

A Therapy Toolkit for Treatment of Urinary Incontinence

Home Health



Created by the APTA Home Health Practice Committee, Incontinence Toolkit Work Group

Sarah J. Haag, PT, DPT, WCS

Jamie Lowy, PT, MSPT, CCI

Kenneth L Miller, PT, DPT, GCS, CEEAA, Practice Committee Chair



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Acknowledgments

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APTA Home Health Practice Committee:

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Disclaimer: This educational resource is intended to provide physical therapists and physical therapist assistants with guidance in treating incontinence. This resource reflects regulations, evidence, and best practices at the time that it was created. Individual clinicians should always confirm current regulations, evidence, and best practices with the original sources of this information prior to applying recommendations made here.

Table of Contents

Click the topic for redirection to the appropriate page in the PDF.

4	Introduction
6	Patient Education – Incontinence Handout
8	Patient Education – Types of Incontinence Handout
10	Incontinence Decision Tree
11	Neurogenic Bladder
12	Case Scenario: Urodynamics for neurogenic bladder, failure to empty
13	Common Diagnostic Test for Bladder Function
14	Incontinence Medications
15	Incontinence Medications Table
17	Drugs that Worsen Incontinence
18	Case Scenario: Medication-Induced Incontinence
19	Talking about Incontinence with your Patients
21	Quick Bladder Diary Assessment
22	Bowel and Bladder Diary
25	Bristol Stool Chart
26	Diary Instructions
27	Potential Bladder Irritants

Introduction

Urinary incontinence is a common health condition in the United States affecting greater than 20 million US women.¹ Incontinence is defined as any involuntary leakage of urine and has multiple subtypes. The growing older population seen in home care has an incidence of incontinence greater than 40% and it is worse by 1.7 times in women than men.² This is alarming as incontinence is linked to falls and incontinence worsens with age. Lastly, the medications used to treat lower urinary tract symptoms (LUTS) are also linked to increasing the risk of falling.³ The purpose for this incontinence toolkit is to provide therapists non-pharmacological resources to manage incontinence, assist in de-prescribing inappropriate medications used for symptom control, reduce the risk of falling and improve the quality of life in the patients we serve.

Background

- Urinary incontinence impacts 25 million Americans, yet only 1 in 12 will see help. (National Association for Continence)
- 80% of those affected by incontinence can be cured or improved.
- While the odds of urinary incontinence increase with age, incontinence is not a normal part of aging
- Incontinence isn't cheap – incontinence costs Americans over \$66 billion each year.
- It is NEVER normal to be incontinent!
- Having incontinence increases your risk of falling by more than 25%
- A woman with incontinence is **two** times more likely to be admitted to a nursing home than continent women. A man is almost **four** times more likely to end up in a nursing home if he is incontinent.

Purpose

This toolkit was developed to provide practicing home care therapists with tools to assess, treat and refer patients for appropriate care.

The toolkit includes:

- Patient Education on *what is incontinence*
- Definitions of the types of incontinence for clinician use in educating clients
- Decision Tree to guide clinicians from assessment to developing treatment plans
- Bladder Diary as one of the tools utilized with patients
- Common diagnostic tests performed by physician practices and what the results mean
- Defining neurogenic bladder and a sample case scenario of a urodynamics test

- Common medications and a sample case scenario of medication induced urinary incontinence
- A clinician guide to talking with patients effectively about incontinence
- Patient education on common potential bladder irritants

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Patient Education – Incontinence Handout

Did you know?

- Urinary incontinence impacts 25 million Americans, yet only 1 in 12 will see help¹
- 80% of those affected by incontinence can be cured or improved.
- While the odds of urinary incontinence increase with age, incontinence is not a normal part of aging
- Incontinence isn't cheap – incontinence costs Americans over \$66 billion each year.
- It is NEVER normal to be incontinent!
- Having incontinence increases your risk of falling by more than 25%²
- A woman with incontinence is 2 times more likely to be admitted to a nursing home than continent women. A man is almost 4 times more likely to end up in a nursing home if he is incontinent.³

Definition

Urinary incontinence is any involuntary leakage of urine. Any time, any amount. However, there are different types of urinary incontinence and knowing what type of incontinence you or a loved one is experiencing is key in finding the best treatment possible.

What can you do if you think you have urinary incontinence?

- Let your physician and/or healthcare provider know!
 - If your health care provider is surprised or not sure what to do to help, ask for a referral to a *pelvic health physical therapist*.
 - You can locate a pelvic health physical therapist at <http://www.womenshealthapta.org> or apta.org.
- Keep track of your bladder symptoms.
 - You can access some self-assessment tools through the National Association for Continence. <http://www.nafc.org>
 - Knowing how often the incontinence is happening, and when it is happening can help your healthcare provider identify the best course of treatment for you.
- Don't give up if "Kegels" didn't work for you before!
 - Pelvic floor muscle exercises don't fix every type of incontinence
 - Many people do pelvic floor contractions incorrectly!
 - A pelvic health therapist can help assess if you're able to do a Kegel properly.
- Be aware of bladder irritants!

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- Caffeine, carbonation and alcohol are all common bladder irritants; that means that you may feel like you have to go more often or more urgently when you drink them!
- Decreasing the amounts of these irritants may greatly reduce your symptoms!

Talk to your doctor or healthcare provider about your urinary incontinence:

- Don't reflexively say "everything is fine". Walk in, planning to let them know that you're experiencing incontinence.
- Many doctors don't ask specifically about bowel and bladder issues. Just because they don't ask, doesn't mean that it doesn't matter. Be bold and let them know what's going on.
- Don't be discouraged if your doctor isn't aware of physical therapy for urinary incontinence (as well as other pelvic issues!). You can use this pamphlet to help educate them and get the help you need.

For more information:

- <http://www.wwhf.org>
- <http://www.womenshealthapta.org>
- [Entropy Physiotherapy and Wellness](#)

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Patient Education: Types of Incontinence Handout

There are lots of different reasons that people leak urine. Understanding why you are leaking urine will help you and your team figure out the best way to address your incontinence.

Do you leak when you cough or sneeze?

- You may have *stress incontinence*. Stress incontinence is when you leak urine when you have an increase in your intra-abdominal pressure. Intra-abdominal pressure increases for lots of reasons. Running, laughing, lifting something off the floor are all activities that can increase your intra-abdominal pressure. “Kegels” may help with this type of incontinence, but sometimes you need a little more help from a pelvic floor therapist.

Do you end up planning your day by where the next bathroom is?

- If you’re going to the bathroom more than one time every 2 hours, you may be experiencing *urinary frequency*. Your bladder has one job: to store urine. However, sometimes the bladder can get a little unruly. There is help for this, and the plan will be tailored just for you. Your therapist may have you fill out a voiding log so that they can help you identify some changes that will put you back in charge of your day!
- Do you find yourself having to go to the bathroom all of the sudden? Maybe as you’re putting your key in the door when you come home. Or maybe as you’re walking towards the bathroom, the urge increases and you barely have time to get your pants down?
- You may have *urge incontinence*. This type of incontinence won’t likely get better with pelvic floor exercises. Like urinary frequency, this type of incontinence is best addressed by filling out a voiding log, so you and your therapist can come up with a plan that will address that sudden urge!

Do you leak with coughing AND when you’re heading to the bathroom?

- There is help! You have what we call *mixed incontinence*. There is still help but finding the right strategies and help you avoid frustrations of trying to figure it out on your own!

Do you leave your seat in plenty of time, but because of mobility issues, by the time you get to the toilet and get ready, you’re already too late?

- You may have *functional incontinence*. Functional incontinence happens when your bladder is working fine, but because of your environment or the clothes you are wearing. Your therapy team can help identify what the barriers may be, and help you overcome them!

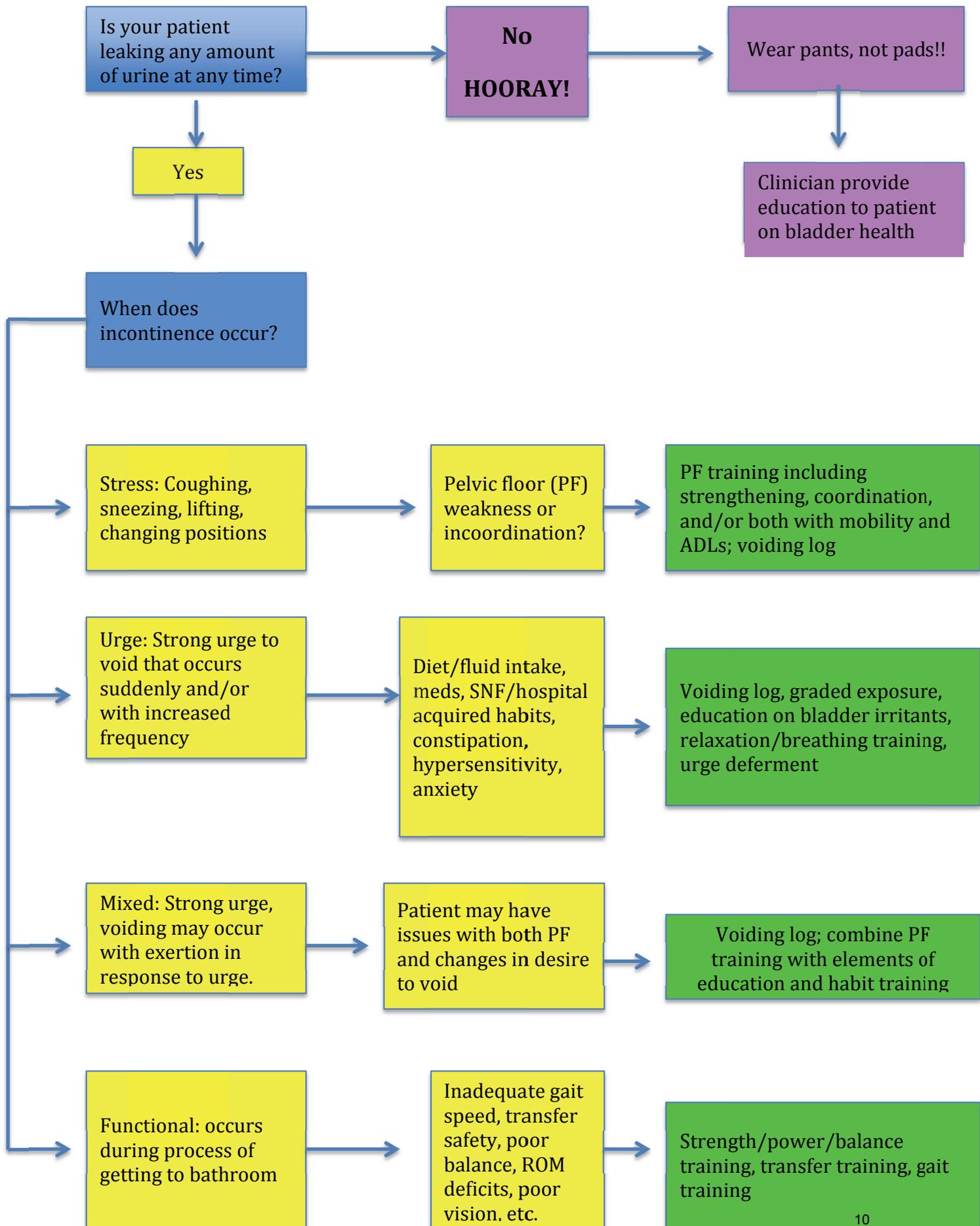
A Therapy Toolkit for Treatment of Urinary Incontinence

Home Health

The most important thing to remember is that urinary incontinence is NEVER normal, and is NOT a normal part of aging. If you're experiencing urinary incontinence, let your therapist or nurse know. We can help.

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Neurogenic Bladder

The function of the urinary bladder is simple: store urine until an appropriate time and place to empty.

Neurogenic bladder is a blanket term that covers a variety of urinary conditions that result in a lack of bladder control due to any number of issues in the nervous system. The reasons for the neurological deficit can be due to injury or disease in the brain, spinal cord, or peripheral nerves.

Neurogenic bladder can be divided into *Failure to Empty* and *Failure to Store*. Careful assessment of bladder function is essential for diagnosis and treatment or management. *Failure to Empty* may be a serious issue, as retaining >400 mL, or emptying bladder under elevated pressure, can result in reflux into the kidneys. Reflux into the kidneys can cause irreparable kidney damage. It's imperative that if there is reason to suspect neurogenic bladder, that it is fully assessed by a physician and urodynamics.

Failure to Store is often managed with a catheter of some sort, or medication if appropriate. Anti-cholinergic medications can improve detrusor compliance, and reduce urgency, frequency and urge incontinence.

Case Scenario: Urodynamics for neurogenic bladder, failure to empty

Reason for referral: Detrusor sphincter dyssynergia

History of Present Illness: Syringomyelia, progressing recently for unknown reasons

Medications: Dulcolax

Health Condition (ICD-10): Syringomyelia, detrusor sphincter dyssynergia

Body Structures/Body Functions (Impairments): Weakness in lower extremities, decreased ability to void bowel and bladder independently.

Activities & Participations: Ambulation: Home distance on ground floor with bilateral forearm crutches, presently unable to assist caring for his children or get to his office to return to work. Difficulty climbing stairs and is presently sleeping in spare bedroom on ground floor of home.

Environmental Factors: 2 story home with 2 bathrooms. Patient's current bowel and bladder function is not impacted by environment at home as he has access to a bathroom on ground floor of home. Patient is challenged with his current bladder program that involves catheterizing himself 4-6x/day. Patient would like to discontinue cathing if possible as it would make it more likely he could return to work sooner.

Personal Factors: 39 year old male, was recently working as a financial analyst full-time, married with 6 month old daughter and 4 year old son.

Physical Exam: Weakness in bilateral LE, Pelvic floor assessment: decreased tone noted throughout pelvic floor, decreased sensation in perineum to light touch and firm pressure. Patient reports that he's felt successful recently managing his bladder, as when he has a bowel movement in the morning, he also voids 400-500 mL of urine. Patient is questioning the need to continue catheterizing, as he is voiding a "full bladder's worth" of urine.

Urodynamics results: Patient was able to feel first urge at 400 mL of filling, and felt urge to void at close to 600 mL. Patient was able to void 400 mL, resulting in a 200 mL post-void residual (PVR). In order to void, excessive pressure was needed in the bladder.

Clinical implications: Patient was voiding a "normal amount" of urine, he was only able to do so with elevated pressures. It's important to remember that excessive pressures in the bladder can cause reflux into the kidneys, causing kidney damage and potential kidney failure. When a patient has a neurogenic bowel or bladder, it is important to work with their physicians to make sure overall urinary tract function is understood and managed appropriately.

Common Diagnostic Test for Bladder Function

Name of Test	Short Description of Test	Why would this be done?	Results
Post-Void Residual (PVR) (via ultrasound)	A real time ultrasound assessment, passing the ultrasound over the bladder	To visualize the amount of residual urine following voluntary voiding.	Normal post void residuals range between 50 mL and 100 mL. >100 mL PVR should be assessed by physician.
Urodynamics	Patient would first voluntarily void urine. Then sensors would be placed in the urethra, and vagina or rectum. The bladder is filled slowly with sterile water.	To assess many aspects of bladder function, including PVR, bladder capacity, detrusor function, sphincter function.	There are many variables that are evaluated by urodynamics. Urodynamics can help identify neurogenic bladder issues, and can help direct treatment.
Cystoscopy	A small camera is inserted via the urethra to visualize the inside of the bladder.	To check the lining of the bladder. May also be used visualize urine entering the bladder from the ureters, and to view any narrowing of the urethra.	Typically does not change the course of physical therapy intervention. Is typically used to identify pathology that needs to be addressed medically, or to rule out red flags.

Tests above are performed by physician practices (such as MD, DO, PA, NP).

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Incontinence Medications

The purpose of the table that follows is to assist healthcare providers working with the older adult population improve quality of life through a comprehensive assessment including incontinence. Performing a medication review includes assessing medications for intended and unintended effects may identify possible side effects (mimicking symptoms of incontinence) attributable to medication use. Many medications are prescribed for incontinence that may have a paradoxical effect and worsen the symptoms being treated. Additionally, the older adult often has multiple co-morbidities such as heart failure which is treated with medications that may worsen incontinence symptoms. Physicians have challenges when prescribing for heart failure while at the same time controlling urinary incontinence. The non-pharmacologic intervention of pelvic floor training has been shown to have clinically important effects of reducing urinary leakage and is a mainstay of physical therapy education. The same medications that may worsen incontinence resulting in patient's rushing to the bathroom, may also reduce blood pressure causing orthostatic hypotension which increases the risk of falling.

What is the Beers Criteria?

The Beers Criteria is a resource created by the American Geriatrics Society (AGS) that builds on the work of the late Dr. Mark Beers, geriatrician, who saw the need to list medications that are potentially inappropriate for the older adult population. The AGS published an updated list in 2015 that makes recommendations of drugs to potentially avoid due to the greater risk of adverse events and drug-related problems. The drug tables listed here contain Beers Criteria recommendations where available. Not all of the medications used to treat incontinence are listed on the Beers criteria although all medications do have the risk of adverse events. The treatment of incontinence is a complex one as some of the available drug choices are oppositional to each other, for example both adrenergic agonists and antagonists (blockers) are used to treat incontinence.

Drug Class/Drug	Mechanism of Action	Indications	Side Effects	Beers Criteria (Y/N)
Alpha-Adrenergic Agonists (for example, midodrine, Sudafed)	Increases urethral smooth muscle contraction	Stress Incontinence	Central nervous system overstimulation; headache; elevation in blood pressure	Yes. Avoid
Anti-Cholinergic Agents (for example, Bentyl, Enablex, VESicare, Hyoscyamine, Detrol, Detrol LA, Sanctura, Toviaz)	Decreases contractility of bladder; increases capacity	Urge Incontinence	Dry mouth; constipation; headache; dizziness.	Yes. Avoid
Anti-Spasmotic Agents (for example, Oxybutynin (Ditropan IR, Ditropan XL))	Relax smooth muscles of urinary bladder	Urge Incontinence	Impaired mental alertness and physical coordination	Yes. Avoid
Tri-Cyclic Antidepressants (for example, Elavil, Tofranil)	blocks reuptake of epinephrine and serotonin, therefore, may have effect of increasing bladder capacity and increasing sphincteric closure	Urge Incontinence	Dry mouth; constipation; blurred vision; dizziness	Yes. Avoid
Estrogens	Stimulates alpha-adrenergic receptors to increase bladder outlet resistance	Stress Incontinence (urethral sphincter insufficiency)	Breast tenderness; uterine bleeding; candidiasis; headache	Yes. Avoid oral and topical patches. Vaginal cream or tablets acceptable for dyspareunia, lower UTI and other vaginal symptoms
Antidepressants (Serotonin-Norepinephrine Reuptake Inhibitor (SNRI) (for example, Cymbalta)	Duloxetine increases serotonin & norepinephrine levels in the sacral spinal cord, thereby enhancing pudendal nerve activity, which in turn leads to increased contraction of the urethral sphincters during the urine storage phase of the micturition cycle—a potential benefit in stress incontinence.	Stress Incontinence	Nausea	Use with caution
Alpha-Adrenergic Blockers (for example, Prazosin (Minipress))	Relaxes smooth muscle of the urethra and prostatic capsule in men with benign prostatic hypertrophy	Urge Incontinence	Postural hypotension; dizziness; edema; dyspnea	Yes. Avoid

Botulinum Toxins (for example, BOTOX)	Neurotoxin that inhibits the release of acetylcholine from the presynaptic cholinergic nerve ending, which decreases the muscle contractibility owing to localized chemical denervation. Botulinum toxin type A has been shown to reduce urinary symptoms of OAB by 35–50% compared with placebo	Overactive Bladder	Inconclusive	Not listed
Mirabegron	Mirabegron is a beta-3-adrenoceptor agonist, which activates beta-3-adrenoceptors, causing the bladder to relax, which helps it to fill and store urine. It has a lower place in therapy and relatively weak evidence due to limited comparative data with other anti-muscarinics and limited long-term efficacy data	Relaxes bladder muscles and increases the amount of urine the bladder can hold	Increased blood pressure, nasopharyngitis, urinary tract infection	Not listed
Desmopressin	Desmopressin is a synthetic analog of vasopressin or antidiuretic hormone, which inhibits diuresis while avoiding vasopressive effects. Given at night, it reduces nocturnal urine production.	Urge incontinence at night	Fatigue, headache, abdominal pain	Yes. Avoid for treatment of nocturia or nocturnal polyuria due to high risk for hyponatremia

Drugs that worsen incontinence

Drug Class	Mechanism of Action
Loop Diuretics (furosemide)	Increases diuresis can cause urgency, frequency, and polyuria
Anticholinergics (antihistamines, antipsychotics, antidepressants, antispasmodics)	Decreased bladder contractility can cause urinary retention with frequency and overflow incontinence; anticholinergics may also impair cognition or mobility.
Adrenergics (decongestants)	Decreased bladder contractility and increased sphincter tone can cause urinary retention with frequency and overflow incontinence
Alpha-Adrenergic blockers (prazosin)	Decreased internal sphincter tone can cause urine leakage
Calcium channel blockers (e.g., nifedipine, verapamil)	Decreased bladder contractility can cause urinary retention and overflow incontinence
Hypnotics and antianxiety agents (e.g., benzodiazepines)	Incontinence secondary to sedation, delirium, and impaired cognition
Alcohol	Incontinence secondary to sedation, diuresis, delirium, and impaired cognition

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A Therapy Toolkit for Treatment of Urinary Incontinence

Home Health

Case Scenario: Medication-Induced Incontinence

Reason for referral: Recent fall without loss of consciousness, unsteady gait

History of Present Illness: Patient had one fall two weeks ago when getting up from a chair in living room to go to bathroom due to urinary urgency.

Medications: Lasix, K-dur, Prazosin, Tylenol, Metformin, Enalapril, Elavil

Health Condition (ICD-10): Congestive Heart Failure (CHF), Benign Prostatic Hyperplasia (BPH), Osteoarthritis (OA) Both Knees, DM2, Depression

Body Structures/Body Functions (Impairments): Weakness in lower extremities, pain in lower extremities, dyspnea with exertion, hyperglycemia controlled with current medication.

Activities & Participations: Activities of Daily Living (ADLs)- dressing upper body independently, lower body with supervision due to difficulty standing on 1 leg. Grooming: independent with setup. Bed mobility: Supervision for supine to sit due to difficulty and complaint of dizziness with activity. Transfers: CG x 1 due to need for physical guarding during sit to stand transfer. Ambulation: 100 feet x 1 with Single point cane (SPC) and CG x 1 for safety. Gait is slow and steady with shuffling. Volunteers 2 days per week at local hospital.

Environmental Factors: Single floor home with 3 steps (rail present) to enter with hardwood floors, wide doorways and clear access throughout home using SPC.

Personal Factors: 67-year-old male with a college education, former occupation – business owner, retired, financially able to meet needs.

Physical Exam: BP – 136/68 supine; 116/56 sitting; 96/56 standing

30 second chair stand test – able to complete 3 reps. Timed up and go – 22 seconds. Pain – 4/10 and is interfering with transfers and walking.

Patient reports that he felt dizzy when he fell. Denies other falls.

Could any of the medications be indicated in causing urgency? Could any meds be indicated in causing dizziness? Could any of the meds be indicated in causing the fall?

Using the Incontinence Toolkit, please consider what the possible factors for the fall might be.

Talking about Incontinence with your Patients

- Only a fraction of people with incontinence seek help.
- Only a fraction of healthcare providers ask about incontinence.
- While the OASIS form has incontinence questions on it, the questions are not helpful in identifying the type or severity of the incontinence.
- More importantly, the OASIS form does not offer insight as to the best approach to addressing the incontinence.
- An informal survey of home health therapists in three different states reported that not only was incontinence not addressed by physical therapy, but usually there was no plan of care to address incontinence outside of medication and absorbent garments.

Don't Ask, Don't Tell is not a good policy

- Ignoring incontinence doesn't go away.
- Decreased social, mental and physical well-being
 - Stronger influence on Quality of Life than diabetes, cancer, & arthritis.^{1,2}
- UI is responsible for increased nursing home admissions
 - 2.0x as likely for an incontinence woman to be admitted and 3.7x greater for incontinent men³
- Incontinence is a barrier for some women to participate in physical activity.⁴
- Urinary and fecal incontinence are associated with skin breakdown.⁵
- Urinary Incontinence has a huge impact on safety³
 - 26% increase fall risk
 - 34% increase in risk of fracture
- *Substantial economic burden* on patients and society.⁶
- \$66 billion in 2007 in the US
- Including cost of routine care and nursing home admissions.⁶
- Projected to be \$82.6 billion by 2020⁷

So what can I do about it?

- Ask!!
 - Usually *Have you had any changes in bowel or bladder function* is a “red flag” question.
 - Regardless of the answer they give, just ask:
 - *Are you ever bothered by your bladder?*
 - *Do you ever leak a little urine when you don't mean to?*
 - If “no”:
 - I was only asking because there is a lot that can be done to not just make it better, but to cure it!
 - If “yes”:

- Do you mind if I ask you a few more questions about what you're experiencing?
- Does your physician know?
- If "yes":
 - Has your physician done anything about it?
 - Can you tell me more about how your bladder bothers you?

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Quick Bladder Diary Assessment

Note: It's important to rule out active infections and any potential neurogenic bladder issues, especially failure to empty. These tips are meant to be quick guidelines. If incontinence does not improve, please refer to or consult with a pelvic floor therapist.

- There is some variability in our day to day bodily functions, as well as what we're doing. Getting three days (they do not have to be consecutive) that are as accurate as possible will be helpful.
- The better the information on the diary, the more accurate the plan will be!
- What is considered "normal"?
 - 6-7 voids per day
 - 0-1x/ night if <65 years of age
 - 1-2x/night if >65 years of age
- NO leakage of any kind
- If there is leakage with activity – Try "blow before you go"
 - Inhale and sit up tall
 - Before moving, start to gently blow out through your lips, like you're blowing through a straw.
 - Keep blowing throughout the activity if possible.
- Frequent trips to the bathroom, typically voiding small amounts or feeling like the void is incomplete.
 - Check log for bladder irritants
 - Caffeine, carbonation, and alcohol are 3 MAJOR irritants for SOME people.
 - Decreasing or eliminating the irritants may help a lot!
 - There is not a *perfect* amount of fluids to drink in a day. However, if people are limiting their fluid intake in an attempt to manage incontinence, it may backfire. Concentrated urine is also a bladder irritant!
- If the voids are <60 minutes apart, it's worth investigating why.
 - Some medications will increase voiding and drinking a lot will obviously increase the amount urine. However, if the volume of voids is small (<100ml), it's possible that the bladder has been conditioned to provide an urge signal before it's appropriate.

BRISTOL STOOL CHART

	Type 1	Separate hard lumps	SEVERE CONSTIPATION
	Type 2	Lumpy and sausage like	MILD CONSTIPATION
	Type 3	A sausage shape with cracks in the surface	NORMAL
	Type 4	Like a smooth, soft sausage or snake	NORMAL
	Type 5	Soft blobs with clear-cut edges	LACKING FIBRE
	Type 6	Mushy consistency with ragged edges	MILD DIARRHEA
	Type 7	Liquid consistency with no solid pieces	SEVERE DIARRHEA

By Cabot Health, Bristol Stool Chart (<http://cdn.intechopen.com/pdfs-wm/46082.pdf>) [CC BY-SA 3.0 (<https://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons.

Instructions:

- Use chart to track things for 3 days:
 - Write down the time you are recording info
 - Measure urine if able, or just make a check mark every time you urinate.
 - Note the degree of urge you had to void
 - 0 – No Urge
 - 1 – Mild Urge
 - 2 – Moderate Urge
 - 3 – Severe Urge
 - 4 – Urgent Urge
 - Note the type of bowel movement you have had based on the Bristol Stool Scale
 - Note how much and what you've drunk
 - Leakage – if you experienced any urinary incontinence note the amount
 - 1 – a drop or 2, no need to change underwear
 - 2 – wet underwear – would need to change
 - 3 – wet pants – would need to change outer pants/skirt
 - 4 – wet the floor – complete loss of full bladder

Potential Bladder Irritants

Anecdotally, fluid and food intake can greatly impact bladder function, and irritability. The exact mechanism of why consumption of the items on this list are irritating to some is not completely understood. The items on this list are not meant to be absolutes, but only used as a guide in conjunction with a completed voiding log.

- Alcohol
- Caffeine
- Carbonation
- Citrus Fruits
- Tomato
- Spicy Foods
- Pineapple Juice
- Cranberry Juice
- Artificial sweeteners
- Dairy Products
- Chocolate

Remember, the items on this list are not absolutes, and some people find other foods irritating. It's all relative, and very important to assess each individual by completing a voiding log. Once the voiding log is completed, if a potential dietary irritant is found, then the log is continued with the elimination of that irritant for 2-3 days. After 2-3 days, a change in symptoms will be present, or not. If symptoms are not improved, then it is possible to add that particular item back into the diet. If symptoms are improved, then it may be logical to avoid that item in the future.

It is important to note that consumption of irritants does not cause “damage” to the bladder, but is truly just an irritant that will pass.

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A Therapy Toolkit for Treatment of Urinary Incontinence

Home Health

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Physical Therapy Interventions for Incontinence in the Home Care Setting. This two-hour course is available through the [APTA Learning Center](#) [catalog reference: LMS-854]. This course is also an elective module in the [Advanced Competency in Home Health](#) program.



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