

# **URINARY INCONTINENCE AND OVERACTIVE BLADDER**

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# incontinence

- “involuntary urine leakage from the bladder”
- Incidence : 17 million every year and 85% are women
- 30% of people above 60 years of age will be affected

# Three Common Types of Urinary Incontinence



## Urge

### **Urge incontinence**

is the strong, sudden need to urinate due to bladder spasms or contractions<sup>5</sup>



## Stress

### **Stress incontinence**

is an involuntary loss of urine that occurs during physical activity, such as coughing, sneezing, laughing, or exercise<sup>5</sup>



## Mixed

### **Mixed incontinence**

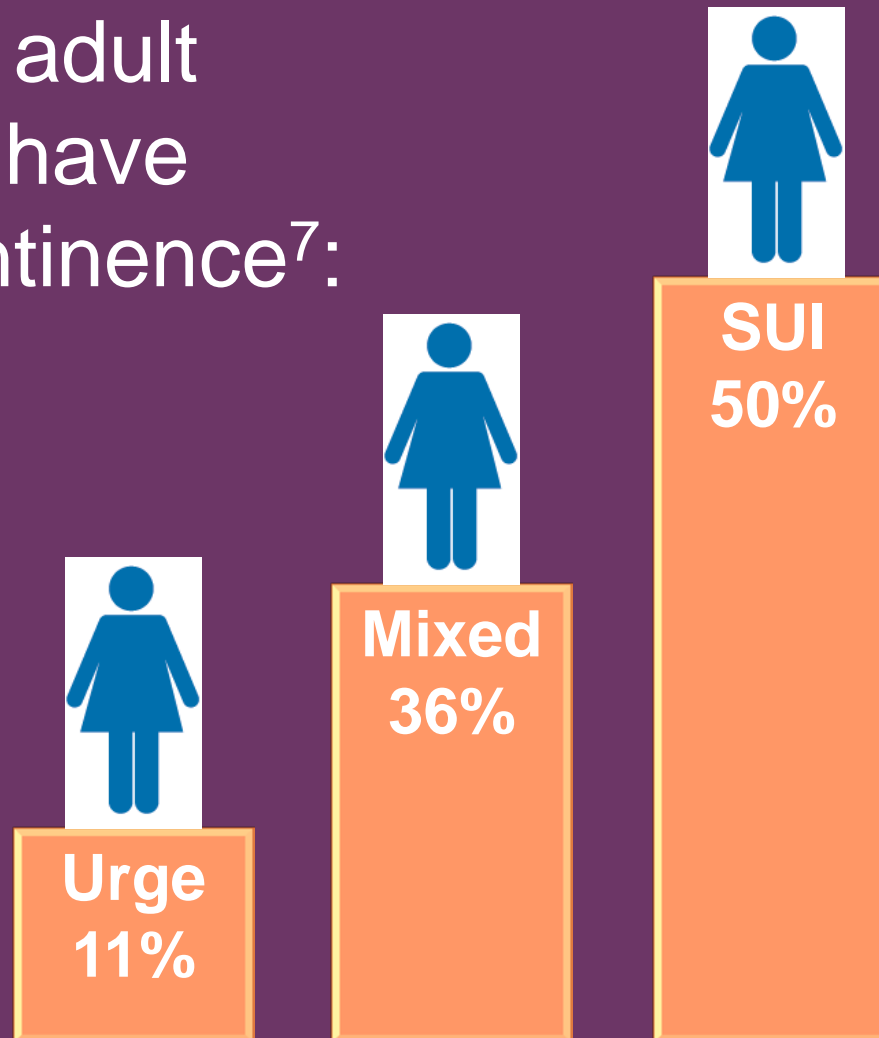
is the combination of both urge and stress incontinence<sup>6</sup>

# Overactive bladder

- Frequency of voiding
- Nocturia
- Urgency
- If associated with leakage
  - Urgency incontinence
  - OAB wet

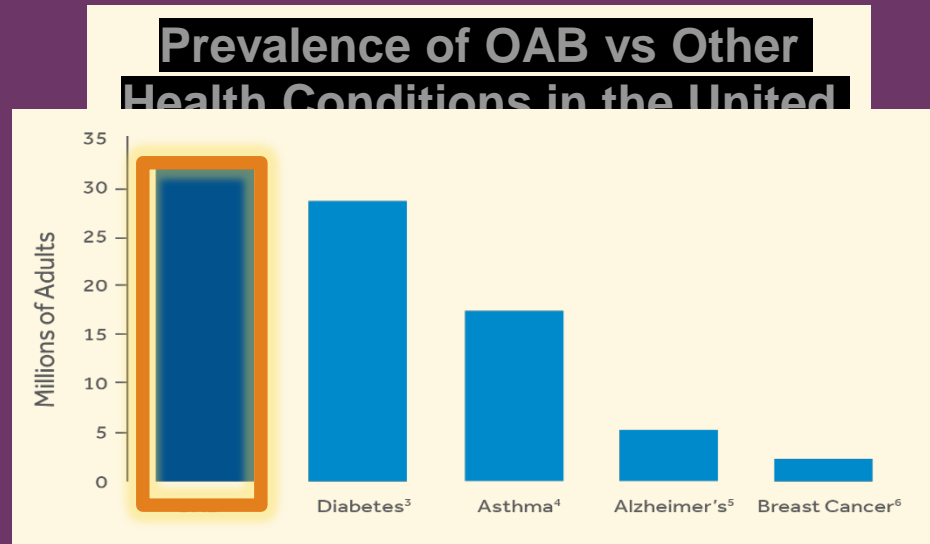
# Urge vs. Stress vs. Mixed Incontinence

- Of the 1 in 3 adult women who have urinary incontinence<sup>7</sup>:



# Prevalence

OAB AND FI (U.S.)



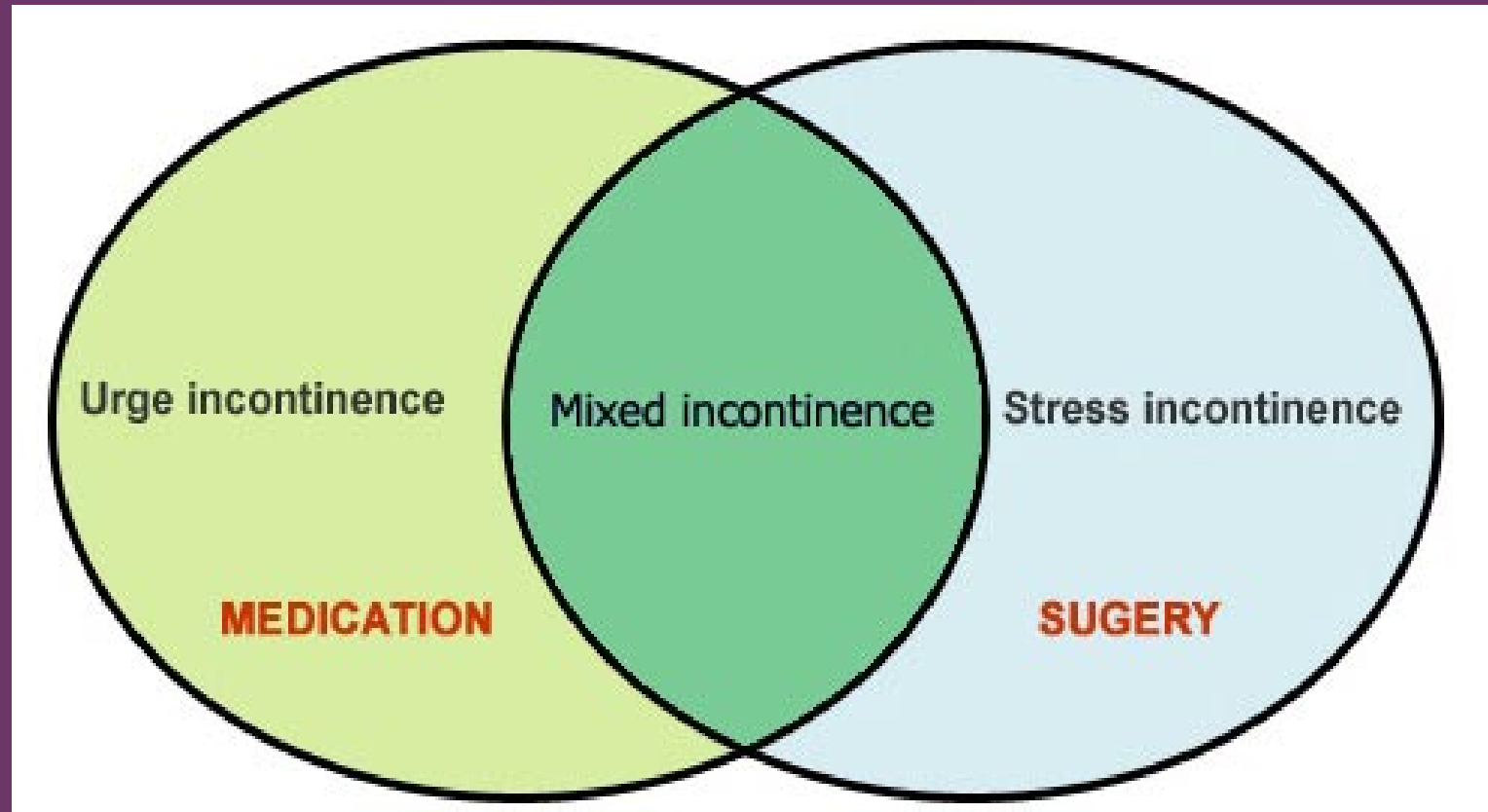
- **1 in 6 Americans<sup>1,2</sup> suffer from overactive bladder (OAB)**
- **Annual costs of UI care are greater than annual direct costs for breast, ovarian, cervical, and uterine cancer treatments combined<sup>8</sup>**
  - **2015 Projected Cost: \$76.2 Billion<sup>9</sup>**
  - **2020 Projected Cost: \$82.6 Billion<sup>9</sup>**

# Incontinence

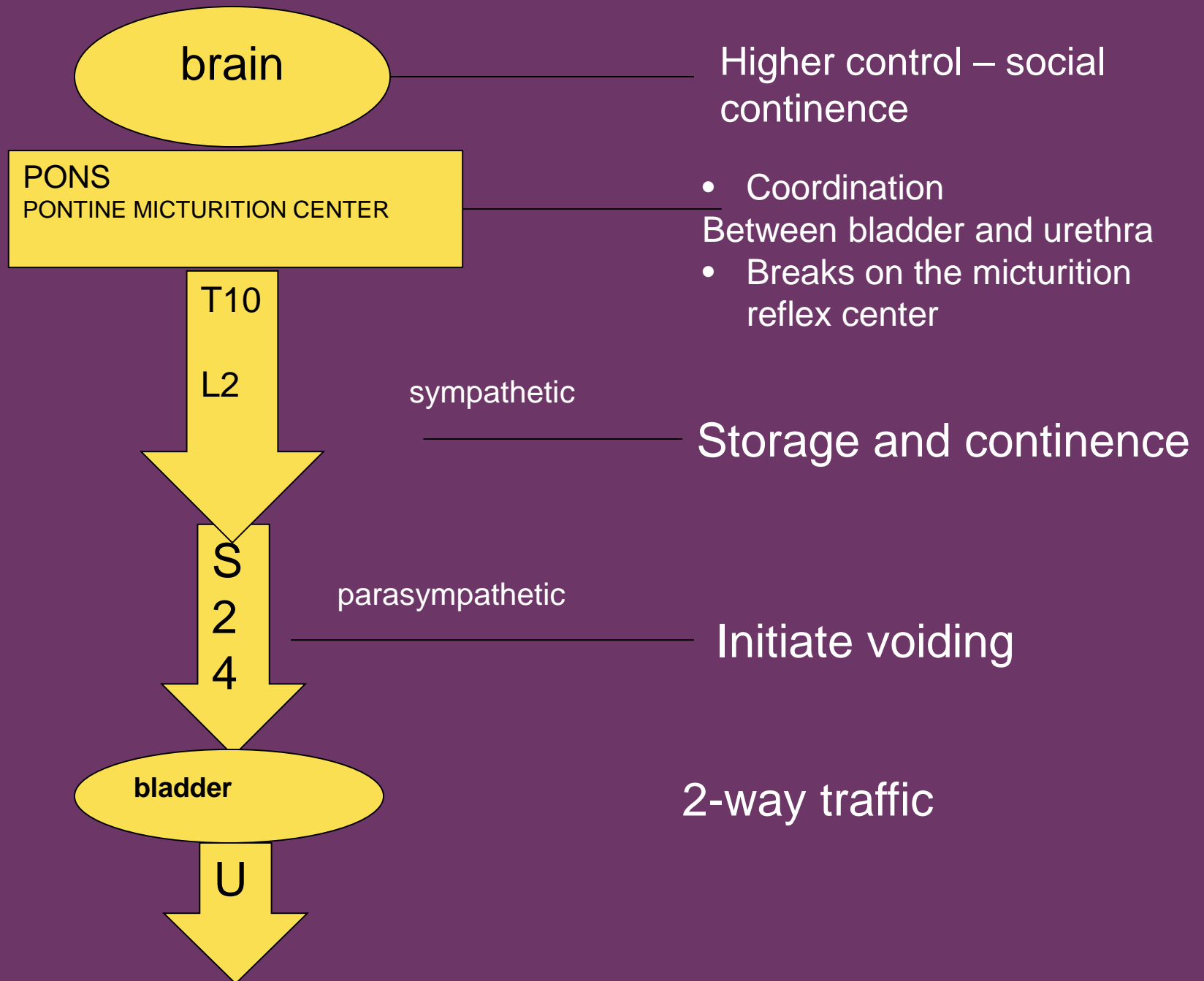
## Other types

- Incontinence without sensory awareness
- Functional incontinence
- Neurogenic incontinence
- Overflow incontinence

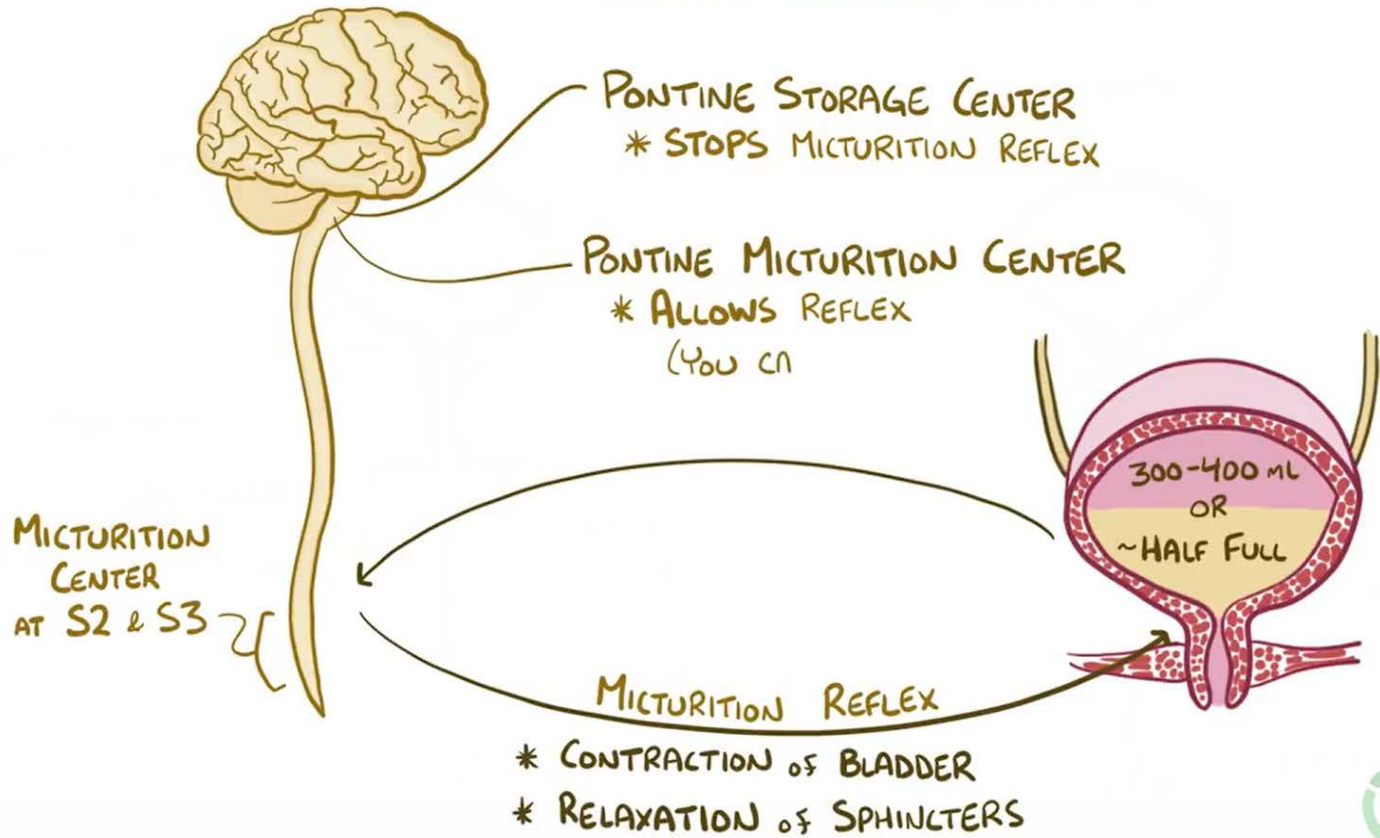
# Complex problem







# URINATION

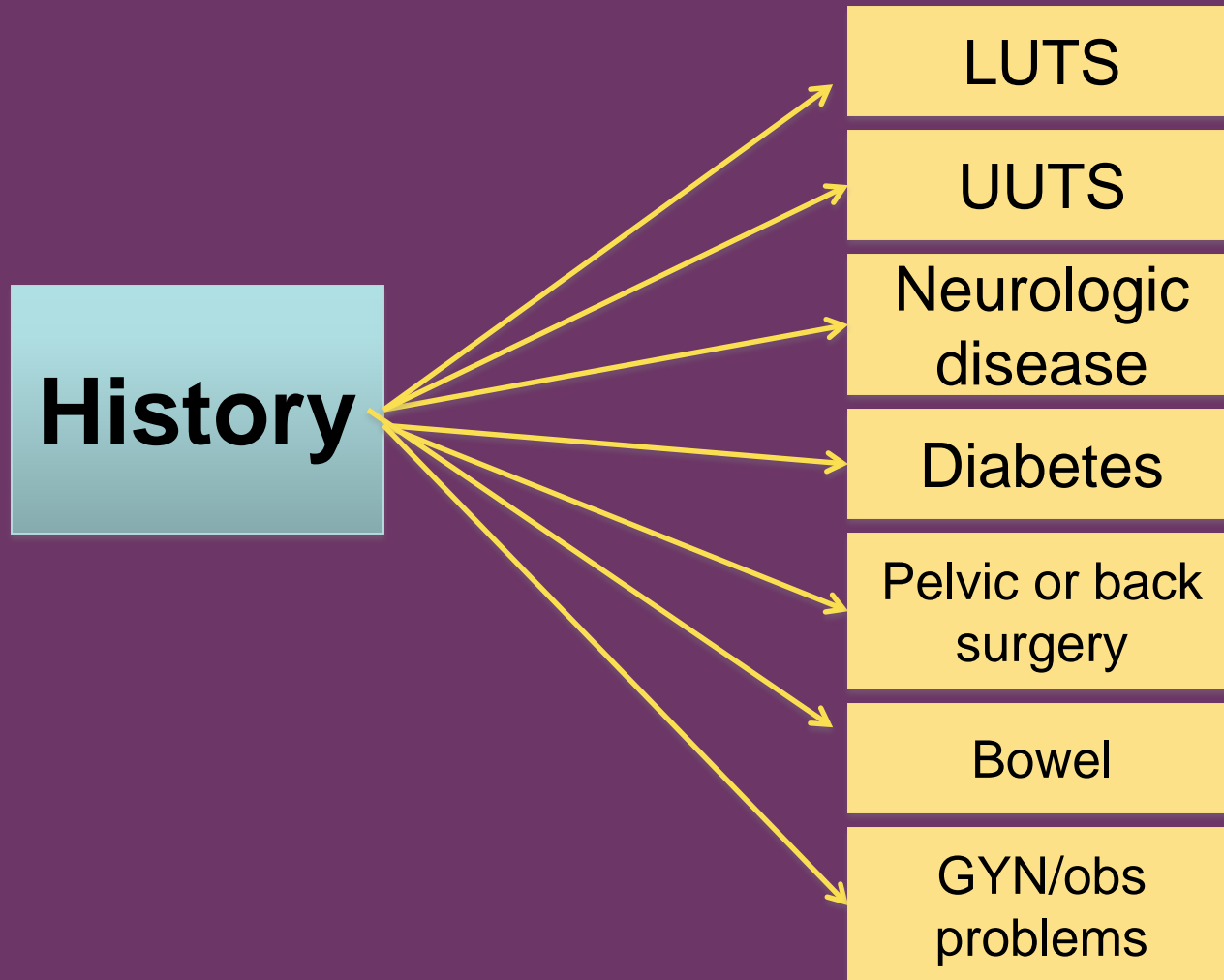




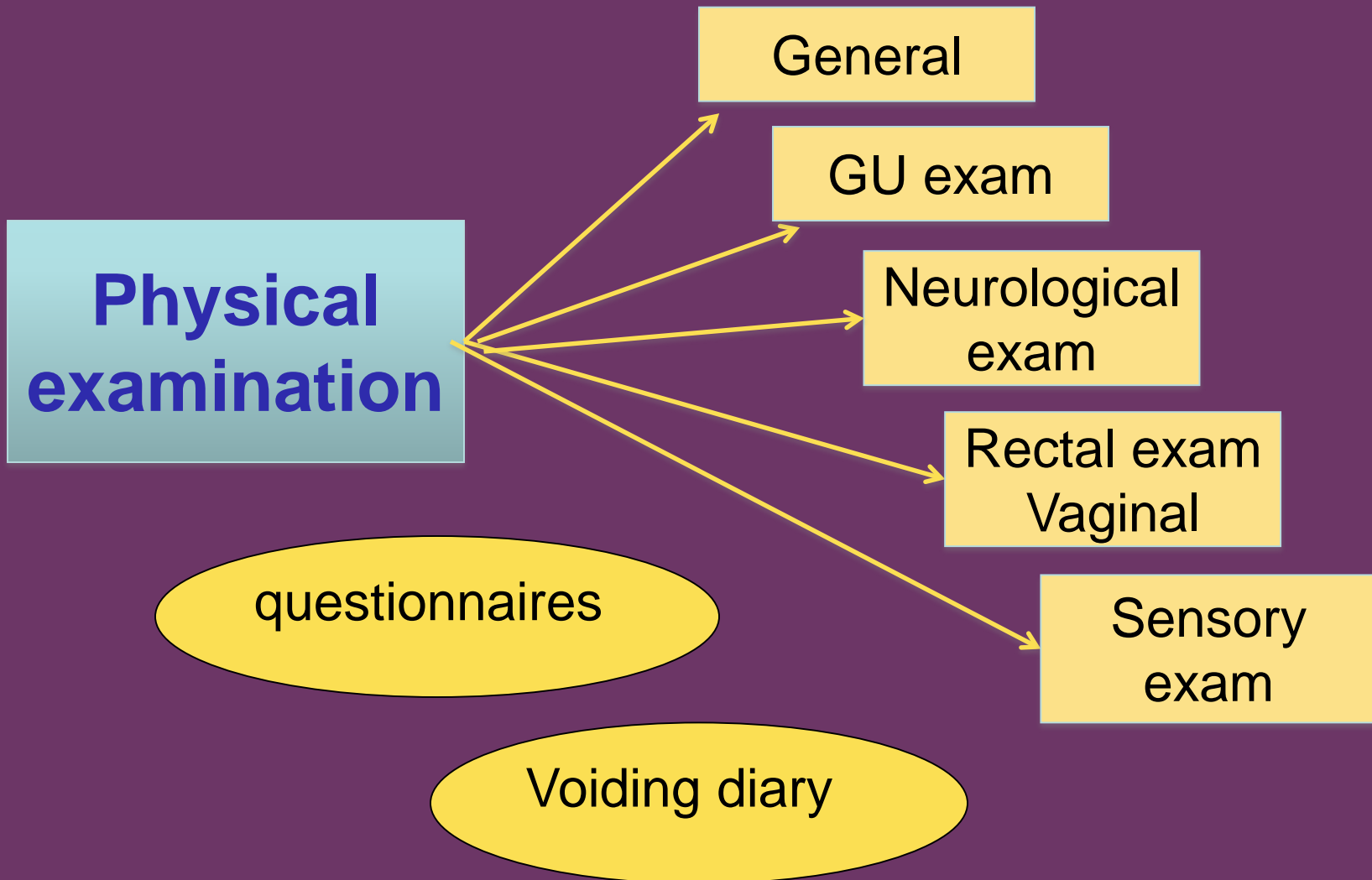
# Problems with OAB

- Fall risks
- Depression
- Underlying urinary problems
- Symptoms of other systemic problems

# Evaluation of voiding dysfunction patients



# Evaluation of voiding dysfunction patients



# Evaluation

- **Upper tracts**

- Decreased compliance
- Development of new LUTS
- Upper tract sx and/or infection
- High PVR in neurogenic bladder
- hematuria

- **Cystoscopy**

- Hematuria or suspect other path
- Previous urethral or bladder surgery
- History of prolonged catheterization

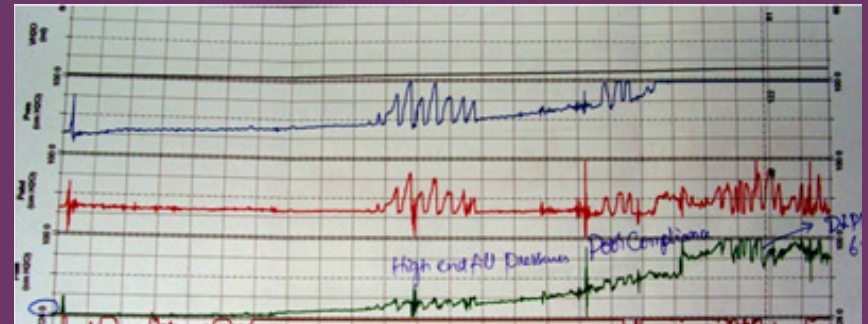


# Evaluation

- **Urodynamics:**
  - In non-index complicated patient
  - ? neurologic bladder
  - Clinical exam no explained

## Aim:

1. ID the pathology, and etiology
2. ID risk factors to upper tract
3. Help to design therapy to the pt





**Guidelines are on INDEX patients.**

# Urine leakage



– Involuntary **Leakage for Urine**

## **STRESS**

Urinary Incontinence

## **URGENCY**

Urinary Incontinence



# TYPES

## Urgency Urinary Incontinence

- Sudden Compelling desire to void that is associated with leakage
- **OAB symptoms:** frequency, Urgency, Nocturia
- **OAB+ leakage=** Urgency incontinence

# Temporary causes of incontinence

- **D**ementia
- **I**nfection
- **A**trophic vaginitis
- **P**harmacotherapy
- **P**sychologic
- **E**xcess Urine
- **R**estricted mobility
- **S**tool

# Urgency incontinence

- “lose urine as soon as I feel a strong need to go”
- “Can’t go to the bathroom quickly enough”
- “When I drink small amount of liquid or when I hear water running, I need to rush to the bathroom or leak”
- “I have to go to pee so often”
- “always wet”



# **Stress Urinary Incontinence**

# Stress Urinary Incontinence (SUI)

- **Stress incontinence** is urine loss during exercise, coughing, sneezing, laughing, or any body movement which puts pressure on the bladder



# Stress Urinary Incontinence (SUI)

## Potential SUI risk factors<sup>9</sup>

- Age
- Pregnancy
- Vaginal delivery
- Obesity/BMI
- Hysterectomy
- Physical activity
- Smoking
- Family history
- Diet
- Other medical conditions



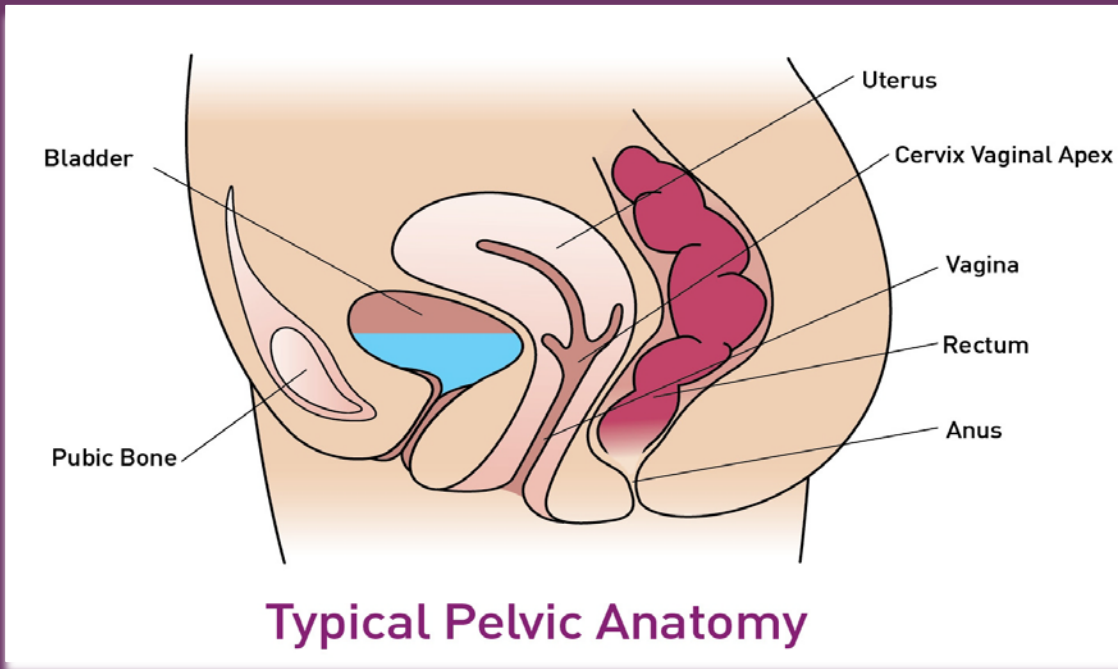
# Body Before SUI

- Bladder stores the urine

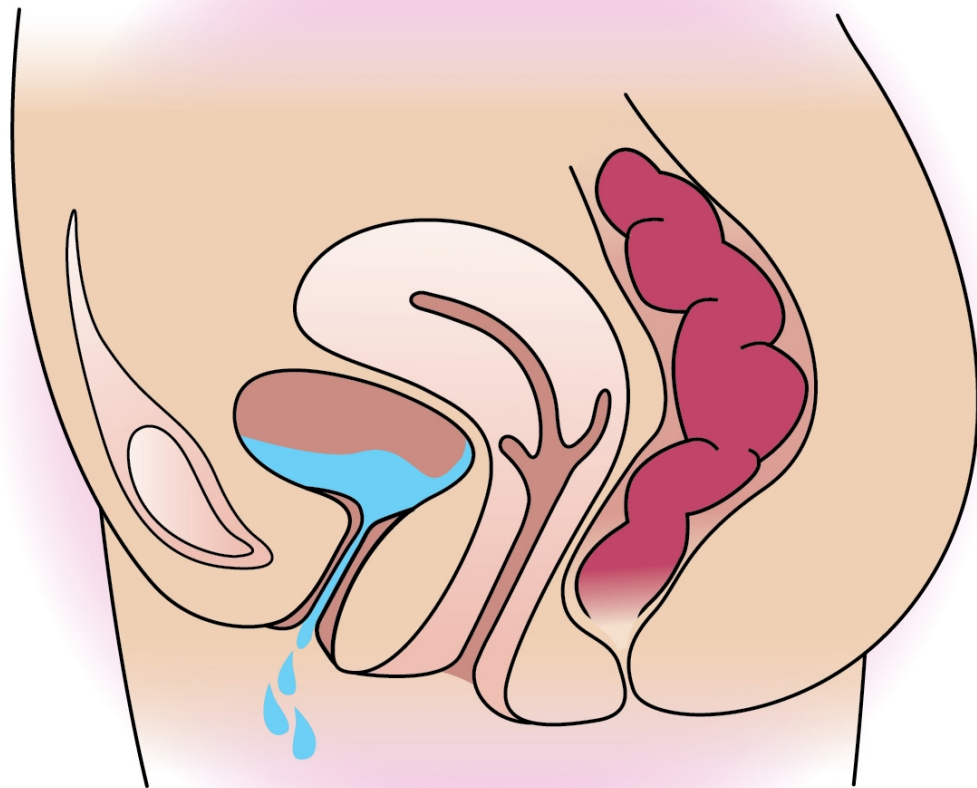
- Sphincter muscle holds the urine in the bladder

- Urethra is the tube in which urine is passed out of the body

*When the pelvic floor muscles are strong, the urethra is supported and leakage does not occur*



# Anatomical Changes with SUI



*When pelvic floor muscles are weak, the urethra is no longer supported allowing urine leakage to occur*

# Functional Incontinence

- Urine leak without awareness
- Usually sudden leakage once they start moving to the bathroom
- Large volume
- Failure of inhibitor signals from the cortex-> automatic voiding
- Dementia, lack of mobility, aging with lack of motivation

# Evaluation of patient with urine leakage

## Evaluation

- Careful history
- Physical examination
- UA
- Urine culture
- PVR
- Bladder diaries
- Questionnaires

## Work up

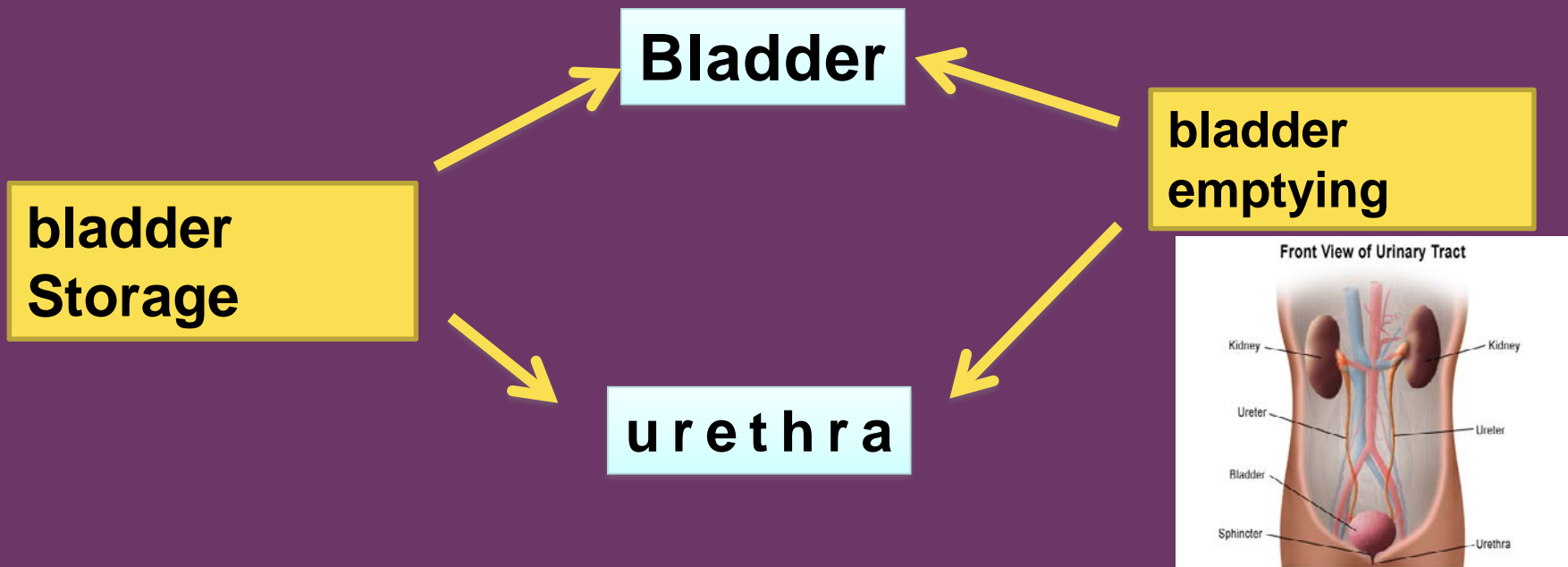
- Cystoscopy
- Urodynamics evaluation
- Renal and bladder US

Not for non-complicated patients

Only if indicated

# Management of lower urinary tract sx

Goal:



# Treatments for SUI Include

## **Nonsurgical treatments<sup>10</sup>**

Pelvic floor muscle training

Bladder training

Prompted voiding

## **Surgical treatments<sup>10</sup>**

Open retropubic colposuspension (Burch procedure)

Sling procedure

*\* No medications are currently indicated to treat SUI*

## LIFESTYLE CHANGES

- **Changing what you eat and drink** to see if less caffeine, alcohol, and/or spicy foods will reduce your symptoms
- Keeping a **daily “bladder diary”** of your trips to the bathroom
- Going to the bathroom at **scheduled times** during the day
- Doing “quick flick” **pelvic exercises** to help you relax your bladder muscle when you feel a strong urge to urinate

## PRESCRIPTION MEDICATIONS

- Your doctor may **prescribe drugs** to help with your OAB symptoms

# Treatment of Stress Urinary Incontinence

## Conservative

**Behavioral  
modification**

**Pelvic floor  
exercise**

**Medications?**

**Femsoft  
Pessaries**



# Treatment of Stress Urinary Incontinence

**Minimally  
invasive**

**mid-urethral sling  
(suburethral sling)**

**Periurethral  
bulking agents**

**Pubovaginal  
slings**

## TREATMENT

### Non-Surgical

- Continenence pessary
- Vaginal inserts
- Pelvic floor muscle exercises

### Surgical

- Bulking agents
- Midurethral sling (synthetic)
- Autologous fascia pubovaginal sling
- Burch colposuspension

If a midurethral sling surgery is selected, either the retropubic or transobturator midurethral sling may be offered. A single-incision sling may be offered to index patients if they are informed as to the immaturity of evidence regarding their efficacy and safety. Physicians must discuss the specific risks and benefits of mesh as well as alternatives to a mesh sling.

## SPECIAL CASES

### 1. Fixed immobile urethra

- Pubovaginal sling
- Retropubic midurethral sling
- Urethral bulking agents

### 2. Concomitant surgery for POP repair and SUI

Any incontinence procedure

### 3. Concomitant NLUTD

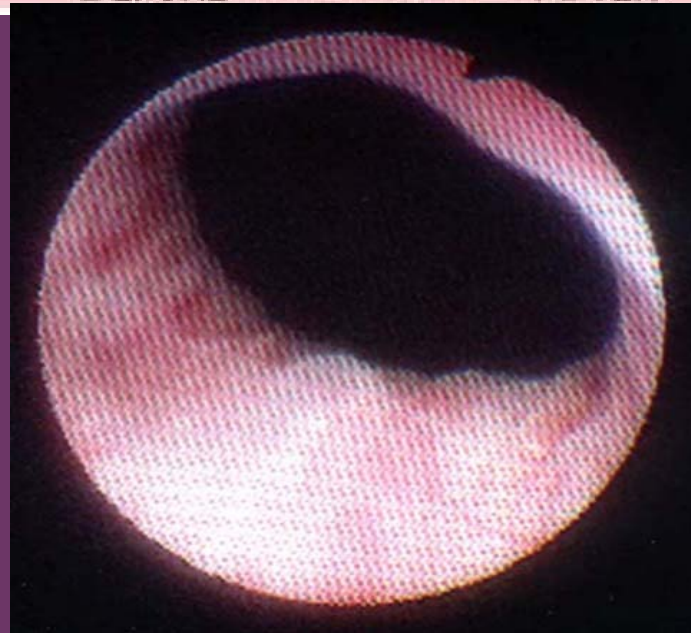
Surgical treatment following appropriate evaluation and counseling

### 4. Child-bearing, diabetes, obesity, geriatric

Surgical treatment following appropriate evaluation and counseling

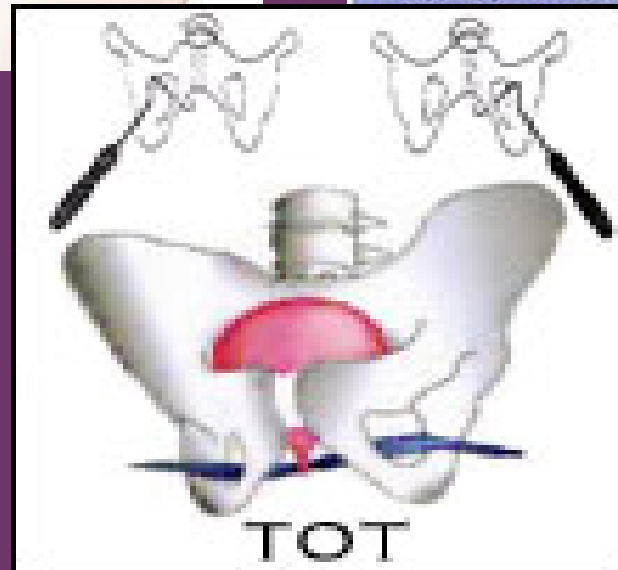
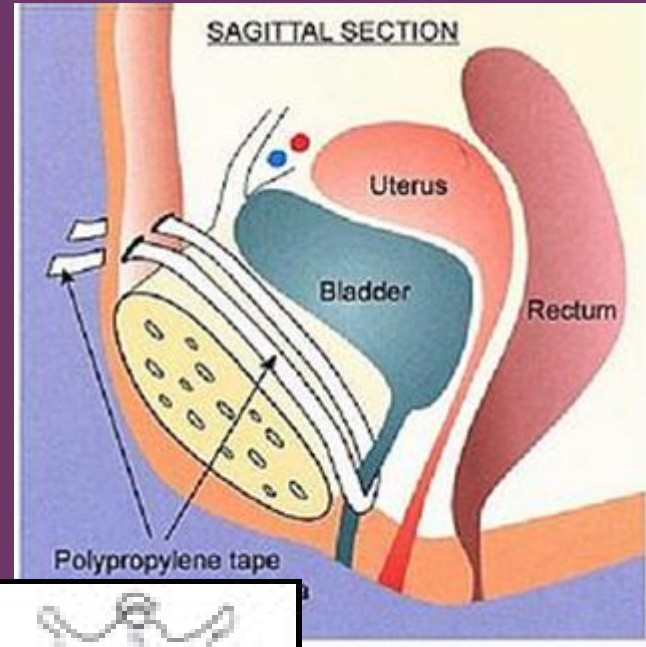
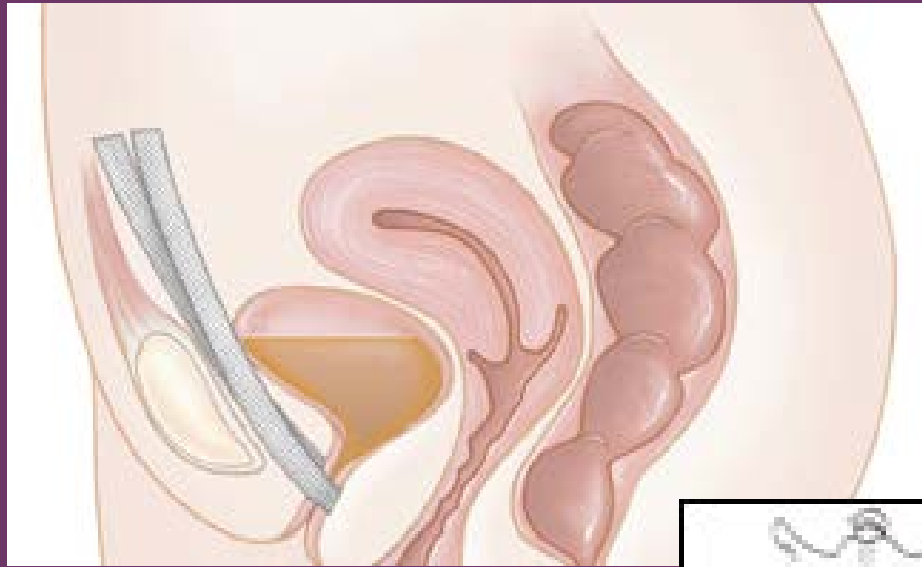
MUI= mixed urinary incontinence; NLUTD= neurogenic lower urinary tract dysfunction; OAB= overactive bladder; POP= pelvic organ prolapse; PVR= post-void residual; SUI= stress urinary incontinence

# Periurethral Bulking

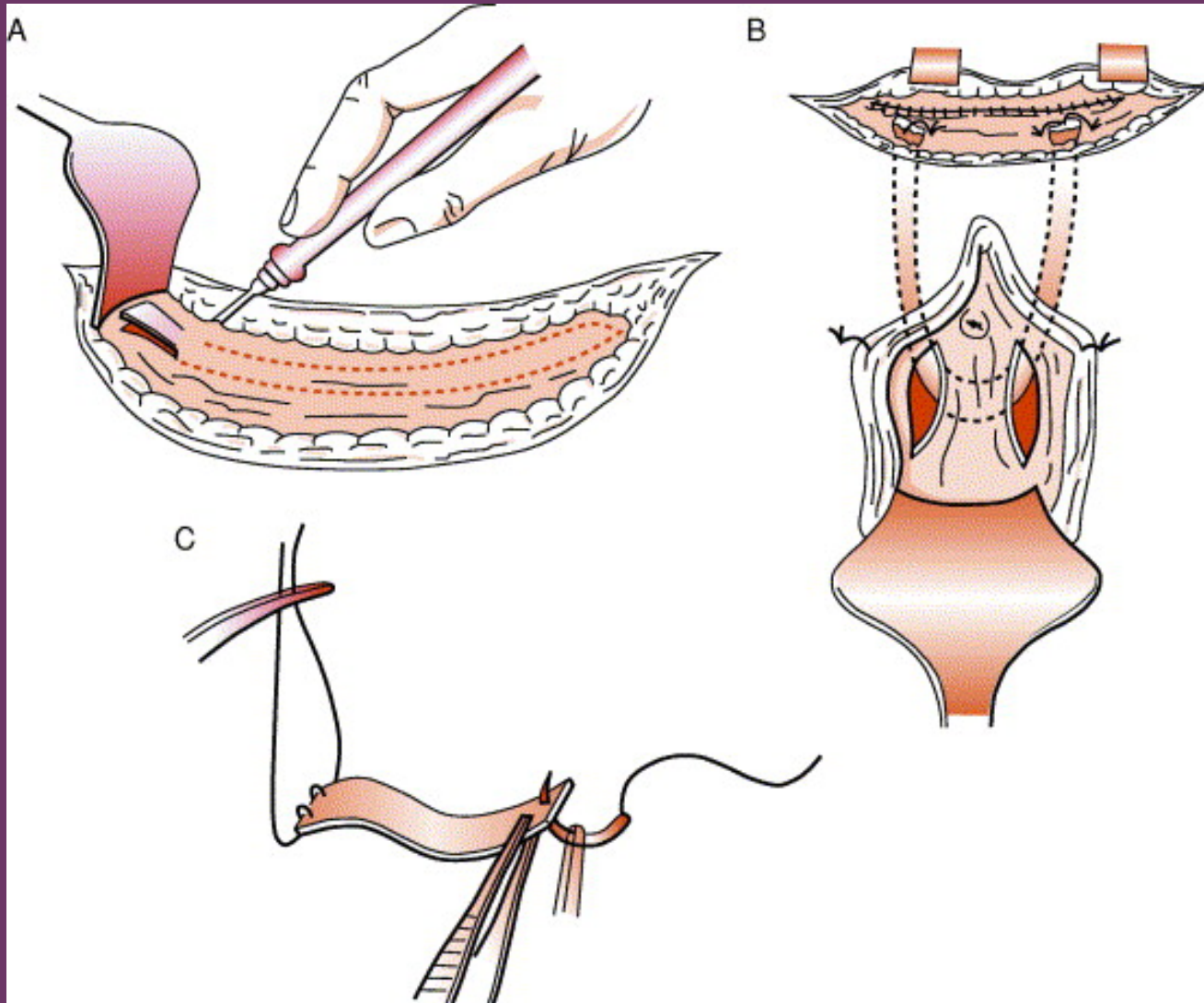


<http://emedicine.medscape.com/article/447068-overview>

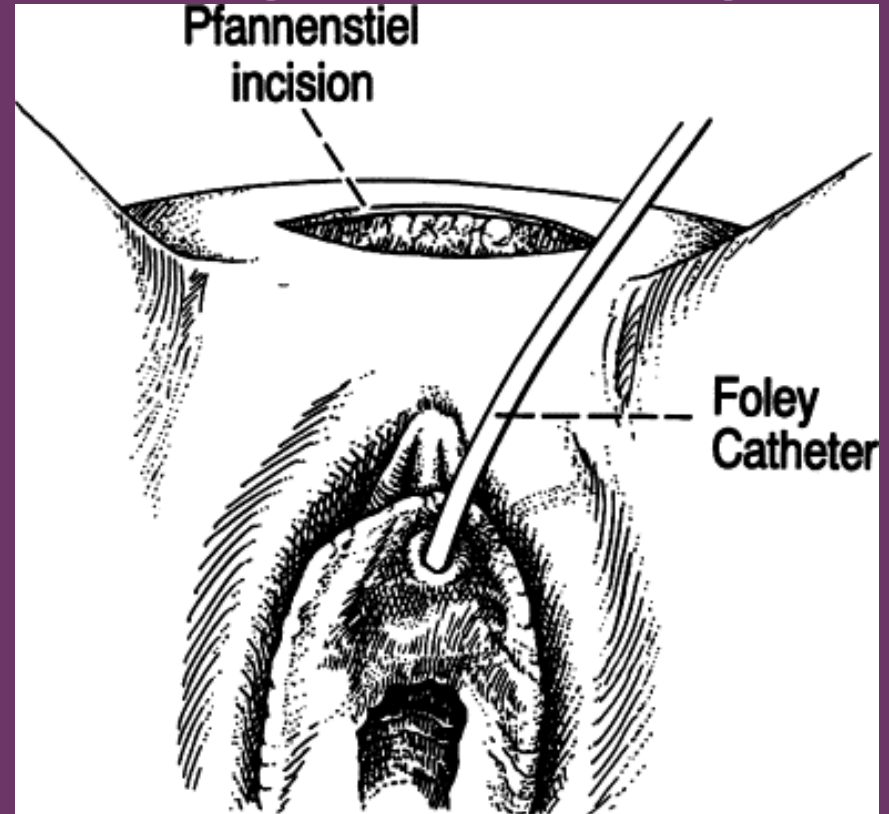
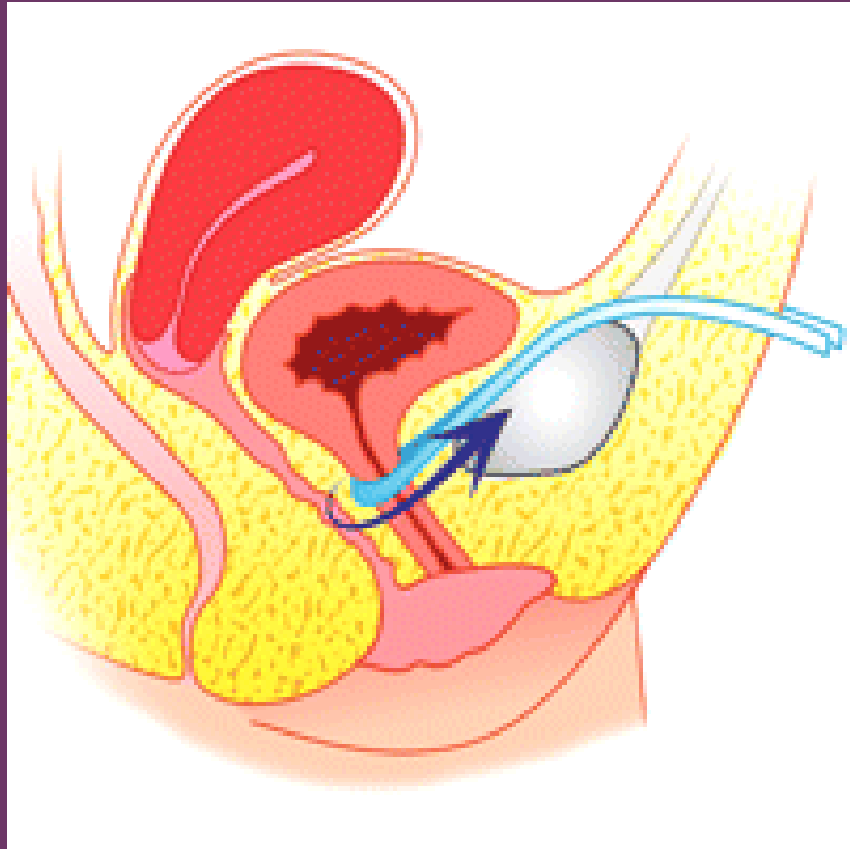
# Midurethral sling



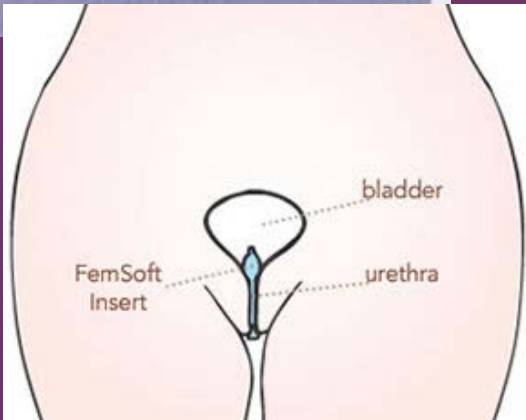
# Autologous pubovaginal sling



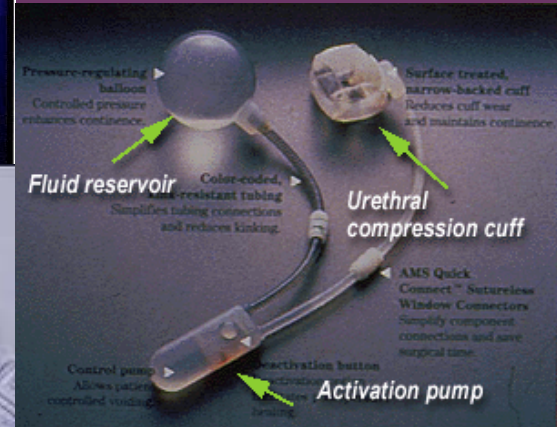
# Autologus pubovaginal sling



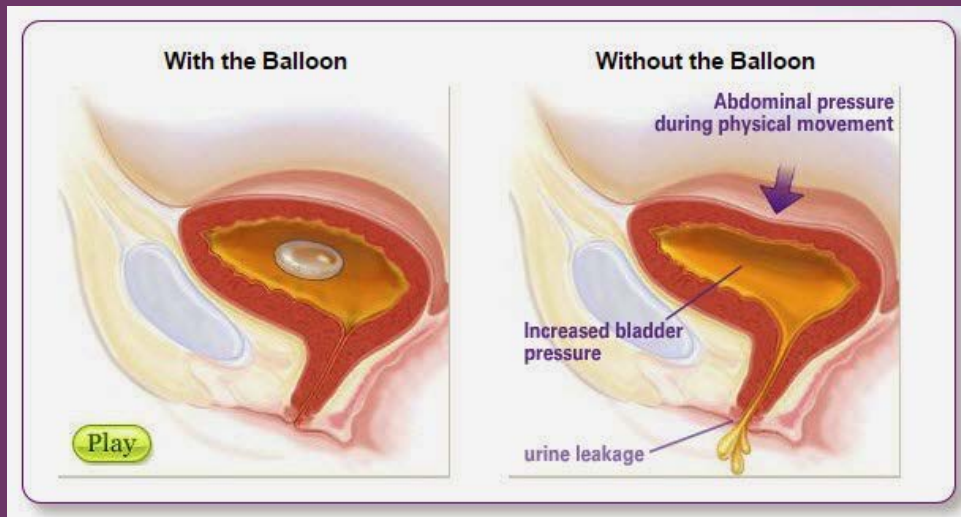
# SUI treatment



Ring (with Knob)



# Other conservative therapy





# Treatment of Urgency incontinence

## Conservative

Behavioral  
modification

Pelvic floor  
exercise

### Medications

- Antimuscarinics
- B3 agonists



# Medical treatment

- Anticholinergics
  - SE
- B3 agonists
- Combination
- Alpha blockers
- Amitriptylline

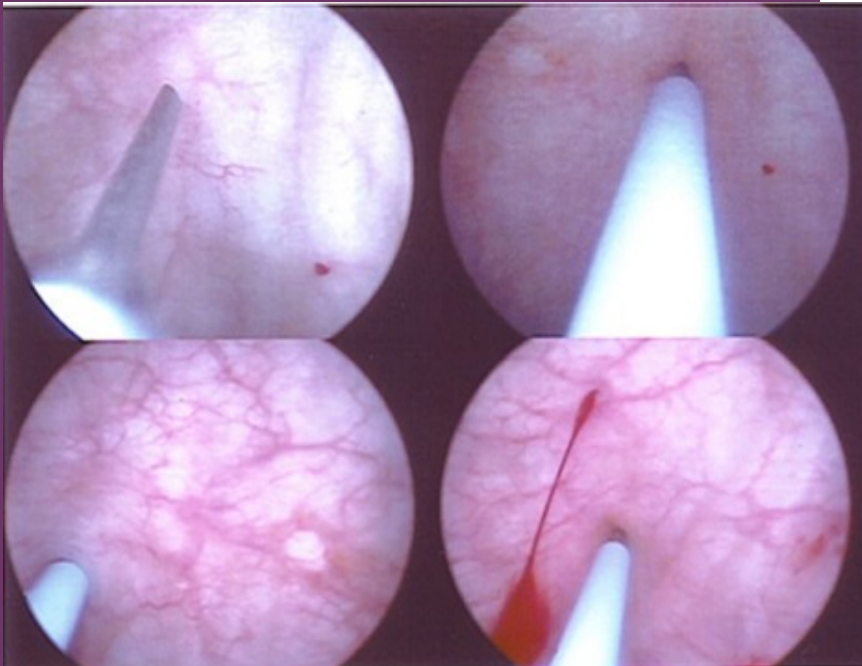
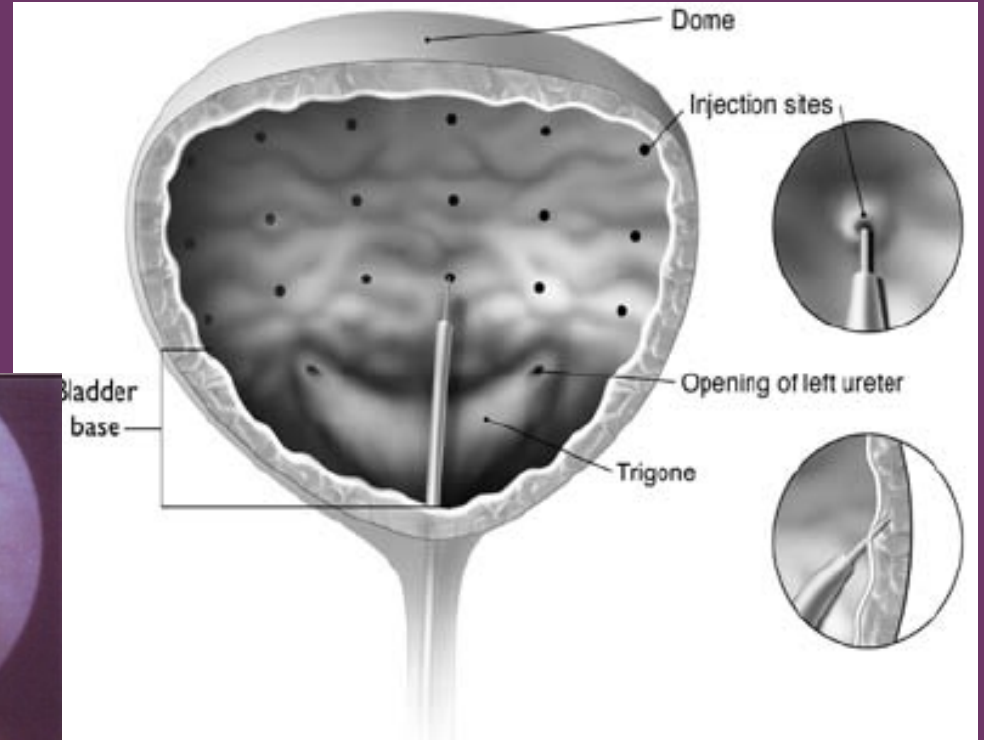
# Treatment of Urgency incontinence

**Minimally invasive**

**Botox injection**

**Sacral neuromodulation  
Interstim  
“Pace maker of bladder”**

# BOTOX





Medtronic, Inc. 2008



# Treatment of Stress Urinary Incontinence

**Minimally invasive**

**mid-urethral sling  
(suburethral sling)**

**Periurethral bulking  
agents**

**Pubovaginal slings**

# Take a home message

- Urine leakage is not normal
- It is inconvenient and affect quality of life
- Talk to your patient about treatment options and make sure you know how to differentiate. Know your tools.
- Treatment options are available, Guidelines are good to follow and tailor your treatment for the patient needs.

THANK YOU