grade B)
    - Consider reducing the dose of current anti-muscarinic (Clinical Principle)
    - Consider stopping anti-muscarinic and starting a B_3-agonist (Clinical Principle)
  - Mitigating costs
    - Consider antimuscarinic (Practical Principle)
  - Refractory to Monotherapy
    - Consider **combination therapy** with **anti-muscarinic AND β_3-adrenoceptor agonists** (Evidence Strength Grade B)

Drug	Dosage Form[2]	Initial Dosing[2]	RDA for CrCl <30 mL/min[2]	Approximate Cost/Rx*
Oral Anti-Muscarinic Agents				
Oxybutynin (Ditropan)	IR Tablet ER Tablet Solution (5 mg/5mL) Patch (3.9 mg) Gel (100 mg/g)	IR: 5 mg 2 to 3 times daily ER: 5-10 mg once daily 5 mL 2 to 3 times daily 1 patch twice weekly 1 sachet (1 pump) daily	No	$11.25 (generic IR) $9.63 (generic ER) $13.71 (generic syrup) $195.53 (brand Ditropan XL®)
Tolterodine (Detrol)	IR Tablet ER Capsule	IR: 2 mg twice daily ER: 4 mg once daily	Yes	$24.53 (generic IR) $19.10 (generic ER) $368.41 (brand Detrol ER)
Darifenacin (Enablex)	ER Tablet	7.5 mg once daily	No	$49.46 (generic ER)
Solifenacin (Vesicare)	Tablet Suspension (5mg/5mL)	5 mg once daily 5 mL once daily	Yes	$15.21 (generic) $378.29 (brand Vesicare®)
Fesoterodine (Toviaz)	ER Tablet	4 mg once daily	Yes	$40.75 (generic ER) $376.03 (brand Toviaz®)
Trospium (Sanctura)	IR Tablet ER Capsule	IR: 20 mg twice daily ER: 60 mg daily (morning)	Yes	$22.99 (generic IR) $55.23 (generic ER)
B_3-Agonist Agents				
Mirabegron (Myrbetriq)	ER Tablet ER Suspension (8 mg/mL)	ER: 25 mg once daily 3 mL once daily	Yes	$393.57 (brand Myrbetriq®) $207.25 (brand solution)
Vibegron (Gemtesa)	IR Tablet	75 mg once daily	No	$461.46 (brand Gemtesa®)

*Estimated cash price for 30-day RX. Cost varies based on pharmacy, dose, day supply and patient's insurance coverage.

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Review of Urinary Incontinence Types and Treatments[3,4]

Type of Urinary Incontinence	Medications that may exacerbate incontinence	Non-Pharmacologic Treatment	Pharmacologic Treatment
Urge* Overactive bladder or bladder outlet obstruction *Most common type	• Acetylcholinesterase inhibitors (i.e., donepezil, rivastigmine) • Caffeine • Diuretics	• Discontinue or avoid medications that can exacerbate incontinence • Avoid bladder irritants (i.e., aspartame, spicy/citrus foods, caffeine, carbonated beverages) • Weight loss • Smoking cessation • Avoid constipation • Pelvic floor exercises (Kegel exercises) • Bladder training • Delayed or scheduled voiding • Urge control techniques such as distractions or self-assertions • Fluid management • Changing the time of administration of diuretics	• Anti-muscarinic' s • B_3-adrenergic agonist's
Stress Decreased urethral sphincter tone	• α1-antagonists (i.e., doxazosin, prazosin) • ACE-I's (chronic cough) • First generation antipsychotics • Diuretics		• Duloxetine* *Off-label
Functional Physical conditions that impair patients' mobility to get to the bathroom in time	• Alcohol • Anticholinergics • Antipsychotics • Benzodiazepines • Diuretics • Opioids		• Treat mobility disorders (i.e., Parkinson's, multiple sclerosis)
Overflow Incomplete emptying of the bladder due to bladder outlet obstruction or underactive bladder	• ACE-Inhibitors (cough) • Anticholinergics • Antihistamines • Antimuscarinics • Benzodiazepines • B_3-agonist • Calcium Channel Blockers • Diuretics • Opioids • Skeletal muscle relaxants • Tricyclic Antidepressants		Treat BPH • α1-antagonist • 5 α-reductase inhibitors • Cholinergic stimulation of detrusor muscle
Mixed Both Urge and stress incontinence	• Same as urge and stress		• Treat as urge or stress incontinence

1. Lightner DJ, et al. Journal of Urology. 2019.
2. In: Lexi-Drugs. Lexicomp Online [Internet].
3. Clemens JQ. Urinary incontinence in men. In: UpToDate. 2022.
4. Lukacz ES. Urgency urinary incontinence/overactive bladder (OAB) in females: treatment. In: UpToDate. 2023.