

# URINARY INCONTINENCE (UI)

**DEFINITION:** involuntary leakage of urine.

- **STRESS (SUI):** associated with physical activity.
- **URGE (UUI):** associated with an urgent and compelling desire to urinate.
- **MIXED (MUI):** both SUI and UUI
- **OTHERS:** overflow, functional, continuous (fistula, ureteral ectopia), nocturnal ...

**REFER TO A SPECIALIST**  
If pain, hematuria, voiding dysfunction, history of UI or pelvic surgery, history of pelvic RT, NRL disease, recurrent ITUS ...

	FISIOPATHOLOGY	EPIDEMIOLOGY (>65a)	ETIOLOGY
<b>SUI</b>	Injury or weakness of the urinary sphincter or pelvic floor musculature (PFM).	 <b>30-50%</b>	Pregnancy & delivery, obesity, age, menopause, gynecological surgery (e.g. hysterectomy) ...
		 <b>&lt;10%</b>	Prostatic surgery, pelvic RT
<b>UUI</b>	Involuntary contraction of the bladder detrusor.	 <b>10-20%</b>	OAB: Neurological, secondary to chronic infravesical obstruction (e.g. BPH, urethral stricture, surgical hypercorrection), idiopathic.
		 <b>15-50%</b>	

## DIAGNOSIS

- **CLINICAL HISTORY:** UI type, onset and duration, pathological history/surgical, drugs ...
- **VALIDATED QUESTIONNAIRES:** to establish and monitor the severity of symptoms (e.g. ICIQ-IU.)
- **PHYSICAL EXAMINATION:** DRE, vaginal atrophy, pelvic organ prolapse (POP), strength of the PFM, basic neurological examination, stress test, Bonney test, Q-tip test.
- **UC:** to rule out UTI.
- **VOIDING DIARY:** provides information about fluid intake, times of voiding, voided volumes, incontinence episodes, pad usage, degree of urgency and degree of UI.
- **PAD-TEST:** to quantify leakage.
- **US:** No routine. May give information about PV, UHN, PVR, urethral mobility, POP ...
- **URETROCISTOSCOPY:** No routine. Bladder tumor, urethral stricture, study previous extruded meshes...
- **URODYNAMICS:** if the findings may change the choice of invasive treatment. Not for uncomplicated SUI.

TREATMENT	SUI	UUI
<b>Conservative</b>	<ul style="list-style-type: none"> <li>- Pads</li> <li>- Weight loss</li> <li>- Containment devices</li> </ul>	<ul style="list-style-type: none"> <li>- Pads</li> <li>- Bladder training</li> </ul>
<b>Physical</b>	Pelvic floor muscle training	Posterior tibial nerve stimulation
<b>Pharmacologic</b>	<ul style="list-style-type: none"> <li>- Duloxetine (↑ side effects)</li> <li>- Vaginal oestrogens: postmenopausal women with atrophy</li> </ul>	<ul style="list-style-type: none"> <li>- Antimuscarinic and/or <math>\beta_3</math> agonists</li> <li>- Bladder wall injection of botulinum toxin A</li> </ul>
<b>Surgical</b>	<ul style="list-style-type: none"> <li>- Bulking agents</li> <li>- Suburethral slings</li> <li>-  Autologous fascial sling and colposuspension</li> <li>- Artificial urinary sphincter</li> </ul>	<ul style="list-style-type: none"> <li>- Sacral neuromodulation</li> <li>- Augmentation cystoplasty</li> <li>- Urinary diversion.</li> </ul>

**MUI:** Treat the most bothersome symptom first in patients with MUI.