



Incontinence in the Older Person – role of the pelvic floor physiotherapist

8 November 2019

Patricia Malone

Clinical Specialist Physiotherapist,
Pelvic Floor Rehabilitation/Continence

Continence in older people

✂ In a typical older person, incontinence is the end result of multiple underlying risk factors, pathophysiologies and modifiers.

✂ Gibston and Wagg 2014



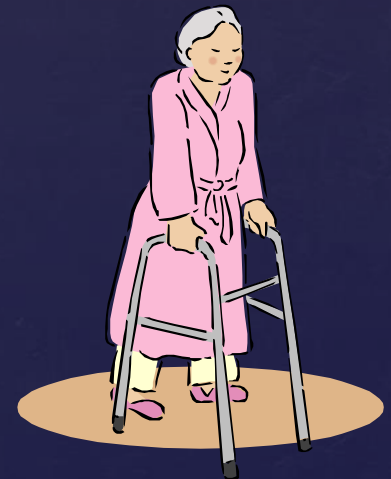
Maintenance of Continence

- ⌘ Recognise need to empty bladder/bowel
- ⌘ Identify socially acceptable place
- ⌘ **Hold on until you reach it**
- ⌘ Pass urine/faeces when reached.



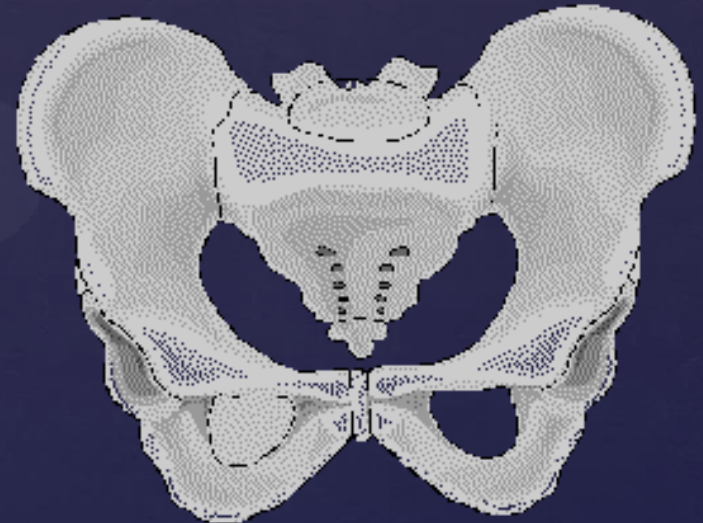
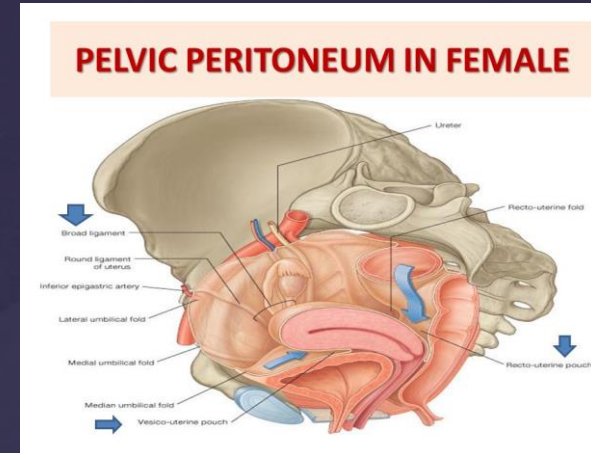
Functional Incontinence

- ⌘ Not caused by bladder or bowel pathology
- ⌘ Cognitive difficulty
- ⌘ May be environmental
- ⌘ May be due to other pathology causing difficulty in getting to the toilet in time
- ⌘ May be a lack of manual dexterity
- ⌘ Lack of assistance



Pelvic floor - definition

- & Closes bony pelvic outlet
- & All of the structures that lie between the pelvic peritoneum and the vulvar/scrotal skin
- & Messelink et al 2005



Pelvic floor muscle

☞ The muscular layer of the pelvic floor.

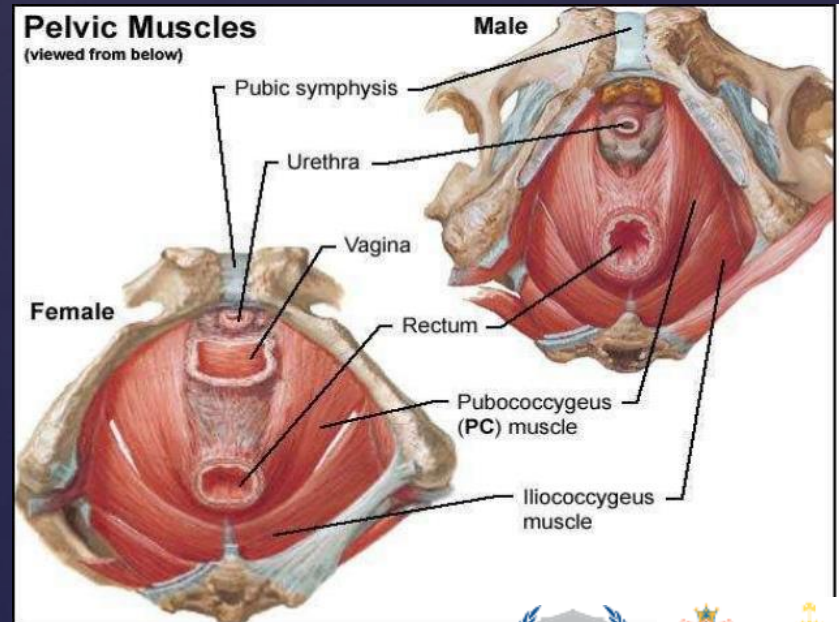
☞ Endopelvic fascia

☞ Pelvic diaphragm – Levator ani

- ☞ Pubovisceral muscle (pubococcygeus, pubovaginalis, puborectalis)
- ☞ Iliococcygeus
- ☞ Coccygeus

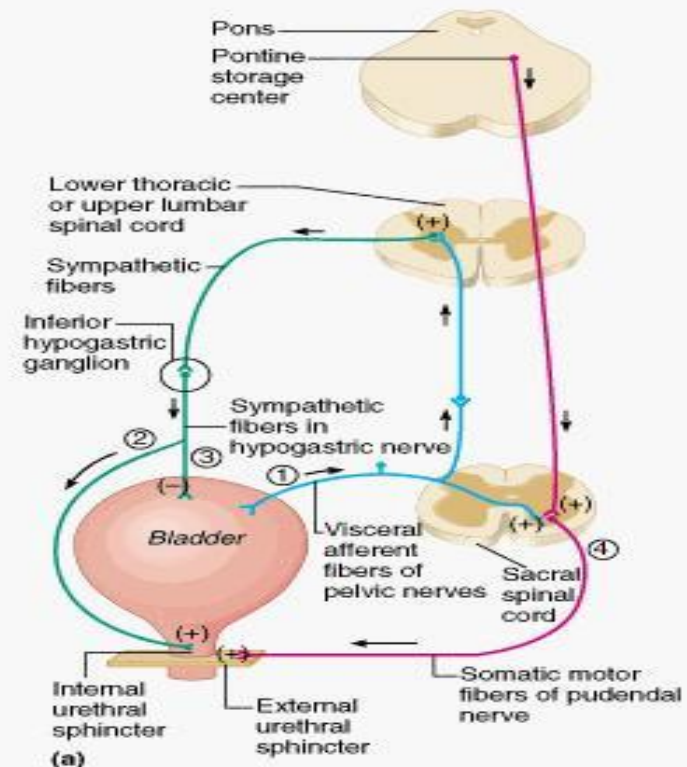
☞ Urogenital diaphragm

- ☞ Superficial pelvic floor muscles
- ☞ External anal sphincter



Somatic vs. autonomic function

- & Major organs of micturition, elimination, sexual function
- & Control under autonomic function
- & Autonomic function under cognitive control



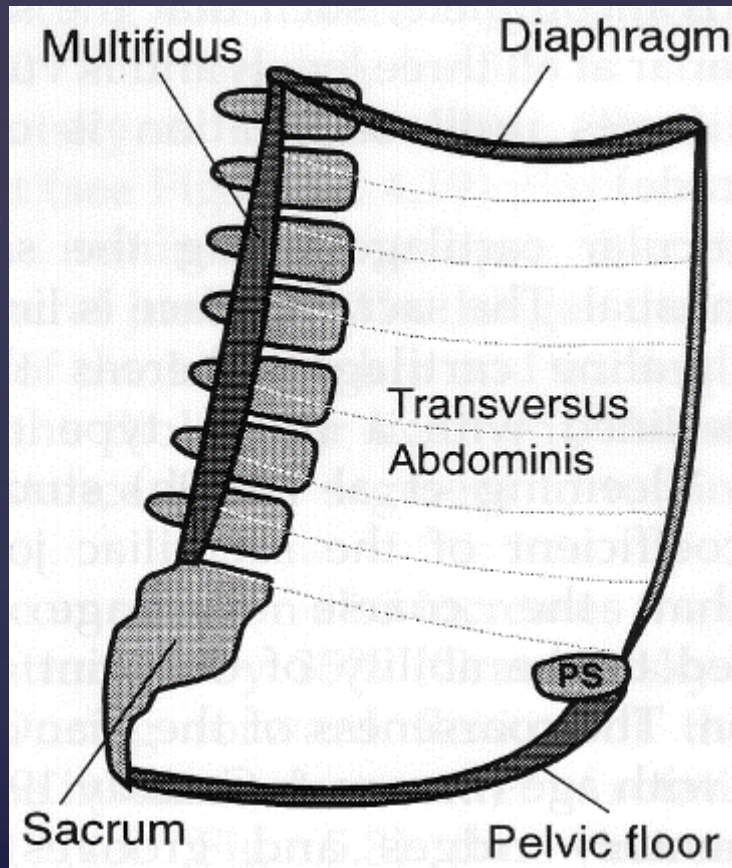
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Functions of the Pelvic Floor Muscle

- ✧ Provide organ support
 - ✧ Against gravity, at rest, and in response to loading
- ✧ Contraction:
 - Maintain continence
 - Closes urethra, anus and vagina
 - Rectoanal inhibitory reflex
 - Contraction of pelvic floor inhibits detrusor activity
- Messelink et al 2005
- ✧ Relaxation
 - ✧ Elimination



Functions of the Pelvic Floor Muscle(2)



- ⌘ Sexual response
- ⌘ Works with lumbar multifidus, transversus abdominis, diaphragm:
 - ⌘ Intra abdominal pressure
 - ⌘ Lumbo-pelvic stability

Symptoms Associated with Pelvic Floor Muscle Dysfunction

Lower urinary tract symptoms

- Urinary incontinence
- Urgency or frequency
- Slow or intermittent stream and straining
- Feeling of incomplete emptying

Vaginal Symptoms

- Pelvic organ prolapse

Sexual Function

- In women – Dyspareunia
- In men –Erectile dysfunction
- In both – Orgasmic dysfunction

Bowel Symptoms

- Obstructed defaecation
- Functional constipation
- Faecal incontinence
- Rectal/anal prolapse

Pain

- Chronic pelvic pain
- Pelvic pain syndrome

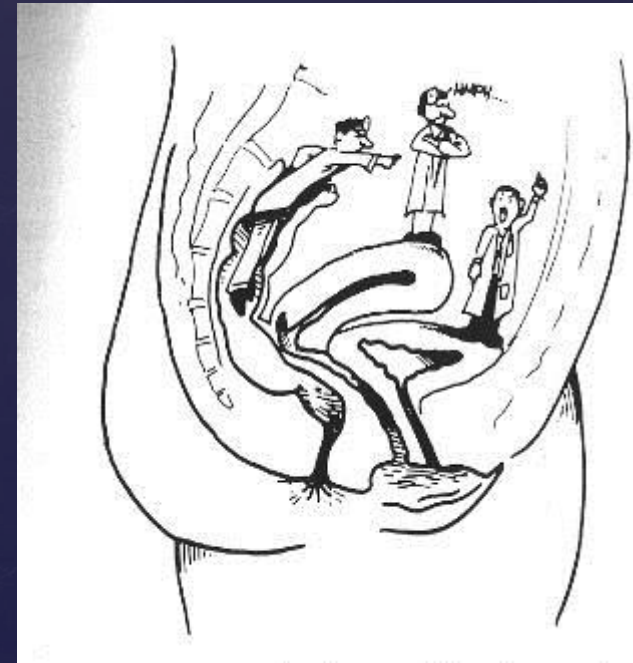
Messelink et al 2005
Neurourology& Urodynamics 24:374-380



More than one?

⌘ 8.7% experienced 3 or more types of pelvic floor dysfunction

⌘ MacLennan et al 2000



Increasing prevalence

- 43.8 million will suffer from at least one pelvic floor disorder in the USA by 2050.
- Wu et al 2009

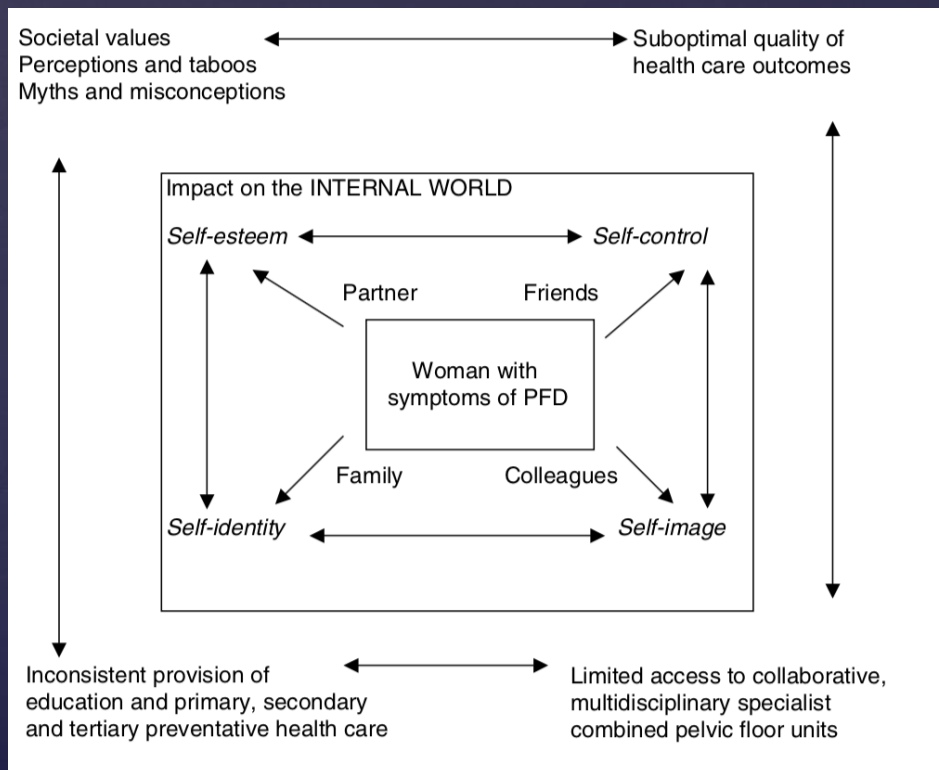
Some risk factors for pelvic floor dysfunction

- ⌘ Female gender
- ⌘ Pregnancy (>20 weeks)
- ⌘ Mode of delivery
- ⌘ Increasing age
- ⌘ Increased body mass index
- ⌘ Coughing

⌘ – MacLennan et al 2000



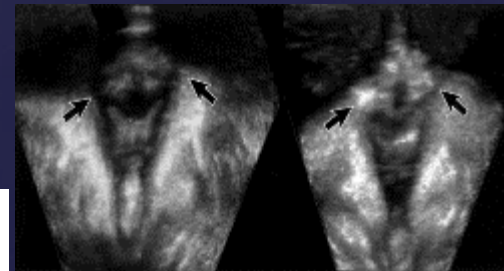
Complex problem



Kumar et al 2003

Factors affecting pelvic floor muscle - Childbirth

- ⌘ Changes in pelvic connective tissue support structures/Striated urethral sphincter
- ⌘ Changes in PFM fibre length
 - ⌘ Alperin et al 2016
- ⌘ Levator avulsion
 - ⌘ Up to 1/3 of women have levator avulsion after first vaginal delivery
 - ⌘ Dietz and Lanzarone 2005. Obstetrics and Gynaecology.106(4). 707-712
- ⌘ Neural
 - ⌘ Lien et al 2015



PFM changes due to ageing

- ⌘ Age related sarcopenia in skeletal muscle
- ⌘ Changes in architecture and collagen content
- ⌘ Age related independent alterations in intrinsic structure of PFM occur independently of childbirth

⌘ Alperin et al 2016

- ⌘ Morphometric differences in PFM between continent and incontinent elderly women

⌘ Fradet et al 2018



The pelvic floor in continence

“This most basic of needs”

Continence is the ability to voluntarily control emptying the bladder and bowels effectively in a socially acceptable and hygienic way.

Excellence in Continence Care 2015



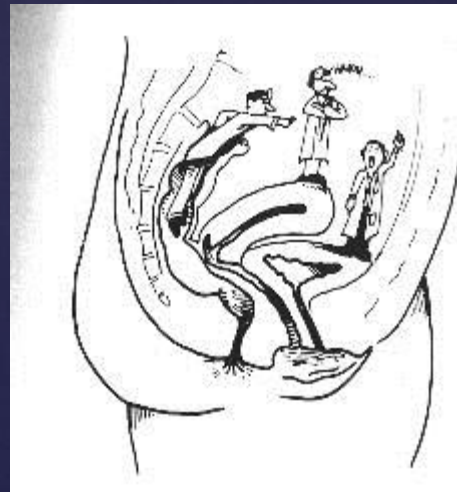
The pelvic floor as a musculoskeletal unit



& The pelvic floor muscle is a musculoskeletal unit with similarities to the rest of the musculoskeletal system.

Physiotherapy

- ⌘ Rehabilitation professionals
- ⌘ Physiotherapists help people affected by injury, illness or disability through movement and exercise, manual therapy, education and advice
 - ⌘ Chartered Society of Physiotherapy



Pelvic Floor Rehabilitation

- ⌘ To restore control over the pelvic floor musculature when it has been lost
- ⌘ To teach correct methods of control over micturition and defaecation which some individuals never learnt as children, or learnt incorrectly.
 - Schussler 2000.



Pelvic Floor Rehabilitation

- ⌘ To assist the patient achieve optimal control of all elements of pelvic floor function within the limits of any underlying structural or neural damage.

Pelvic floor muscle assessment

- ⌘ Vaginal/anorectal
- ⌘ Structural deficits
- ⌘ Muscle bulk and tone
- ⌘ Strength/endurance /functional control
- ⌘ Reassess



Physiotherapy for Pelvic Floor Dysfunction

& Individualised

& Aims of treatment may include:

- ⌘ Educate re correct bowel, bladder habits
- ⌘ Pelvic floor exercise
- ⌘ Lengthen pelvic floor, teach correct relaxation
- ⌘ Eradicate trigger points
- ⌘ Mobilise connective tissue restrictions or scars
- ⌘ Stabilise pelvis, improve its locomotor control

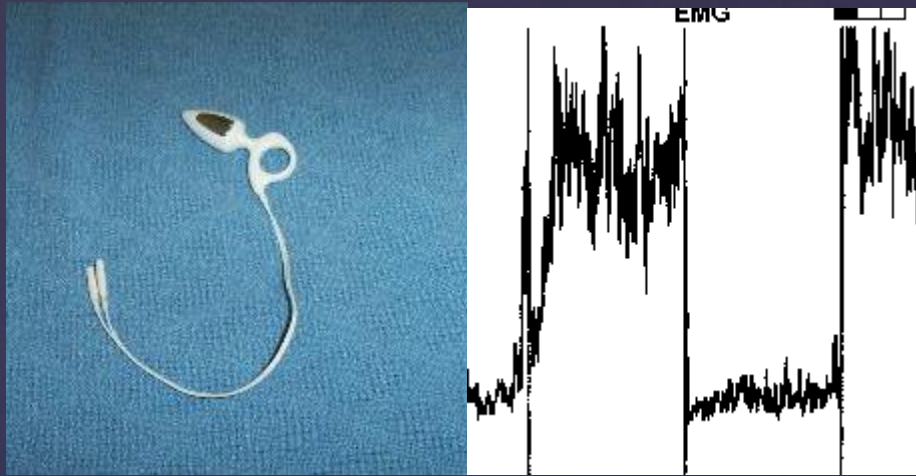
Pelvic Floor Muscle Exercise for Urinary or Faecal Incontinence

To improve patients awareness and functional control – motor learning

To increase strength/and or endurance - training



Biofeedback

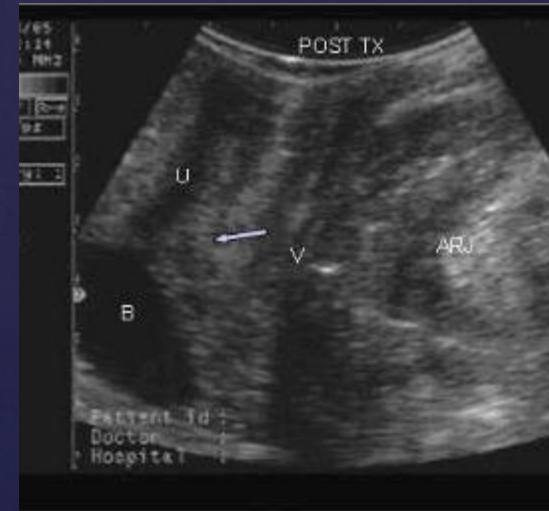


EMG biofeedback

Real time ultrasound image to show motion of pelvic floor contraction



Rectal balloon for rectal sensitivity training



Neuromuscular electrical stimulation

- ⌘ Can be used to elicit a muscle contraction and “teach” muscle activity where voluntary contraction is not available

Educate re correct bowel, bladder habits

- ⌘ Bladder diary – education as well as assessment tool
- ⌘ Fluid intake
- ⌘ Diet – regularity
- ⌘ Positioning for defaecation
- ⌘ Defaecation technique



Bladder training

Bladder training actively includes the individual in attempting to increase the interval between the desire to void and the actual void

Cochrane 2009

- ⌘ Decrease voiding intervals
- ⌘ Analysis, individual schedule



Faecal incontinence

- ⌘ Frail, older are a high risk group for FI
- ⌘ Initial assessment
 - ⌘ Exclude rectal cancer /rectal prolapse/ third degree haemorrhoids/anal sphincter injury/acute disc or cauda equina
- ⌘ Manage faecal loading/treatable diarrhoea
- ⌘ Initial conservative measures:
 - ⌘ Diet, fluids, fibre
 - ⌘ patient education around toileting and positioning
 - ⌘ Medication review
 - ⌘ Support measures
- ⌘ Pelvic floor rehabilitation as part of specialist management
 - ⌘ NICE 2007



Referral to physiotherapy

- ⌘ Local referral pathways may differ – physiotherapy manager
- ⌘ Irish Society of Chartered Physiotherapy maintain list of physiotherapists working in pelvic health – www.iscp.ie
- ⌘ Patients should be
 - ⌘ Alert, oriented
 - ⌘ Able to follow a guided home program





Original Article

Int Neurourol J 2017;21:295-301

<https://doi.org/10.5213/inj.1734956.478>

pISSN 2093-4777 · eISSN 2093-6931

INTERNATIONAL NEUROUROLOGY JOURNAL

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Effects of Pelvic Floor Muscle Exercise on Urinary Incontinence in Elderly Women With Cognitive Impairment

Bo Ae Lee^{1,*}, Su Jin Kim^{2,*}, Don Kyoung Choi³, Ohseong Kwon³, Hae Ri Na⁴, Sung Tae Cho³

¹Department of Rehabilitation Medicine, Pusan National University School of Medicine, Busan, Korea

²Department of Urology, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

³Department of Urology, Hallym University Kangnam Sacred Heart Hospital, Hallym University College of Medicine, Seoul, Korea

⁴Department of Neurology, Bobath Memorial Hospital, Seongnam, Korea



Supervised pelvic floor muscle exercise can be a good therapeutic option improving urinary incontinence in women with (mild) cognitive impairment



Behavioural techniques

& Timed voiding

- ⌘ Fixed interval between voiding
- ⌘ Cognitive/ motor deficits

& Prompted voiding

- ⌘ Teach people to initiate own toileting
- postivie reinforcement



Pelvic floor rehabilitation has a role in the management of continence issues for the older person



*Pelvic floor exercise
anyone?*



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