Pelvic floor health: a guide from puberty to postmenopause

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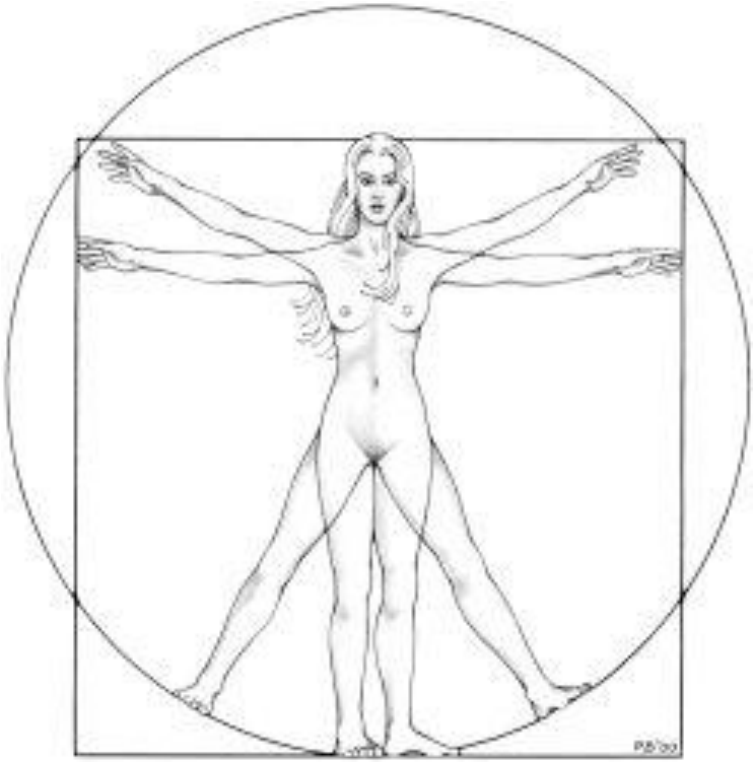
Female life phases

- Prepubertal
- Puberty
- Reproductive phase
  - Menstrual cycle
  - Childbirth
  - Lactation
  - Post childbirth
- Perimenopause
- Postmenopause

- Female well being
- Quality of life
- Relationship



Urinary continence

- **Learnt phenomenon**
- **Development inhibitory pathways**
- **Intact nerve pathways**
- **Intact lower urinary tract**

Definitions

- Urinary Incontinence: a condition in which involuntary loss of urine is a social or hygienic problem and is objectively demonstrated.

- Overactive bladder syndrome (OAB): urgency, with or without urgency incontinence, usually with frequency and nocturia, if there is no proven infection or other obvious pathology.

- Stress urinary incontinence: the observation of leakage from the urethra synchronous with exertion/effort of coughing or sneezing

Prepubertal issues

- Urinary incontinence
  - Eneuresis
  - OAB
- Vulval itch/soreness
  - Labial adhesions
  - Thrush
  - Urethral mucosal prolapse

Premenstrual changes

- Frequency
- Urgency
- Nocturia
- Pain
- Prolapse symptoms
- IBS symptoms

Post childbirth

- Incontinence
  - stress
- Voiding difficulties
- Bladder injury
- Prolapse
- Dyspareunia
  - Perineal wounds
  - Vaginal atrophy
    - Secondary to E2 deficiency

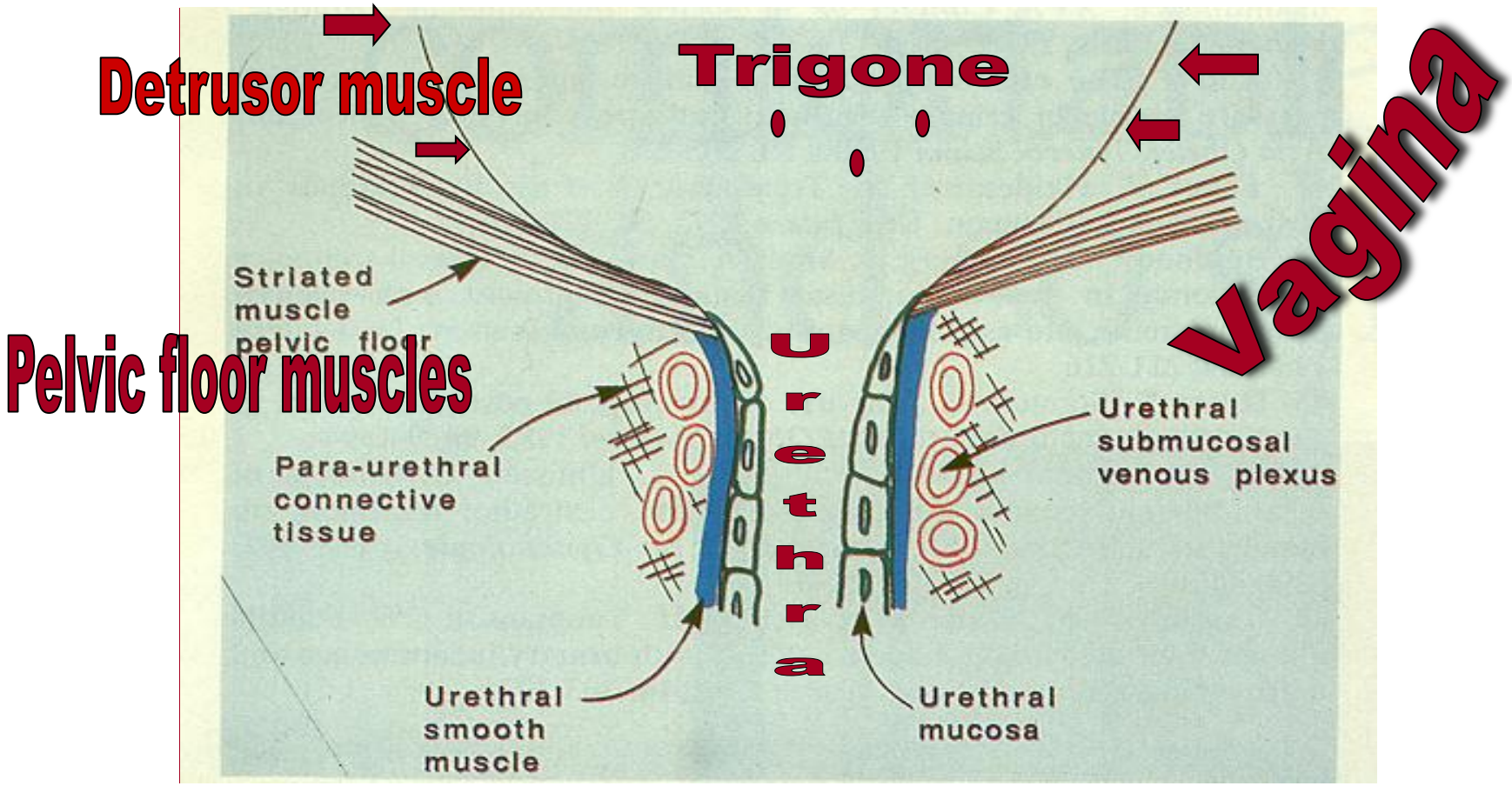
PFEs

The perimenopause

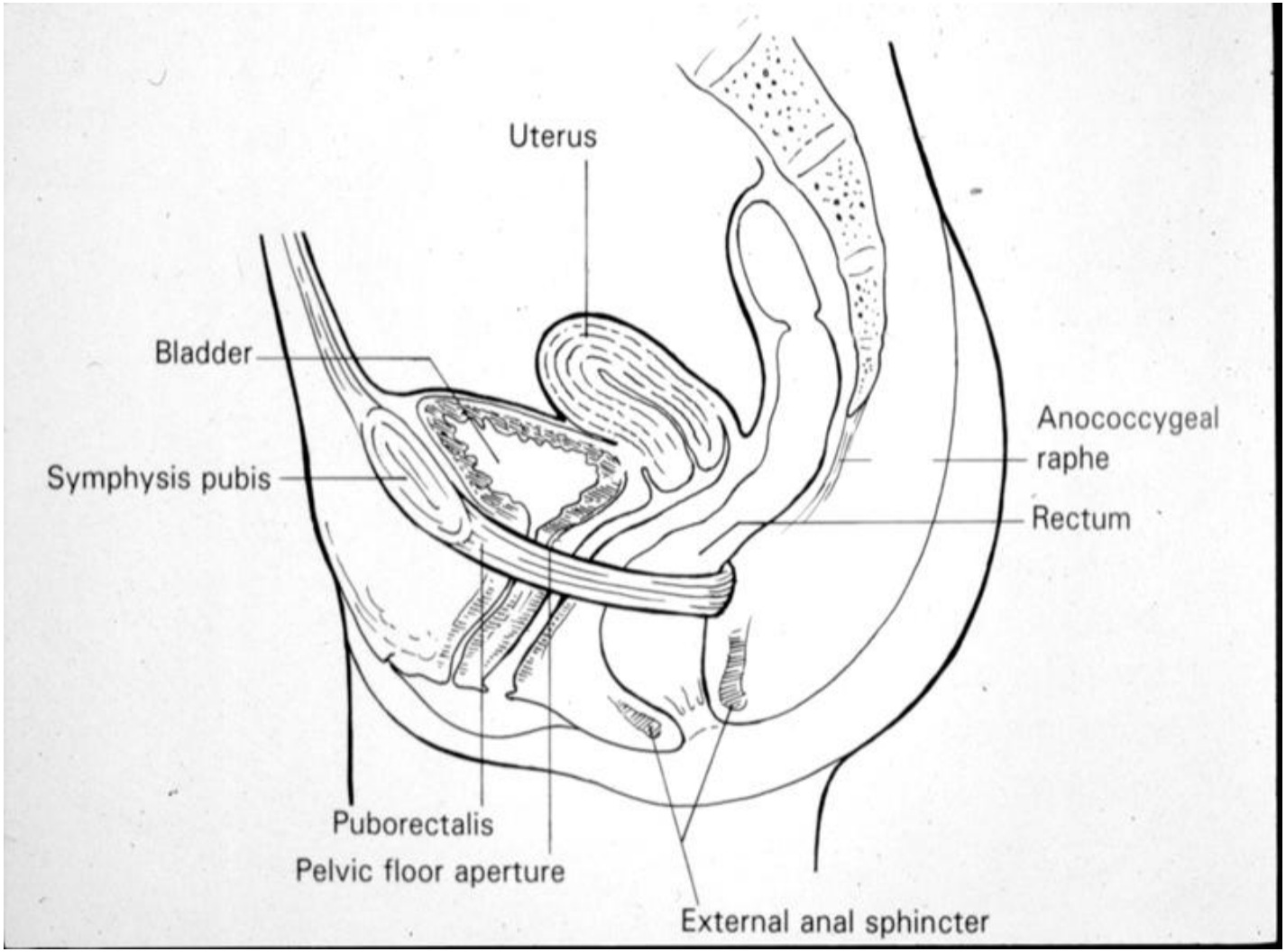
- Menopausal symptoms
- Changes in menstrual cycle
- Urogenital changes
  - Prolapse
  - Incontinence
  - Overactive bladder
  - RUTI
- Sexual issues

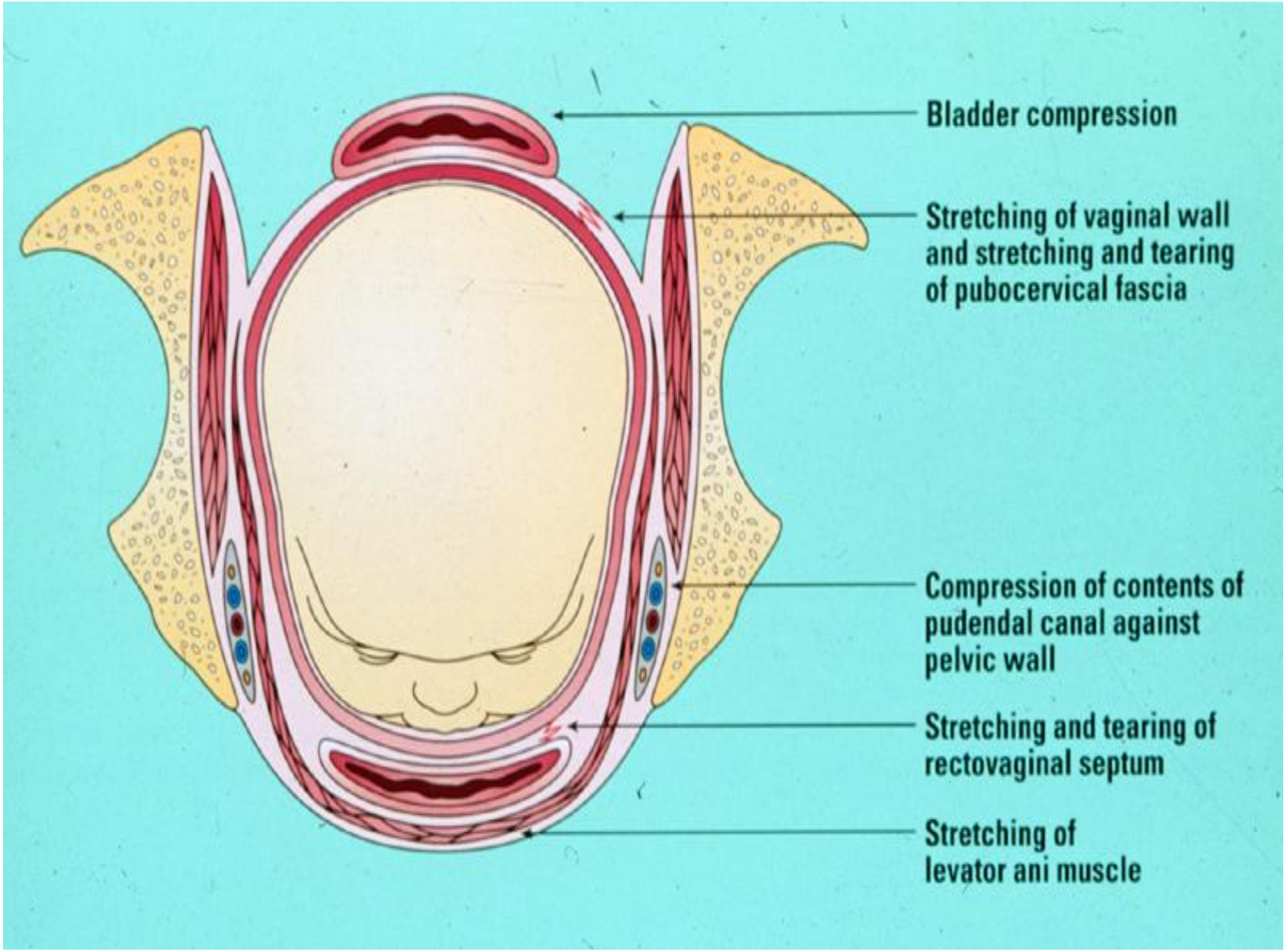
The consequences

Oestrogen Receptors



Female Pelvic floor




Bladder compression
Stretching of vaginal wall and stretching and tearing of pubocervical fascia
Compression of contents of pudendal canal against pelvic wall
Stretching and tearing of rectovaginal septum
Stretching of levator ani muscle

Risk factors in women

- **Congenital abnormalities**
- **Developmental or behavioural factors**
- **Female**
- **Childbirth**
- **Aging and the menopause**
- **Medical disorders**
- **Surgery or other trauma**
- **Drug therapy**
- **↑ abdominal pressure or pelvic mass**

Symptoms

- Incontinence
  - When
  - Associated with
  - How often
  - How much
  - Do you wear a pad?
- Urgency
- Frequency
- Nocturia
- Flow
- Incomplete voiding
- ?coital

History

- **Urinary frequency - day / night, volume**
- **Fluid intake - caffeine, alcohol**
- **Urinary urgency - ability to defer, triggers**
- **Incontinence - type, duration, severity**
- **Enuresis - current or previous**
- **Coital incontinence - penetration / orgasm**
- **Voiding difficulties - ↓ stream, strains, incomplete emptying**
- **Irritative, recurrent UTI symptoms, pain**

History

- **Obstetric - Number, type delivery, fetal wt.**
- **Gynaecological - fibroids, prolapse.**
- **Medical - DM, DI, renal disease.**
- **Surgical - previous continence / prolapse ops.**
- **Psychiatric - Depression, schizophrenia.**
- **Neurological - MS, CVA, Parkinsons.**
- **Drugs - Diuretics**

Examination

General

- General mobility, BMI.
- Respiratory - Asthma, COAD.
- Abdominal - palpable kidneys, pelvic mass.
- Neurological - general / direct 2,3,4 roots

Examination

Gynaecological

- Genital urinary dermatoses / atrophy
- Bladder neck mobility and incontinence on coughing
- Bimanual examination
- Prolapse grading, vaginal capacity
- Vaginal scarring or pain
- Anorectal tone

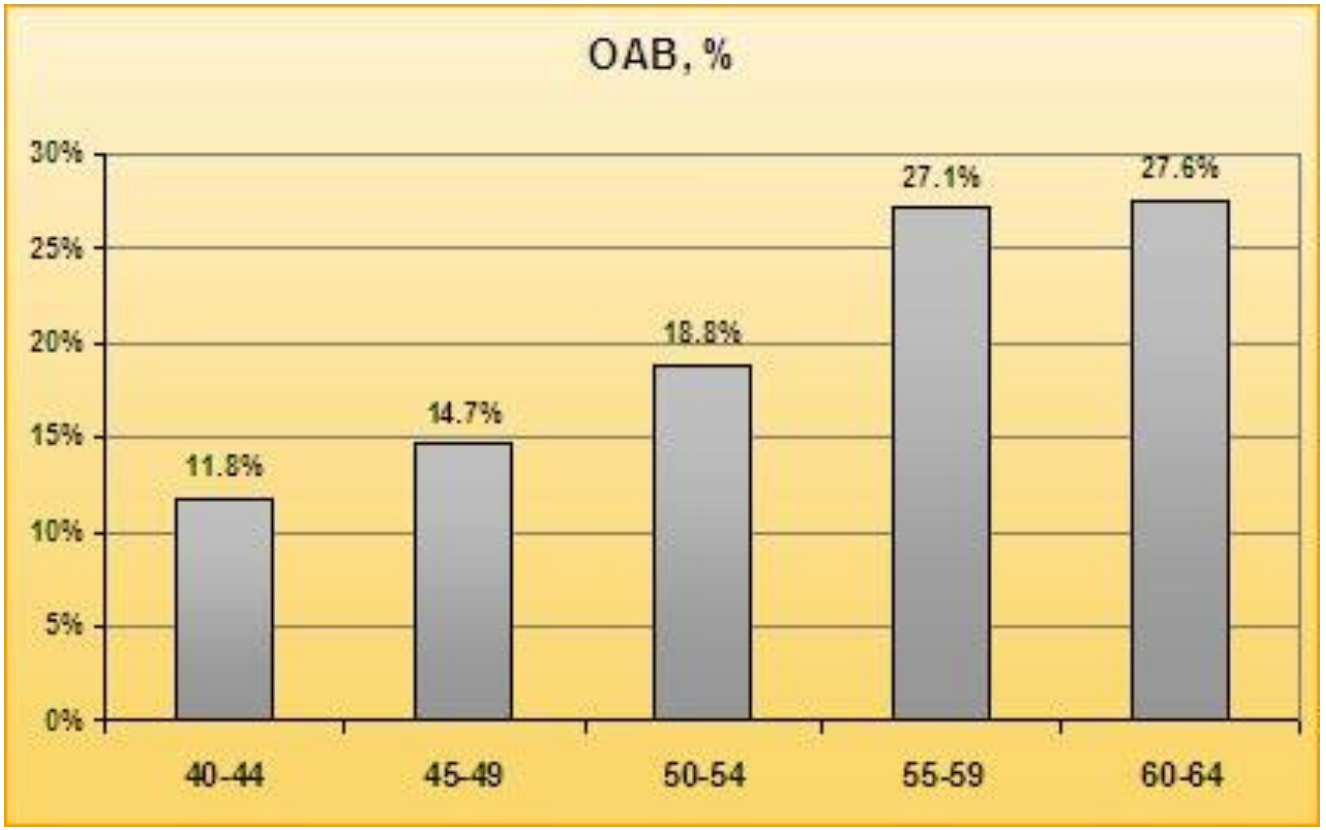
Investigations

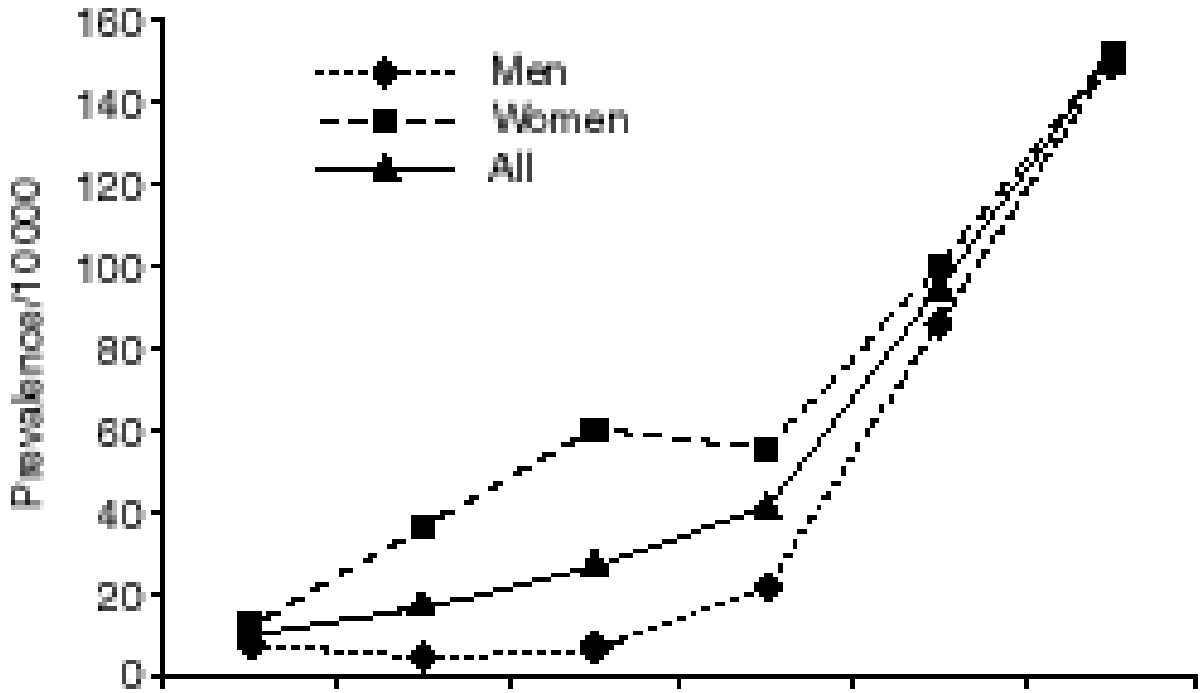
- UA/ MSU
- 3 day bladder diary – frequency/volume charts

- (Urodynamics)
- Post void residual in voiding dysfunction or recurrent UTI

Prevalence of UI

- 40% in women (cf 10% men)
  - 30% with impact on life
  - >50% in institutions
- 36/10 000 of the population p.a. consult a GP for incontinence
- 5 million women in E&W over 20
- 6.2% of people aged 40+ are using incontinence aids
- NHS and patient cost £37 (1995) for a 3/12 period
- £424 million per year NHS costs


OAB, %
30%
25%
20%
15%
10%
5%
0%
11.8%
14.7%
18.8%
27.1%
27.6%
40-44
45-49
50-54
55-59
60-64



	16–24	25–44	45–64	65–74	75–84	85+	All ages
Men	6	3	7	23	82	149	23
Women	11	33	58	55	98	146	48
All	9	18	32	41	92	147	36

Age (years)

Stress Urinary Incontinence

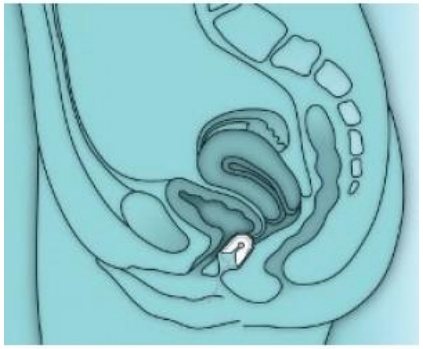
NORMAL

STRESS
INCONTINENCE

Conservative therapy

SUI

- **Fluid restriction (1.5 – 2 litres daily)**
- **Reduce exacerbating factors - eg. cough, weight**
- **Pelvic floor exercises**
  - **(NB pelvic floor physiotherapist)**
- **Tampons / foam pessaries/continence aids**
- **Vaginal cones**
- **Electrical therapy**
- **Biofeedback therapy**
- **Drug therapy**



Contrelle Activgard

Contiform

- Uses: SUI
- Type: Reusable. 3 Sizes – S, M, L
- Cost: Available on NHS. Drug Tariff Order Code SKU184
- https://pioneermedicaleurope.co.uk/brands/contiform/

IncoStress

- Uses: SUI
- Type: Reusable. 1 size
- Cost: £29.99
- https://www.stressnomore.co.uk/incostress-vaginal-pessary-instant-control-80289.html

Diveen

- Uses: SUI
- Type: Can be used twice. Sizes - S, M
- Cost: Available on NHS. Order code 3025E
- https://www.bbraun.com/en/products-and-solutions/therapies/continence-care-and-urology/diveen/diveen-to-reduce-female-stress-urinary-incontinence.html#what-are-the-advantages-of-diveen

Contrelle

- Uses: SUI
- Type: Single Use. Sizes - S, M, L
- Cost: £6 Starter Pack, £75 Pack of 30
- https://contrelle.com

Efemia

- Uses: SUI
- Type: Reusable. Sizes - S, M, L
- Cost: £59 Starter Pack, £49 Single Size
- https://www.mypelvichealth.co.uk/en/women/urine-leakage-management/efemia-bladder-support/

Contam

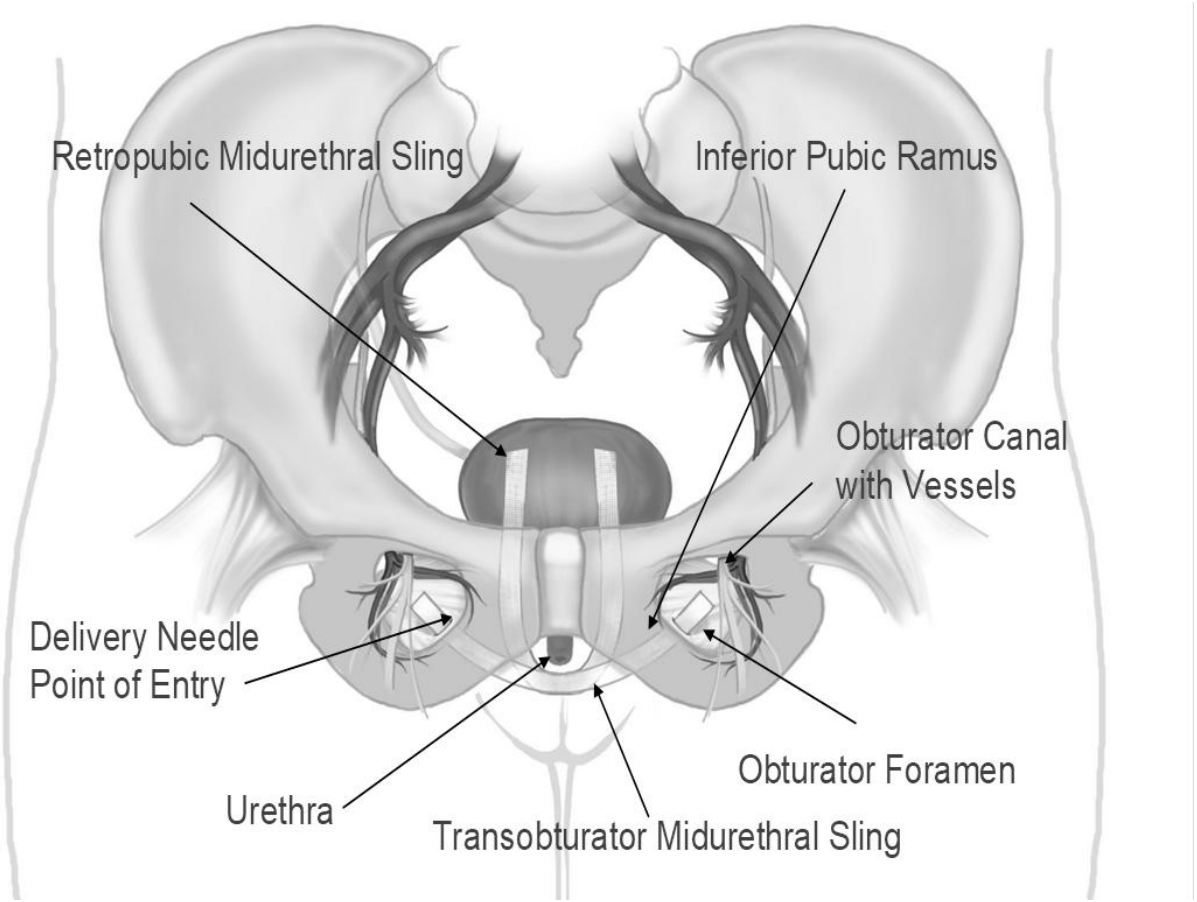
- Uses: SUI and Prolapse
- Type: Single Use. Sizes - Various
- Cost: Various. Please see below
- https://www.stressnomore.co.uk/catalogsearch/result/?q=contam

Surgical therapy

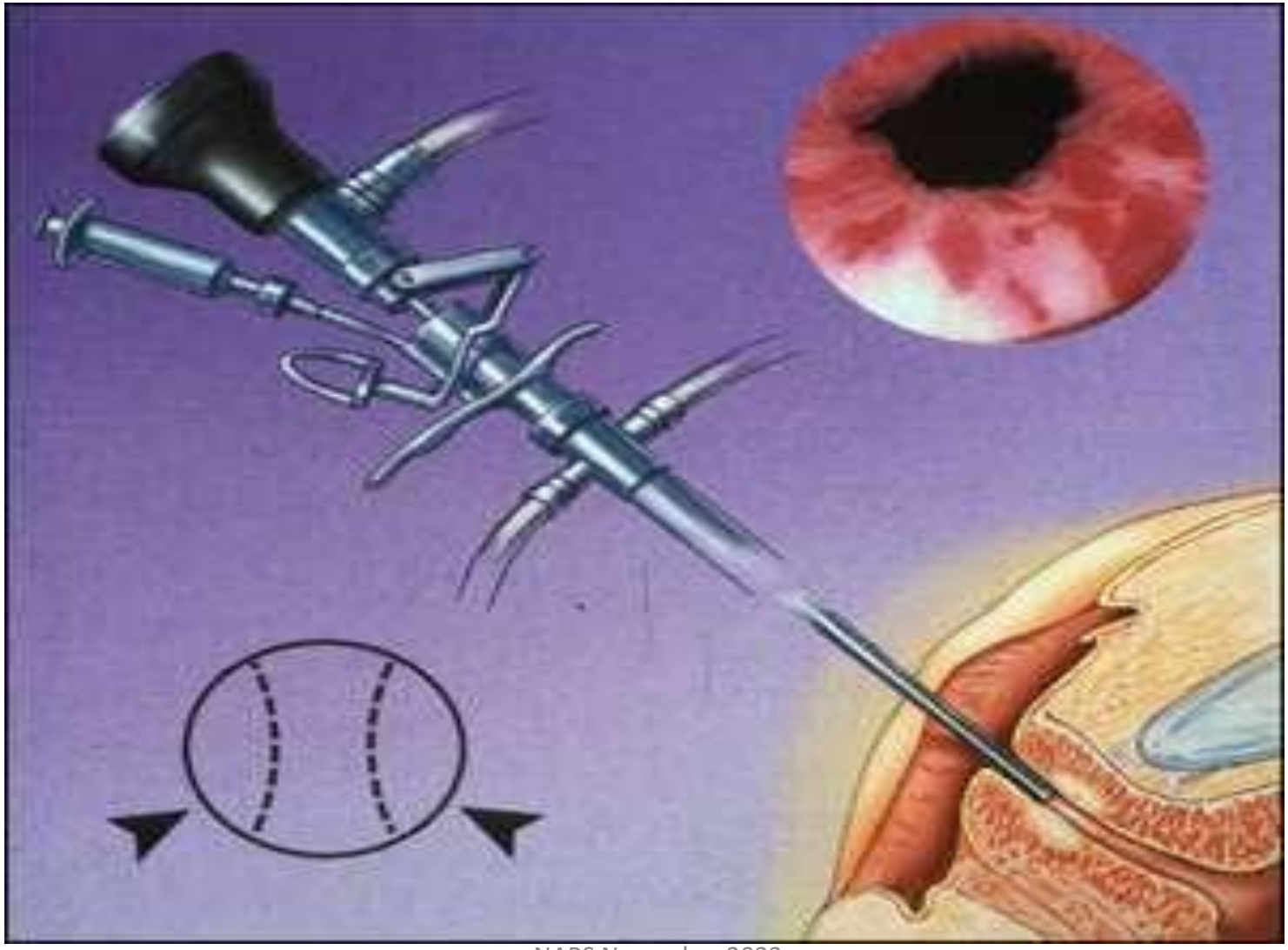
- Peri-urethral injectables (up to 60%)
  - Bulkamid
- Autologus fascial slings – rectus sheath, fascia lata
- Burch colposuspension -open/laparoscopic/robotic
- Anterior vaginal repair with bladder neck plication
- Artificial sphincter (50 - 80% varies)

- *Minimally invasive slings/midurethral tape (NOT AVAILABLE IN UK)*
  - *Retropubic tapes Eg TVT - tension free tape*
  - *TOT- transobturator tape*

Retropubic and transobturator tapes



Trans-urethral Bulking Agents



Medical Therapy for stress incontinence

Duloxetine

- Blocks the reuptake of serotonin & noradrenaline in the sacral spinal cord
- Believed to increase pudendal nerve activity increasing sphincter contraction & thus reducing stress urinary incontinence symptoms
- Works in addition to physiotherapy
- Likely benefit for short term use Eg postpartum

Urge Urinary Incontinence/ overactive bladder

Overactive bladder symptoms

- Frequency
- Urgency
- Nocturia

Can have huge impact on QoL

Overactive bladder

- Urgency: the complaint of a sudden compelling desire to pass urine which is difficult to defer.
- Increased daytime frequency (F): the complaint by the patient who considers that he/she voids too often by day.
- Nocturia (N): the complaint that the individual has to wake at night one or more times to void.
- Urge urinary Incontinence (UUI): the complaint of involuntary leakage of urine accompanied by or immediately preceded by urgency.

Management

Conservative

Reduce fluid intake

Avoid triggers

Bladder retraining

Pelvic floor rehabilitation

Biofeedback

Electrical therapy

Medical:

Topical oestrogens

Anticholinergics

Mirabegron

Intradetrusor botox

Posterior tibial nerve stimulation

Sacral nerve stimulator

Commonly used drugs

Anticholinergics

- **Oxybutynin (NICE 1st line)**
  2.5 mg bd - 5 mg QDS, ER, patch
- **Tolterodine**
  1 - 2 mg BD and 4mg ER
- **Fesoterodine**
  4 – 8mg OD
- **Solifenacin**
  5 –10mg OD
- **Propiverine (frequency not UI)**
  15 mg BD – TDS
- **Trospium chloride 20 mg BD – TDS**
- **Darifenacin 7.5 – 15mg OD**

May be used empirically with fluid restriction and bladder training. I*f fails refer for UDS*. Success 60 - 70%

Mirabegron (Betmiga)

- Sympathetic pathway
- Beta-adrenoceptor agonist
- Minimal effect on voiding
- Minimal side effects cf anticholinergics
- Caution with untreated HT and cardiac conditions

Other commonly used drugs

- **Topical oestrogen for OAB with atrophic vaginitis**
  - **Cream**
  - **Pessary**
  - **Ring**

- Imipramine - 25 - 50 mg nocte

- Desmopressin - 100 - 200 ug nocte (unlicensed - for nocturia – specialist centres only?)

Mixed incontinence

- Treat predominant symptom
- Lifestyle changes and conservative management
  - PFMT
  - Bladder drill
- Refer

Prolapse

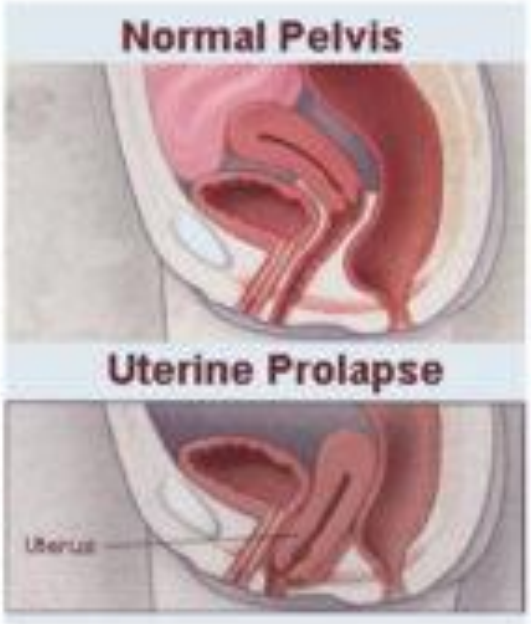
- May become symptomatic only when atrophic
  - postnatal
  - premenstrual
  - perimenopause
- Pelvic floor exercises should be lifelong
- Surgery should be offered to symptomatic women
- Pessaries for those who
  - Don’t want surgery
  - Cant have surgery
  - Only want intermittent relief

Treatment

- Vaginal oestrogens
- Physiotherapy
- Surgery

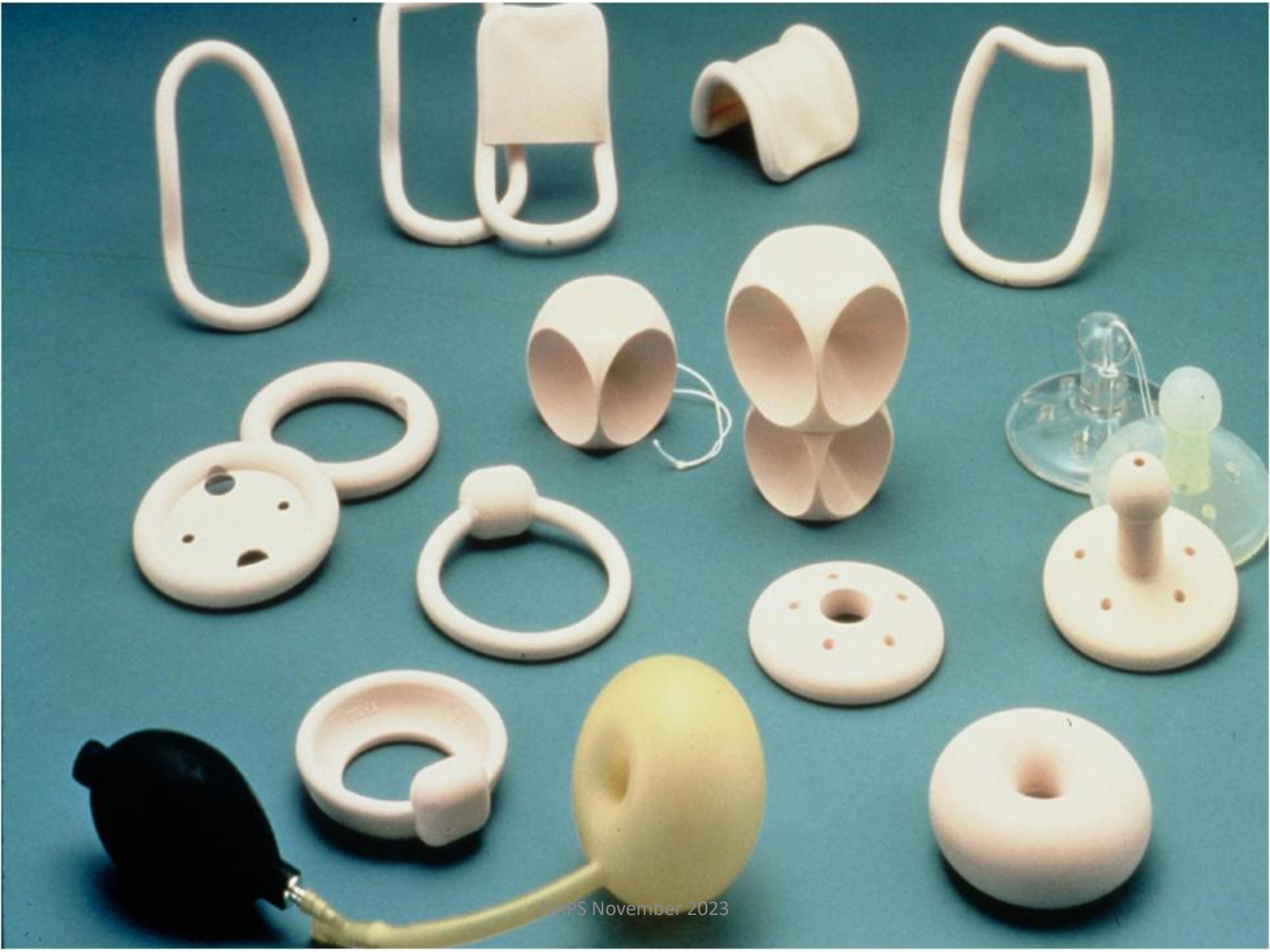
Unnatural Squatting

Natural Squatting

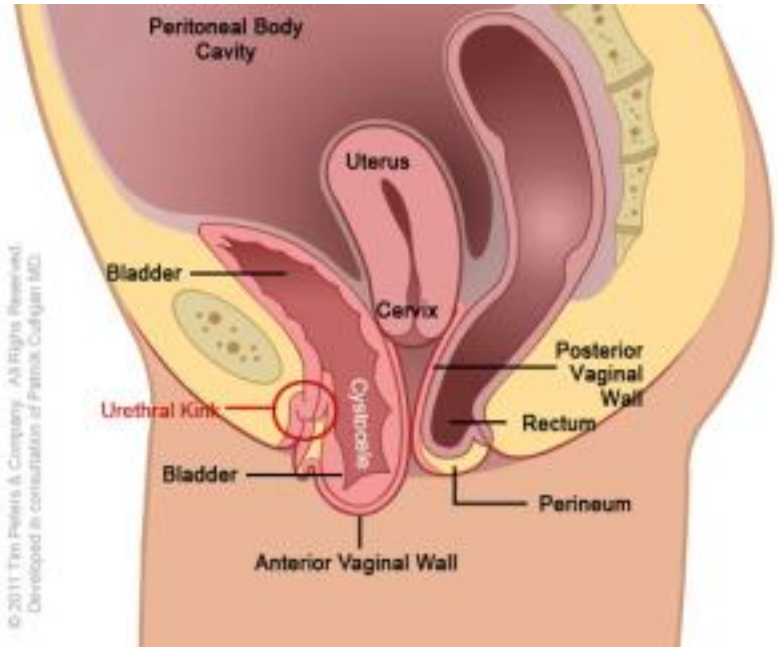


Uterine prolapse – uterus can be seen descending into the vagina

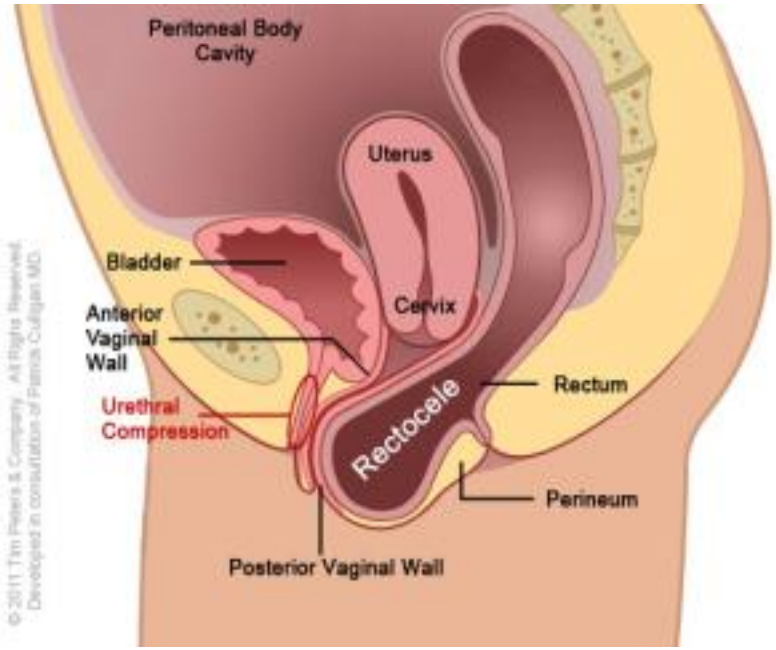
Uterine prolapse – cervix clearly visible at vaginal introitus


NAPS November 2023

Cystocoele


Peritoneal Body Cavity
Uterus
Bladder
Cervix
Posterior Vaginal Wall
Urethral Kink
Cystocele
Rectum
Bladder
Perineum
Anterior Vaginal Wall

Rectocoele



NB Perineal length

Perineum

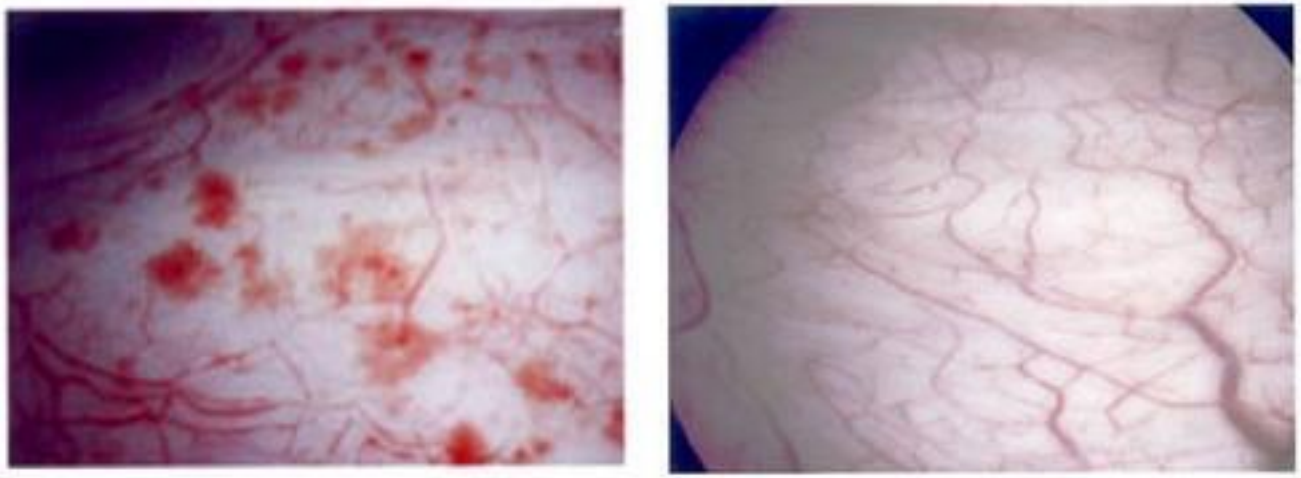
- Length – at least 3 cm
- May make prolapse symptoms worse
- Difficult to maintain pessaries
- No amount of PFEs is going to improve
- Needs to be addressed with surgery

Recurrent UTI

- More common with age/oestrogen deficiency esp postmenopause
- May respond to local oestrogens
- Tx may reduce OAB symptoms
- Often induced by SI
- Prolonged prophylactic antibiotics may be necessary or with trigger
- D mannose 1g BD
- Hiprex (methanamine Hippurate) 1g bd

Chronic bladder pain syndrome

- Commonly misdiagnosed as RUTI
- Often UA microscopic haematuria but no organisms on culture
  - Frequently partially responds to antibiotics
- Dietary and lifestyle factors may resolve
  - COB foundation/bladderhealthuk.org
- May be helped by vaginal oestrogens
- Needs referral to specialist
- Needs cystoscopy for diagnosis



Bladder pain and sexual function

- Most impact on sexuality?
  - Sacco et al IJ Gynae Obstet 2012
- May be apareunic
- Difficult to assess
- Sexual distress scale
- NB range of ages

Quality of life and sexual behaviour

- 66% of women age 45-59 say a satisfying sexual relationship is important to QOL
- High rates of sexual concerns among women seeking routine gynecological care
  - Different specific concerns with varying racial groups

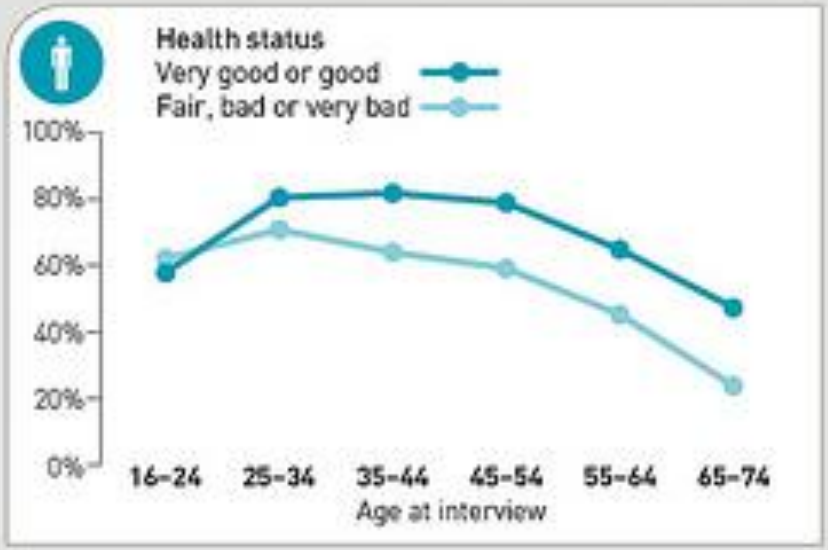
Nusbaum et al. 2005 J Fam Pract

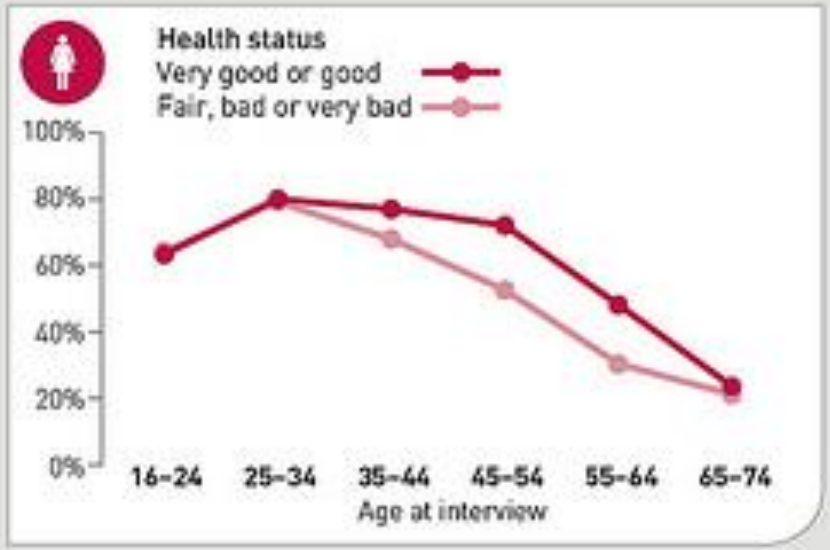
Sexual activity and health status

Overall, more than 60% of people reported having sex recently and over 60% of people said they were satisfied with their sex life. People in poorer health were less likely to have had sex recently, and less likely to say that they were satisfied. This was true even after taking age and whether people were in a relationship into account.

However, ill health does not necessarily mean the end of an active or satisfying sex life: more than one in three people in bad or very bad health had had sex recently, and around half were satisfied with their sex lives.

Percentage reporting recent sexual activity (in past four weeks)





Dyspareunia

- One component only
- Common

- 313 women in 30's
  - 61%
  - 33.5% persistent

    Ghatt et al O&G 1990

- Elderly women 12.8% repeated pain

  Bachmann & Leiblum 1991

- Women in 60's
  - 17% dyspareunia
  - 61% difficulty lubrication
  - 56% ↓ sexual interest
  - 44% ↓ arousal
  - 32% anorgasmia

    Bachmann 1991

Sexual function and pelvic floor dysfunction

- Studies confirm
  - Sexually active in studies 56-68.6%
  - ↑ age ↓ activity
  - ↑ grade prolapse ↓ activity

Weber et al O&G 1995
Ellerkmann et al AJOG 2001
Barber et al O&G 2002
Rogers et al IUGJ 2001
Handa et al AJOG 2004
Mouritsen & Larsen O&G 2002
Ozel et al IUGJ 2005

Sexual function before and after pelvic floor surgery

- **Little data!**
- NB variety of approaches to different compartment prolapse
- No correlation with anatomy

- Studies have indicated no improvement in most

Hormones and the pelvic floor

- No definite role for systemic HRT
- **Definite role for vaginal oestrogens**

- However HRT will usually make them feel better
- Testosterone may have a role
  - After oophorectomy
  - POI
  - With/without oestrogen

Lubricants/remoisturisers

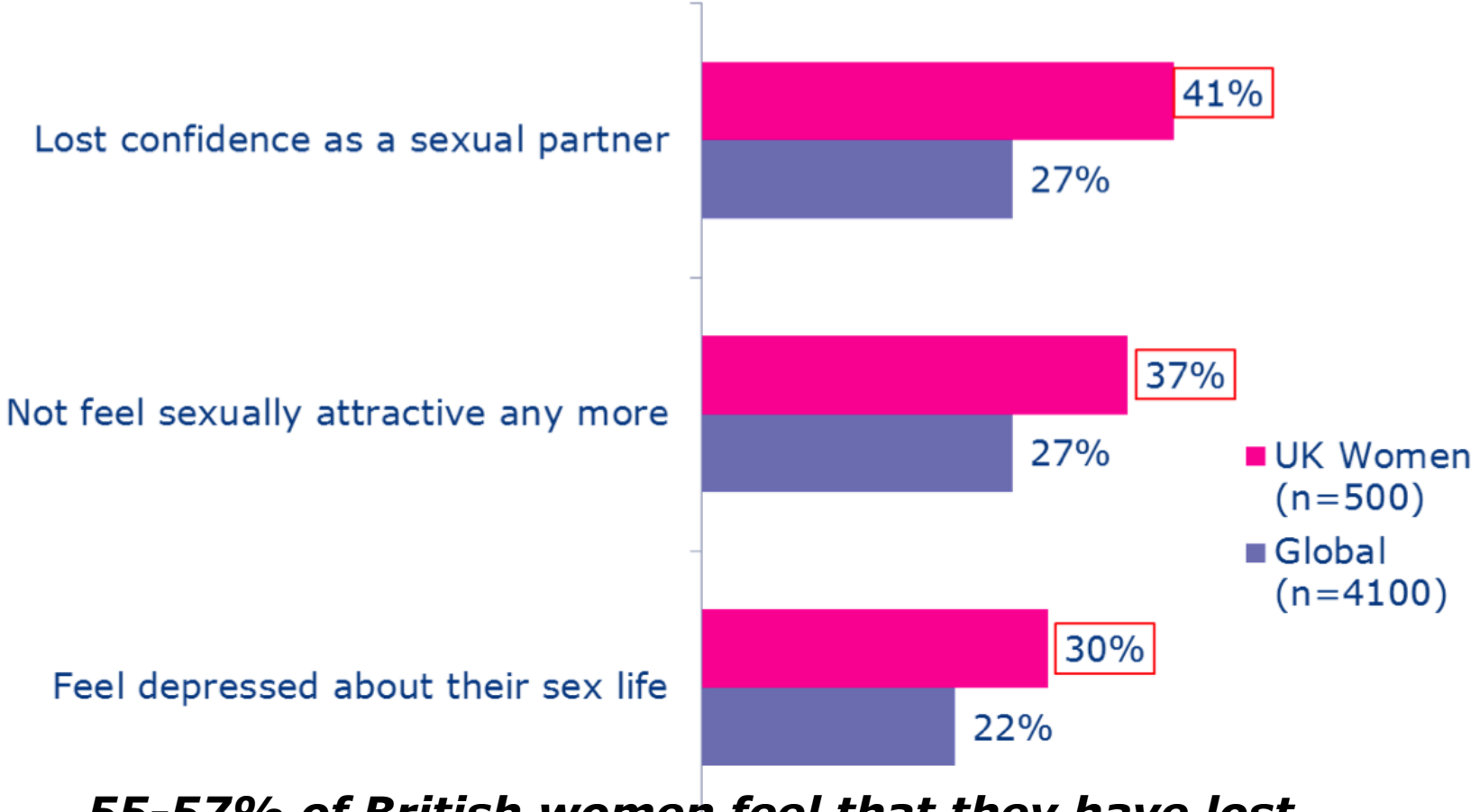
- Advise vaginal oestrogens
- Replens MD
- Hyalofemme

- Sylk
- Durex Play
- Pjur
- Vegetable/nut oils
- NOT KY jelly

- Support and reassurance

Vaginal discomfort has a serious impact on self esteem of UK women

(Closer 2013)



55-57% of British women feel that they have lost their youth or feel old as result of vaginal discomfort

Conclusions

- The pelvic floor is very hormone responsive
- Many lifestyle and basic interventions will improve symptoms and QoL
- All stages of female life have individual symptoms that can be alleviated with early intervention

Conclusions

- Pelvic floor dysfunctions impact on Qol
- Many become more symptomatic at the perimenopause
- Often mistaken as inevitable consequences of ageing
- Can have huge impact on function esp sex
- Negative impact on self esteem and relationships
- Role of primary care important as UK women do not have easy access to gynaecologists

Patient resources

- www.iuga.org
- www.bsug.org.uk
- www.vulvalpainsociety.org
- www.menopausematters.co.uk
- www.thebms.org.uk