Pelvic Floor and More……..

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- Pregnancy-related back and pelvic girdle pain
- Post partum DRAM
- OASI follow-up
- Dyspareunia
- Male and female SUI, UUI and OAB
- Lower bowel symptoms – constipation, urge and incontinence
- Prolapse
- Chronic pelvic pain – male and female
- Pre and post-op prostatectomy
- Obstetric wards
- Perineal clinic

Urinary Continence

'The ability to store and retain urine, with conscious control over the time and place of emptying.'

Sapsford 1998

Urinary continence depends on…

- A compliant and stable detrusor
- A bladder neck and proximal urethra that remain closed during storage phase
- An adequate and stable urethral closing pressure
- During increased IAP, pressure must be transmitted to proximal urethra
- Good neurological control

Normal Bladder Function

- Average bladder capacity 300 – 600mls
- 6 – 8 voids per day
- 0 – 1 void overnight
- First sensations at 150 – 200mls
- Gives enough warning to find a toilet
- Empties almost completely
- Continence maintained by combination of urethral pressure, pelvic floor muscle strength, fascial support and intact nerve supply

Urinary Incontinence

"The involuntary loss of urine which is a social or hygienic problem and objectively demonstrable'

Incontinence causes, management, and provision of services RCP May 2005

"The complaint of any involuntary leakage of urine"

International Continence Society

Types of Urinary Incontinence

- Stress Incontinence (SUI) – Physical exertion
- Urge Incontinence (UUI) – loss with desire to void.
- Mixed – UUI and SUI (MUI)
- Others – unconscious, nocturnal enuresis, post-micturition dribble, overflow or continuous.

Prolapse

- Anterior - cystocoele, urethrocoele
- Posterior - rectocoele
- Apical - cervix or vault
- Vaginal wall laxity

Often associated with bladder symptoms (inadequate support for bladder neck, similar aetiology)

Pelvic Floor Dysfunction

- Stress urinary incontinence during pregnancy – up to 67%
- Stress urinary incontinence after childbirth - up to 38%
- Anal incontinence after childbirth 4-6% (30-50% after OASI)
- Sexual dysfunction/ dyspareunia
- Prolapse: Lifetime risk of incontinence or prolapse surgery - 11%

Risk of repeat surgery 29%

Cochrane Review: 2012

Risk factors for Pelvic Floor Dysfunction

- Pregnancy and childbirth
- Menopause and age-related changes
- Persistent cough, smoking
- Poor lifting technique
- Obesity
- Prolonged ill-health
- Frequent constipation
- Inherited susceptibility (collagen type)

Factors influencing dysfunction

- Weak and/or unco-ordinated pelvic floor muscles
- Over-active bladder syndrome (OAB)
- Bladder outlet obstruction (BOO)
- Disorders of CNS/PNS
- Constipation
- Physical disability or limitations, inability to reach toilet, confusion, unavailable carer

Effects

- 60% avoid leaving home
- 50% feel stigmatised
- 45% avoid public transport
- 50% avoid sex
- Suffer in silence and do not present for help
- Affects ability to work, leisure activities, causes depression, is costly, impacts carers and family

Norton 1988

Effects on men

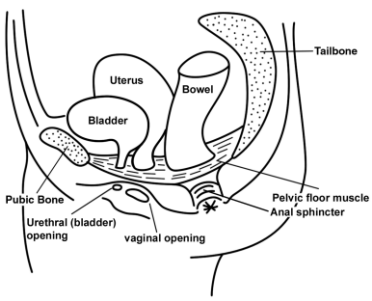
- Male LUTS can occur in 30% of men over 65
  NICE 2010
- UI impacts more than erectile dysfunction on quality of life after prostatectomy
  Temmel et al 2000

Cost to the NHS

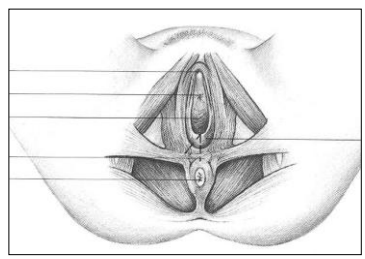
- Incontinence and prolapse management exceeds £200m annually
- Pad cost (NHS supplies) 2014/15 was £29.6m
- Medications < £3m in 2014/15

The Health of the 51%:Women Annual report of the Chief Medical Officer 2015

Anatomy



Pelvic Floor muscles



Role of the Pelvic Floor

- Supports pelvic organs
- Integral to increases in IAP – reinforces urethral pressure
- Inhibitory effect on bladder activity
- Maintains ano-rectal angle – assists faecal continence
- Provides rectal support during defaecation
- Assists in pelvispinal stability ('core')

- Delaney 1993, Morgan 2005

What happens as the pelvic floor contracts?

• Draws the anorectal junction, vagina and urethra anteriorly

• All organs are lifted anteriorally and in a cephalic direction

• The rectum and vagina are compressed and urethral/vesicle junction supported

And as it relaxes / releases……. the opposite happens

Bashforth 2004

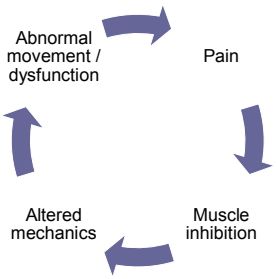
Vaginal Examination

- Observe
- Palpate
- Teach

Overactive Pelvic Floor

- High tone leads to inability to contract PFM effectively
- Can lead to incontinence and / or chronic pelvic pain

Pain cycle



Treatment

- Trigger point release – pelvic floor and /or abdominals
- MSK Rx
- Scar tissue massage / release
- Pelvic floor relaxation (sniff/flop/drop)
- General relaxation
- Breathing control
- Education

Treatment SUI and MUI

'A trial of supervised pelvic floor muscle training of at least 3 months duration should be offered as 1st line treatment to women with stress or mixed urinary incontinence.'

(Nice Urinary Incontinence Guideline 40 Oct 06)

Effectiveness (incontinence)

3/12 supervised pelvic floor exercise

- 60% dry or mildly incontinent
- 85% felt improvement

Berghmans 1998

- PFMT increases stiffness and hypertrophies the PFM to increase support

Bo 2004

- 30% unable to correctly activate PFM
- 25% did 'Valsalva'

Bump et al (1991

Effectiveness (Prolapse)

- 'An individualised pelvic floor muscle training programme is effective in reducing symptoms of prolapse'
- POPPY trial 2013

Supervised Pelvic Floor Muscle Training

- Education - anatomy, causes of pelvic floor dysfunction, life style changes, realistic goals and timescale
- Vaginal examination
- Individual exercise programme
- Graded contractions, fast and slow twitch

Pelvic floor muscle training

- Functional positions
- Retrain and utilise reflex contractions (the 'knack' or bracing) – Urge supression, UUI, SUI and prolapse
- Use meaningful images (not lifts)
- Review exercise programme regularly
- Written information
- Regular review for 3-6 months

Why slow and fast? - Striated muscle types

- Type 1 : Slow, oxidative (tonic), endurance - sustained activity, fatigue resistant
- Fine control, postural and low load activity
- Type 2 : Fast, glycolitic (phasic) - bursts of activity
- Rapid recruitment and high load activity
- Pelvic floor in asymptomatic women : 33% fast, 67% slow twitch fibres

Muscle training

- Muscle contraction must be greater than its everyday load
- Consider strength
  - power
  - endurance
  - repetitions
  - fatigue
- Overload and specificity
- Functional activity

Teaching PFM exercises

- Use a model / diagram
- Use cupped hands to demonstrate close, lift and draw forward
- Exercise in different positions: sitting, sitting leaning forward, side lying, standing
- Use 'The Knack', make it functional
- Make sure you can do them yourself!!

Teaching PFM exercises

Aim:

- To increase strength, endurance and functional control

Verbal cues:

'squeeze and lift from the back passage to the front/ vagina/ base of the penis

'don't tighten the buttocks or squeeze the thighs together'

'breathe normally!'

'a little tension in the tummy is fine, but not a big suck in!'

'The Knack'

- Conscious recruitment of pelvic floor muscles before activities which increase intra-abdominal pressure and risk of leakage / increasing prolapse
- Prevents urethral and bladder descent
- Miller 2008

How many? How often?

- Lots of myths to dispel!
- NICE guidelines: 'at least 8 contractions, 3 times a day'
- Base exercise programme on assessment findings
- Include fast and slow twitch contractions

Self help

- Regular Pelvic Floor muscle exercises (for life!)
- Learn to defer, avoid 'just in case'
- Correct fluid intake – amount (1.5 – 2L)
- Avoid stimulant drinks
- Watch body weight
- Squeezy app – male and female

Self help

- Avoid harmful exercises (double straight leg lifts, full sit-ups)
- Modify fitness programme (high impact, running etc if necessary)
- Avoid heavy lifting, use correct lifting technique (contract PFMs – also helps to protect back from injury)
- Treatment for chronic cough/ stop smoking
- Avoid constipation

Other management options

- Muscle stimulators
- Medical devices eg vaginal weighted cones, pessaries (prolapse and SUI)
  (POP home project – Addenbrookes website)
- Onward referral if indicated as outlined in NICE guidelines


NHS
squeezy
The new physiotherapy App to help support women with their pelvic floor muscle exercises
Scan the code with your smartphone to visit the Squeezy website for more information