PELVIC FLOOR HEALTH: DIAGNOSIS AND MANAGEMENT

THE ROLE OF PHYSIOTHERAPY

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Active Physio Omagh

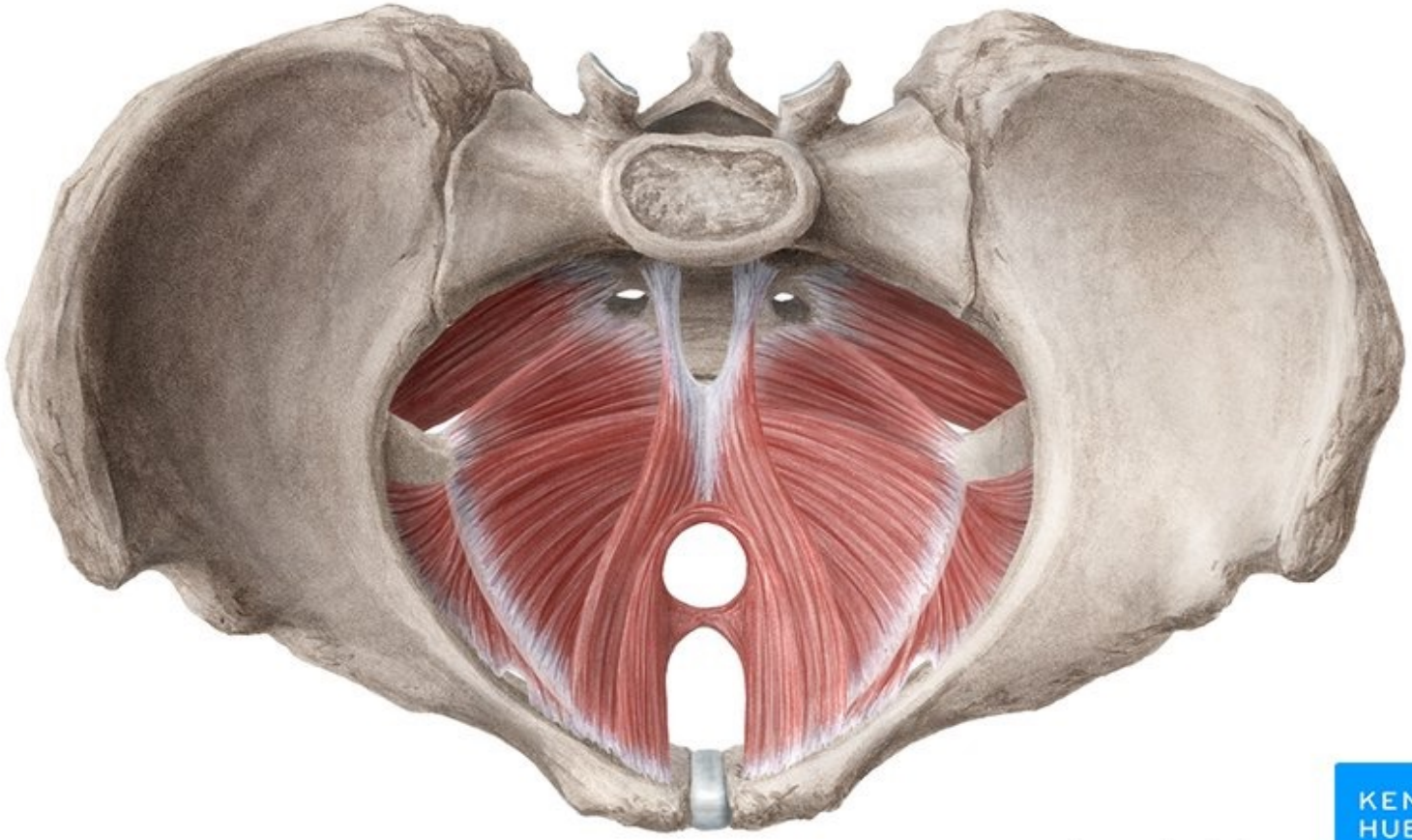
GPNI Clinical Update - Thursday 26th June 2025

Agenda

- Introduction to the pelvic floor and its significance.
- Common symptoms related to pelvic floor dysfunction.
- Provide an overview of the pathophysiology of stress urinary incontinence, overactive bladder, pelvic organ prolapse and hypertonic pelvic floor.
- Explain the clinical reasoning process used in physiotherapy to reach diagnosis
- Evidence based treatment pathway and signposting

What and where is the pelvic floor??

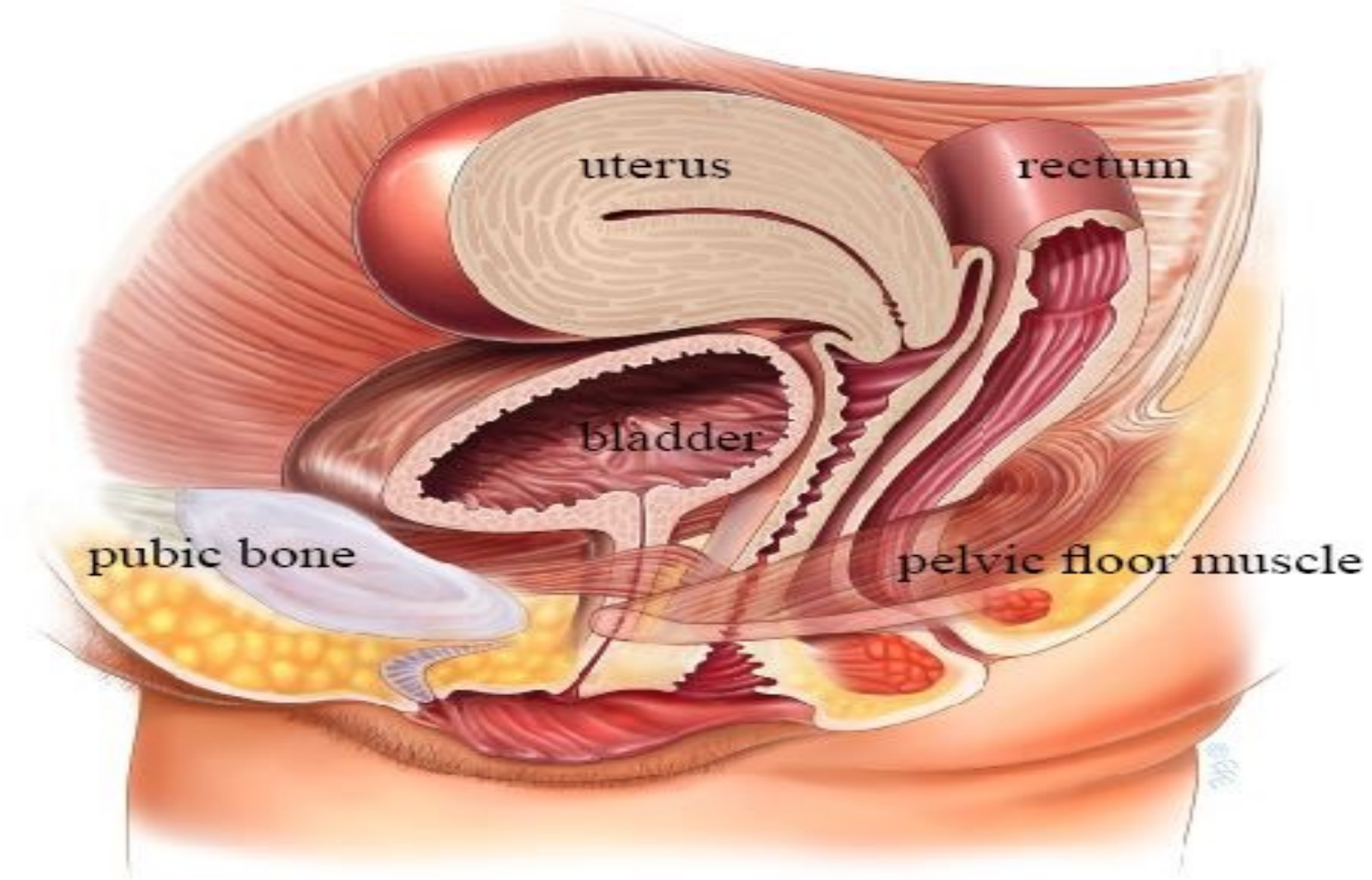




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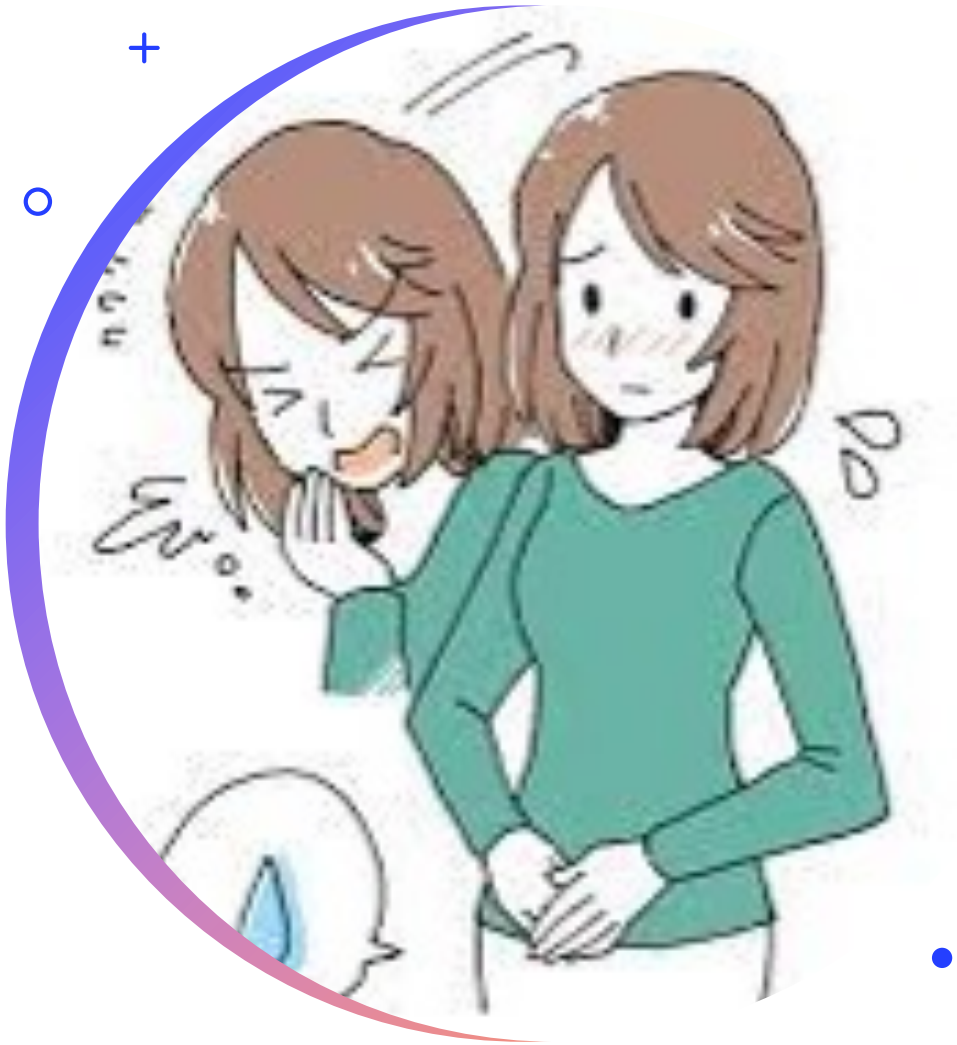
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Common symptoms of dysfunction

- Stress urinary incontinence
- Urinary frequency/urgency (OAB wet/dry)
- Bowel urgency/leaking
- Pelvic organ prolapse
- Dyspareunia
- Pelvic pain



Stress urinary incontinence

For urine to remain in the bladder

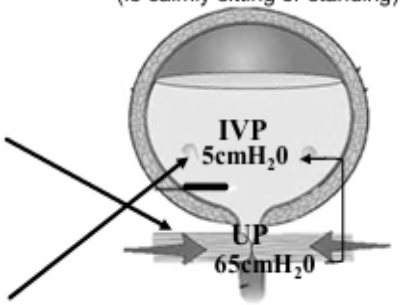
URETHRAL PRESSURE (UP)

must remain **HIGHER** than .

INTRAVESICAL PRESSURE (IVP)

Let's look at some example numbers…

However!!!
these numbers really only reflect what we might see in a woman who is resting (ie calmly sitting or standing)



'Urine will remain in Bladder' Because the UP is a higher force keeping the urethra closed than the IVP pushing the urine out



Stress urinary incontinence

- Happens when pressure from above is greater than the pressure closing the bladder neck:

  - Decreased blood vessels in bladder neck reducing internal pressure or weakness of sphincter muscles
  - Reduced pelvic floor muscle bulk, strength and/or co-ordination
  - Decreased bladder neck (urethral) support leading to hypermobility

SUI Pathophysiology



IAP = +80cmH$_2$0

Under Load (eg coughing, sneezing, jumping)

Intra Abdominal Pressure (IAP) increases

→ IAP transfers to and compresses the bladder

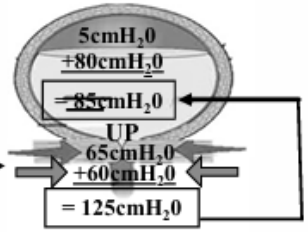
→ **causing IVP to increase**

But with normal PF muscle and fascial function

there **should also** be a

momentary increase in Total UP

(usually by about 70-90% of the increase in IAP)



'Woman remains Continent'

Incontinence should not occur because

$UP_{rest} > IVP_{rest}$

and

$UP_{load} > IVP_{load}$

What causes this augmentation of UP?

for IAP to increase urethral closure

1. **Upper Urethra / Bladder Neck needs to be high**

and....

2. **Pubocervical Fascia needs to maintain tension to provide a solid backstop against which the urethra can be compressed**

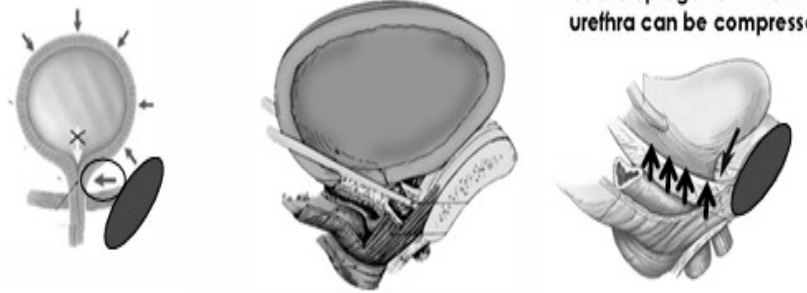
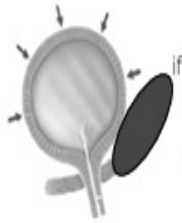


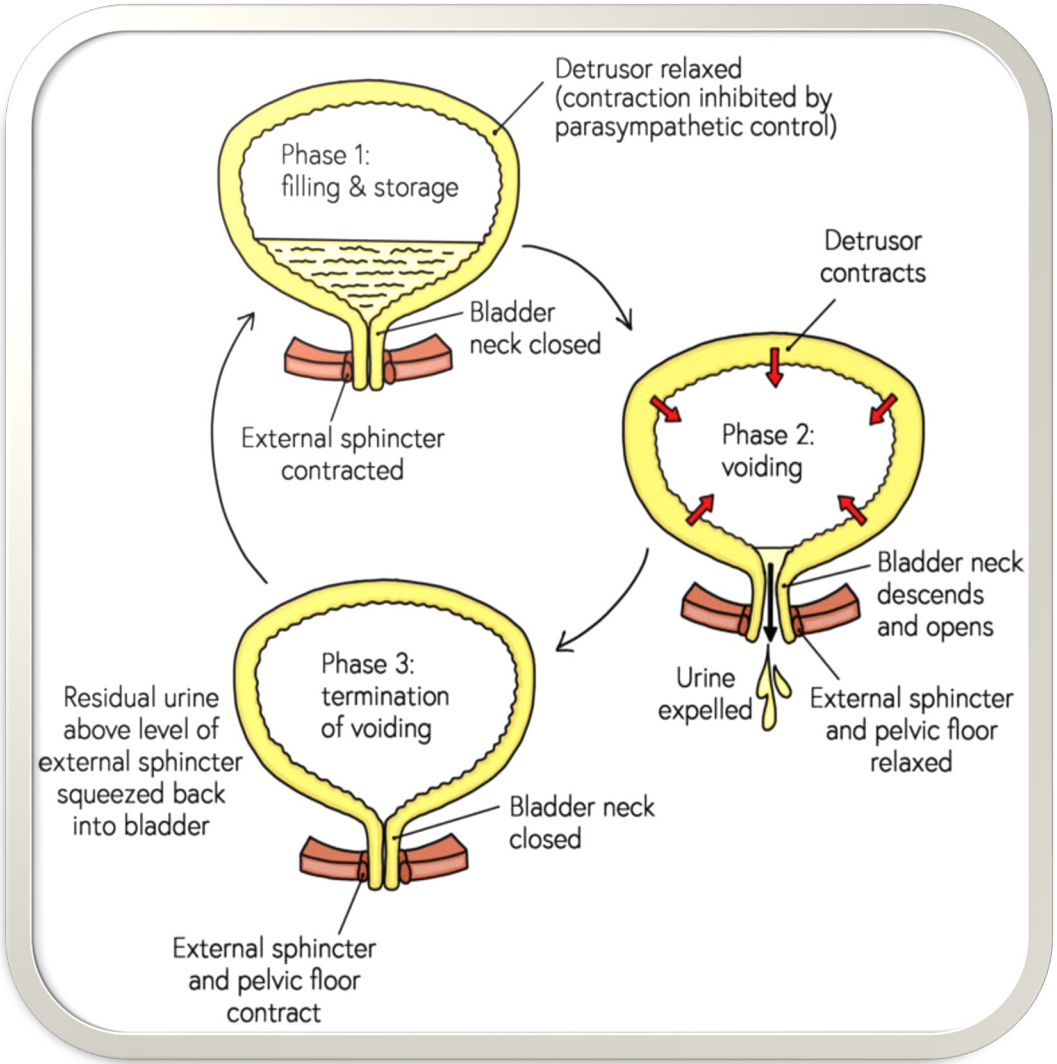
Image from Wei & DeLancey 2004[3]



if the bladder neck sits or drops low during ↑es in IAP, the IAP will only transmit to the bladder and not urethra

→ this is what led to physiotherapists focusing on the function of Levator Ani for SUI!!

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Urinary urgency/ frequency/ leaking

Normal voiding mechanism

- Urine enters the bladder and the detrusor expands
- As more urine enters the bladder the continued expansion should create a gradually increasing urge to pass urine
- During this phase the lev.ani and EUS muscles help to keep the detrusor calm and the urethra closed.
- At approx. 400-500mls the lev.ani and EUS relax and the detrusor contracts resulting in bladder emptying



Urinary urgency/ frequency/ leaking

4 main causes:

- **Decreased bladder compliance – “Tight Bladder”**

congenitally small bladder, chronic constipation, surgical scarring, fibrosis from radiation therapy, incomplete bladder emptying

- **Increased bladder nerve signal**

overactivity of sensory nerves in the bladder can occur due to numerous reasons – fluid or diet irritants, weak or overactive pelvic floor muscles, reduced oestrogen, IC, Trigonitis

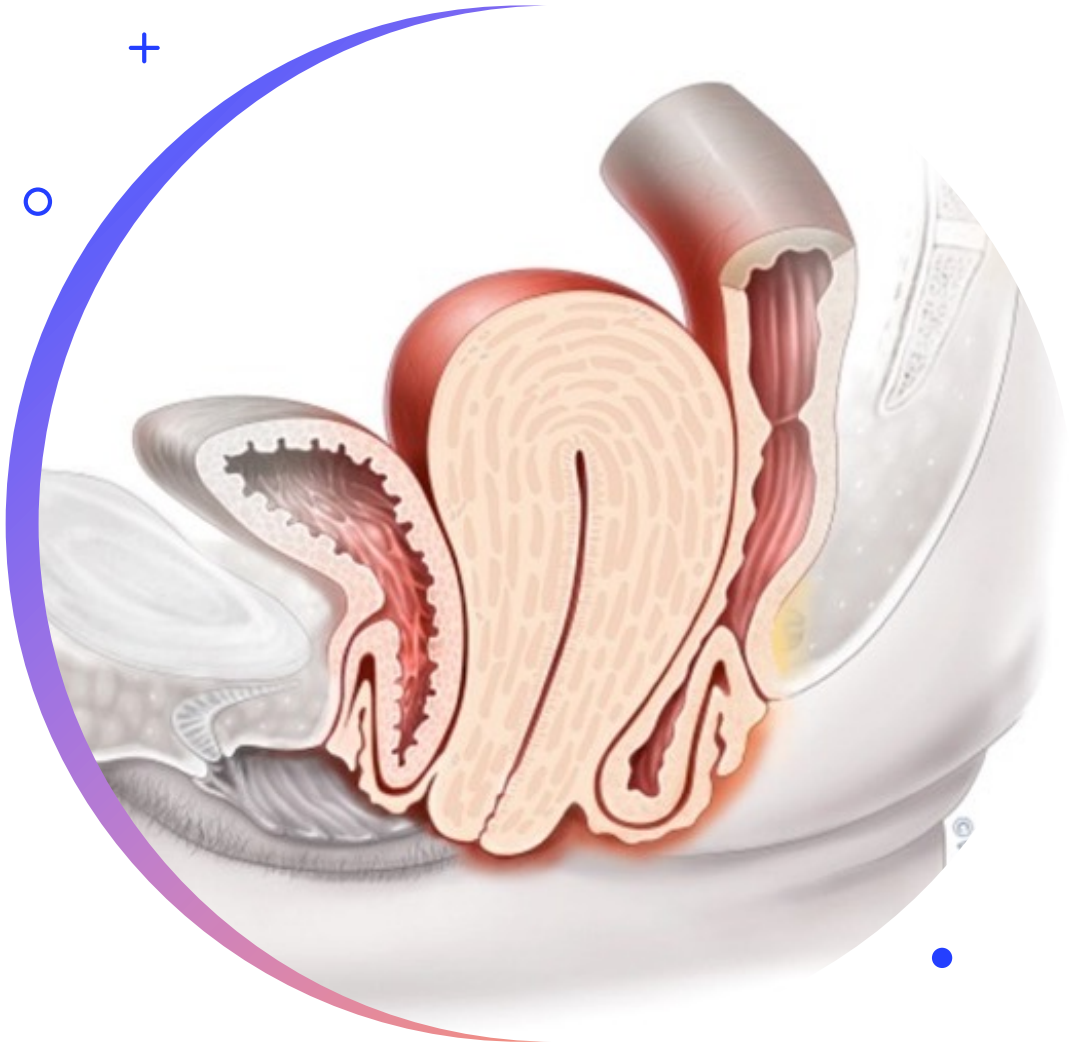
- **True Detrusor Overactivity**

Only 10% of cases. Requires Urodynamics for diagnosis. Only type that should be prescribed anticholinergic medication

- **Urethral induced urgency**

More akin to SUI pathophysiology and needs to be treated accordingly

Poor bladder habits develop leading to smaller bladder volume



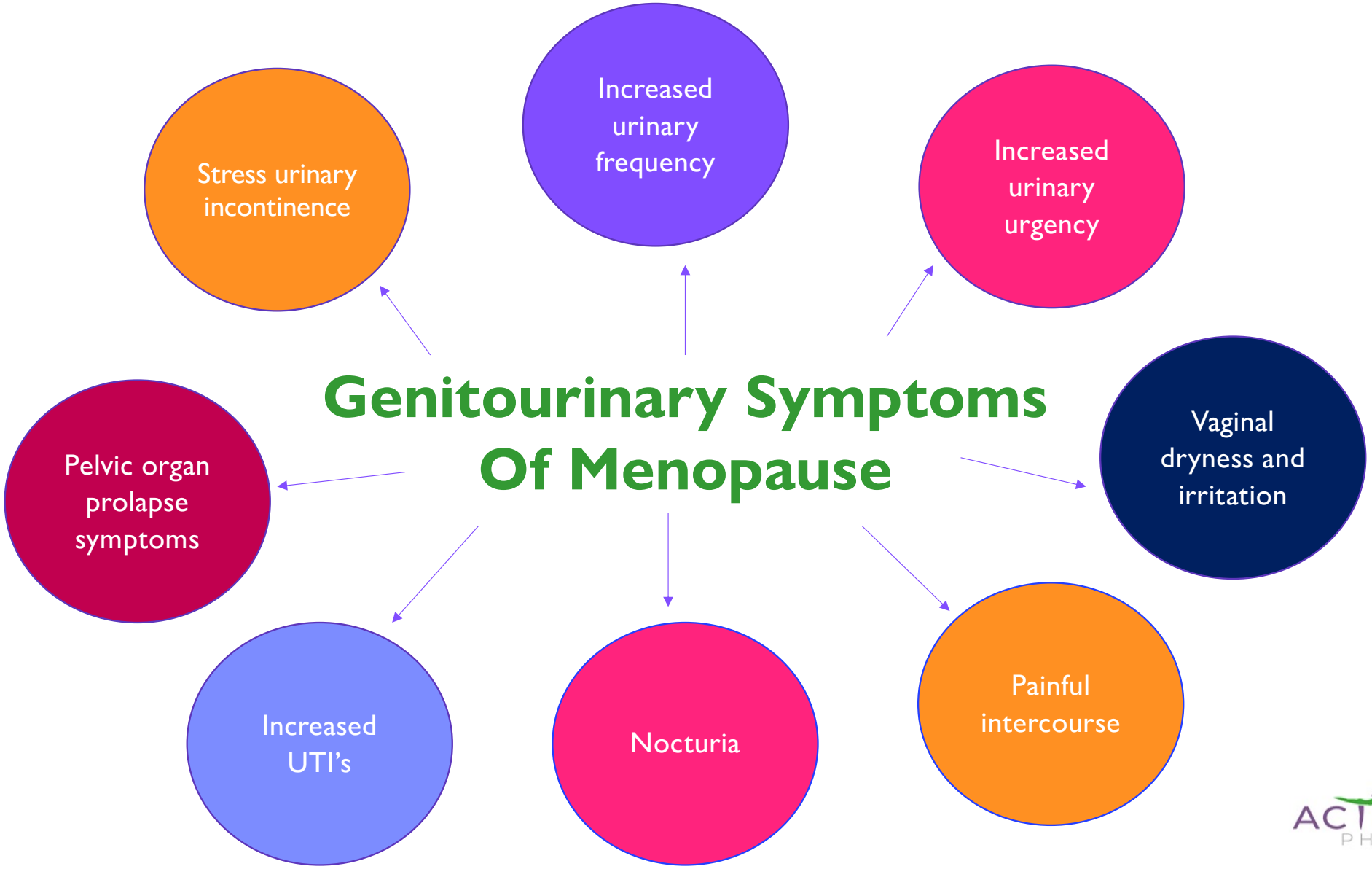
Pelvic Organ Prolapse

- Develops when forces from above are greater than supports underneath
  - Decreased strength of supporting connective tissues (Level 1 supports)
  - Thinning/tearing of vaginal walls (Level 2 supports)
  - Decreased pelvic floor/perineal body support (Level 3 supports)
  - Anterior wall, Posterior wall and Apical/Vault



Hypertonic Pelvic Floor

- A condition where the muscles in the lower pelvis are constantly contracted or in spasm
- Symptoms very similar to low tone pelvic floor – incontinence, urinary frequency and urgency, pelvic pressure
- Also includes – pelvic/back/hip/abdo pain, pain with intercourse, constipation, slow flow urine
- Commonly found in vaginismus, pudendal neuralgia, vulvodynia, PGP, endometriosis etc
- Treated very differently – relaxation, manual release, breathing ex.


Genitourinary Symptoms Of Menopause
Stress urinary incontinence
Increased urinary frequency
Increased urinary urgency
Pelvic organ prolapse symptoms
Vaginal dryness and irritation
Increased UTI's
Nocturia
Painful intercourse

Treatment options

















Pelvic floor exercises

- Need to consider external urethral spchinter muscles (EUS) and levator ani
- Pull in your back passage as if you are trying to stop yourself from passing wind

- Sucking up through a straw
- Zipping from the front to the back
- Place you hand on your perineum and draw up and away from it
- Fast and slow squeezes – 8-10/10/10

NOT ALWAYS APPROPRIATE!!



Specific to stress urinary incontinence…

- Control body weight and constipation
- Pelvic floor ex – functional
- Use of breath and “The Knack”
- Continence pessaries
- Urethral bulking/Surgery

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Specific to urinary urge and frequency…

- Manage constipation
- Timed voids
- Sipping fluids/adequate intake
- Reduce caffeine/hot drinks
- Pelvic floor exercises
- Timing of fluids
- Urge suppression techniques
- Tibial nerve stimulation
- Continence pessaries
- Medication/Bladder Botox

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Drug therapy and OAB

7th ICI and Vaginal Oestrogen

Summary Recommendations of the 7th ICI International Scientific Committee Part III – Urinary Incontinence in Women, p. 2162

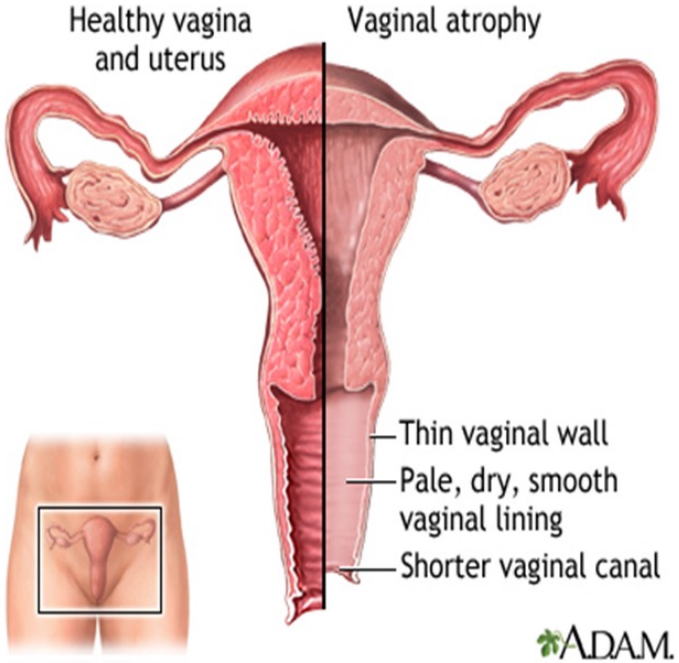
"Topical oestrogen may alleviate OAB symptoms in menopausal women"
(Grade of Recommendation C)

"If oestrogen deficiency is found and / or UTI is found, the patient is to be treated at initial assessment [ie by their GP] and then reassessed after using vaginal oestrogens for a suitable period"
(Grade of Recommendation B)

Should the definition of OAB be: "urinary urgency, frequency and nocturia (with/without UUI), in the absence of UTI, GSM or other obvious pathology" ??

Pharmacological Treatment of Urinary Incontinence (2023), in Incontinence 7th Edition– Chapter 9. ICI-ICS. Cardozo, L, Rovner, E, Wagg, A, Wein, A, Abrams, P. (Eds) International Continence Society, Bristol UK, ISBN: 978-0-9569607-4-0.





Drug therapy and OAB

Anticholinergics and Dementia

SYSTEMATIC REVIEW #1: Dmochowski et al 2021

Included the results of n = 645,865 patients across studies

Found that the increased risk of dementia was directly related to the duration of anticholinergic use

- 3months – 1 year: 14% increased risk
- 1year – 3 years: 35% increased risk
- > 3 years: 49% increased risk

Overall, they estimated that anticholinergic use ≥ 3months increased the risk of dementia by an average of 46% (OR 1.46 95% CI 1.17 – 1.81)

They also found the anticholinergic exposure was associated with:

- 40% increased risk of falls
- 31% increased risk of fractures
- 36% increased risk of all-cause mortality.

Anticholinergics and Dementia

SYSTEMATIC REVIEW #2: Zheng et al 2021

Included the results of n = 1, 564,181patients across studies

Looked further into the data and found that the risk was not the same for all anticholinergics (note: anticholinergics treat lots of things, not just urinary symptoms)

- Anticholinergics prescribed for cardiovascular and gastrointestinal conditions slightly reduce the risk of dementia (OR = 0.97 and 0.95 respectively)
- Whereas **urologic**, anti-Parkinson and antidepressant anticholinergics **increased the risk of dementia** (OR = 1.27, 1.39 and 1.19 respectively)

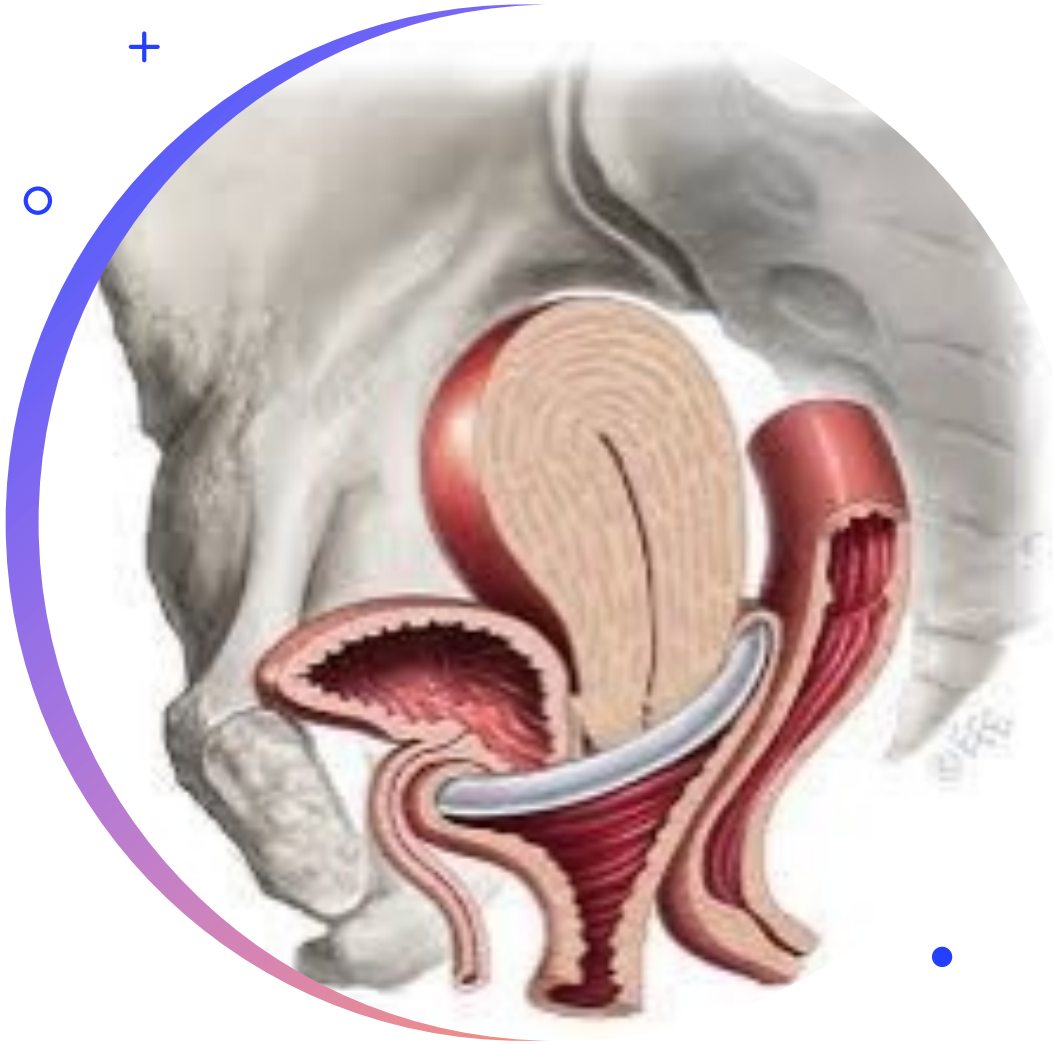
However, they found very similar results to Dmochowski et al 2021, that the increased risk of dementia was directly related to the duration of anticholinergic use

- 3months – 1 year: 16% increased risk 95%CI 1.12 – 1.20
- 1year – 3 years: 39% increased risk 95%CI 1.33 – 1.45
- > 3 years: 49% increased risk 95%CI 1.44 – 1.55

Overall, they estimated that 1-3 years of anticholinergic use increased the risk of dementia by an average of 40 - 50%

Dmochowski et al 2021 Increased risk of incident dementia following use of anticholinergic agents: A systematic literature review and meta-analysis. Neurourology and urodynamics. 2021 Jan;40(1):28-37.

Zheng YB et al 2021. Anticholinergic drugs and the risk of dementia: a systematic review and meta-analysis. Neuroscience & Biobehavioral Reviews. 2021 Apr 29.



Specific to Prolapse…..

- Controlling body weight and constipation
- Pelvic floor exercises
- Support shorts
- Pessaries
- Surgery



Specific to hypertonic pelvic floor….

- Pelvic floor relaxation/Abdominal breathing
- Manual release
- Stretching positions
- Stress management
- Botox *
- Consider CBT or psychosexual counselling if no clear physical driver

To Summarise:

- Pelvic health disorders affect a large majority of women
- 1 in 3 will experience SUI and 1 in 2 will experience POP
- 90% of women with OAB can be treated conservatively
- Identifying underlying mechanism is essential for effective treatment

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To Summarise :

- Pessaries are not just for old people! Most women can be taught to self manage.
- Consider supplementary vaginal oestrogen.
- Important for women to keep active and consider strength training.
- Men have pelvic floors too!!

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QUESTIONS



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