


## Objectives

- Overview of Perinatal Pelvic Health Physiotherapy
- Overview of Common Perinatal Pelvic Health Concerns: UI, OASIS & FI, POP, PGP
- Evidence Update for Management of Perinatal Pelvic Health Concerns
- PT Management for Perinatal Pelvic Health Concerns



## Pelvic Health Physiotherapy

- Also referred to as pelvic floor physiotherapy or pelvic physiotherapy
- The assessment and treatment of dysfunction and/or pain involving or manifesting in the pelvic floor muscles, tissue and nerves in all genders from youth to the elderly

includes the **direct authorized** act of 'putting an instrument, hand or finger into the vagina, or beyond the labia majora, or beyond the anal verge' for the assessment and treatment of pelvic floor conditions

1. Physiotherapy Act, 2011

## Conditions Pelvic PT can help with in the Perinatal Population

- Urinary (UI) and Fecal Incontinence (OASIS)
- Pelvic Organ Prolapse (POP)
- Pregnancy Related Pelvic Girdle Pain (PPGP, PSD)
- Labour and Delivery Preparation
- Diastasis Rectus Abdominus
- Anal, Vaginal, Rectal, CS Scar Management
- Other Pelvic and Sexual Pain (dyspareunia, vaginismus, vulvodynia)
- Other concerns (coccydynia, back & hip pain)

## Antenatal Urinary Incontinence

- Increased prevalence with increasing gestational week (1/3 by late pregnancy)
- SUI was the most common type
- Typically, mild to moderate UI reported
- UI prior to pregnancy was the strongest predictor for UI during pregnancy

1. Moossdorff-Steinhauser, H et al. 2020
2. Wang, X et al. 2022

## Postnatal Urinary Incontinence

### Within the first year postpartum:

- Prevalence of UI in postpartum was 31% for vaginal delivery and 15% for CS delivery
- SUI was the most prevalent type at 54%
- Little change in prevalence over the first year postpartum

1. Moosdorff-Steinhauser, H et al. 2021
2. Thom D & Rortveit, G. 2010
3. MacArthur C. et al. BJOG 2006
4. Viktrup L. et al. 2006

## Postnatal Urinary Incontinence

### Long term prevalence:

- 6 years postpartum: 24% of all parous clients reported UI and was strongly associated with the presence of symptoms at 3 months postpartum
- 12 years postpartum: 42% reported UI and 9% reported it as severe
- UI onset during pregnancy or within first 3-6 months PP was very predictive of stress UI at 12 years

1. Moosdorff-Steinhauser, H et al. 2021
2. Thom D & Rortveit, G. 2010
3. MacArthur C. et al. BJOG 2006
4. Viktrup L. et al. 2006

## Pelvic Physiotherapy Management of UI

### Goals of PT Treatment:

- Education on bladder hygiene, bladder retraining, posture, body mechanics, breathing, activity/movement recommendations
- Address any 'pressure system' concerns
- Improve PF proprioception, strength, endurance and function (PFMT)
- Manual therapy externally and internally as required

## Interventions during pregnancy

- PFMT during pregnancy shortened the first and second stage of labour
- PFMT reduced UI during pregnancy
- Perineal massage reduced perineal pain
- EPI-NO showed no significant benefit

1. Shreiner, L et al 2017  
2. Du et al. 2015  
3. Woodley et al. 2020

## Overall Conclusions (Woodley et al 2020)

- Structured PFMT in early pregnancy for continent women may prevent the onset of UI in late pregnancy and postpartum (62% less risk)
- Antenatal PFMT decreased the risk of UI by 29% in the mid-postnatal period ~3 to 6+ months (high quality evidence)
- For PFMT started after delivery, there was uncertainty about the effect on UI risk in the late postnatal period (moderate quality evidence)

1. Woodley S. et al. 2020

## Overall Conclusions (Woodley et al 2020)

- The effects of PFMT might be greater with targeted approaches vs population based approaches
- PFMT programs should be well defined
- Further high-quality RCTs are needed especially after delivery

1. Woodley S. et al. 2020

## Further Recommendations

- All pregnant and postpartum individuals, at every contact with a Maternal/Perinatal Care Provider, should be asked if they are continent
- Continent women need exercise prescription and behavioural support to perform PFMT to prevent UI
- Those who are incontinent or unable to perform a correct PFM contraction should be referred for rehabilitation

1. Woodley S. et al. 2021

## Further Recommendations

- Given the prevalence of female UI and its impact on exercise participation, PFMT should be incorporated as a routine part of women's exercise programs in general (moderate evidence)

1. Woodley et al. 2020  
2. Morkved S. et al 2013

## Postnatal Anal Incontinence

- Grade 3-4 tearing (OASIS) increases susceptibility to FI
- Incidence of OASIS 0.1% to 10.9%
- AI affecting 35% of pregnant and 25% of women at 1 year postpartum
- FI may appear many years or decades after birth – 20yrs later
- those with OASIS - rate of FI was doubled or tripled in the long term

1. Woodley S & Hay-Smith J. 2021
2. Boyle et al. 2012
3. Andrews, V. et al. Birth 2006
4. Woodley, SJ et al. 2017
5. Harvey MA, Pierce M et al. SOGC Clinical Practice Guideline: OASIS, 2015
6. Nilsson et al IJG 2016
7. Nilsson et al. AJOG 2020

## Factors that may Increase Risk of OASIS

- Occur more often in primiparae
- Macrosomic newborn
- Dorsoposterior position of fetal head
- Shoulder dystocia
- Increasing maternal age and weight
- Vacuum (assoc. with almost 0.57x risk of OASIS with episiotomy and 1.89x risk without episiotomy)
- Forceps use (assoc. with almost 1.34x risk of OASIS with episiotomy and 6.53x risk without episiotomy)

1. Kosec, V. 2019
2. Thakar, R. ICS 2021
3. Gurol-Urganci et al 2013



## Factors that may Decrease Risk of OASIS

- Warm compresses in 2<sup>nd</sup> stage (50% reduction in 3<sup>rd</sup> and 4<sup>th</sup> degree tears)
- Perineal massage in 2<sup>nd</sup> stage (50% reduction in 3<sup>rd</sup> and 4<sup>th</sup> degree tears)
- Episiotomy – selective use may be assoc. with 30% less severe trauma/OASIS
- Mediolateral episiotomy (suggested to aim for **60 degrees** during crowning)
- Manual perineal protection support

1. Thakar, R. ICS 2021  
 2. Aasheim V. et al. 2017  
 3. Jiang H et al 2017  
 4. Andrews, V et al 2004  
 5. Andrews V. et al 2006  
 6. Zachariah, R et al. ICS 2021

## Pelvic Physiotherapy Management of FI & OASIS

### Goals of PT Treatment:

- Education: diet, lifestyle to help improve stool consistency, skincare
- Proper defecatory mechanics, no dyssynergia
- Strengthen PF (especially EAS)
- Manual Therapy
- Normalize sensation (excessive/lack of sensation)
- Biofeedback modalities as required: biofeedback, NMES, balloon catheter retraining

1. Igualada-Martinez, P. ICS 2018

## Pelvic Physiotherapy Management of OASIS

### OASIS Guidelines:

- All women should be offered conservative management following OASIS related AI
- Conservative management should be the first line management of OASIS related bowel dysfunction

1. Harvey M, et al, 2015
2. Fernando, RJ, 2015

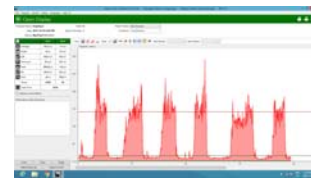
## Postpartum PFMT for treatment of OASIS

- Results indicate that individually adapted PFMT reduces PP AI symptoms and PFMT may be offered as first line treatment for postpartum AI
- Further research needed to determine optimal timing and frequency of PFMT

1. Woodley et al. 2020
2. Johannessen, HH et al. 2016
3. ICI6 – ICS 2017

## Biofeedback for FI

- Biofeedback +/- PFMT and sensory training with a rectal balloon, is recommended as second line treatment for FI after other behavioural and conservative / medical management have been tried and failed to provide adequate symptom relief (Grade A Recommendation)



1. ICI6 – ICS 2017

## Postnatal POP

### Prevalence:

- POP > Stage II at 3-6 months postpartum is 18-56%
- Cystocele most common type
- 15-40% of primiparous women have a major defect of the levator ani muscle
- Risk of severe POP doubles with levator ani defect on u/s

1. Bo, K et al. 2015

## Risk Factors for POP

- Age
- Obesity/high BMI
- Pregnancy and Vaginal Delivery
  - Levator ani injury
  - Forceps
  - Episiotomy
  - Prolonged Second Stage
- Chronic Coughing
- Constipation
- Genetic predisposition
- Increased length of Urogenital (UG) Hiatus

1. Haslam & Laycock, 2008
2. Vergeldt, T et al. 2015
3. Shek & Dietz, 2010

## Uro-Genital Hiatus & POP

- The length of the UG hiatus at rest that makes one at risk for POP

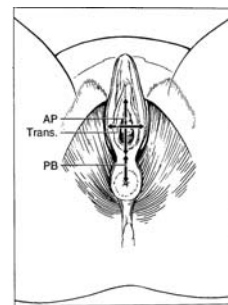
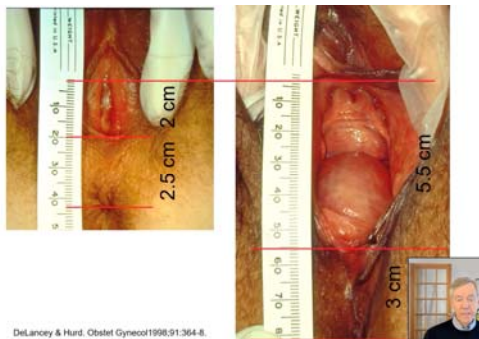


Figure 3. Dimensions measured of the urogenital hiatus in the levator ani muscle. AP = anterior-posterior diameter; Trans = transverse diameter; PB = perineal body.

1. DeLancey, J & Hurd, W. 1998
2. DeLancey, J et al. 2007

## Levator Ani Injury & POP

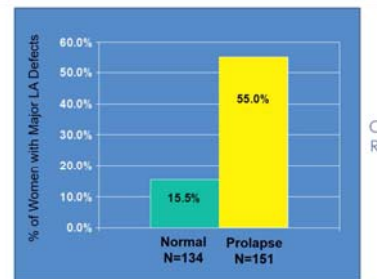
Of those with major levator ani injury:

- 15% of women with normal support
- 55% of women with POP

LA Injury highest with OP, forceps delivery, prolonged second stage

Major Levator Ani Defects:

Delancey, et al. Obstet Gynecol. Feb. 2007



1. Delancey, J et al. 1998
2. Delancey et al. 2007

## Postpartum PFMT and POP

- No effect was found of postpartum PFMT on POP-Q stage or bladder neck position in primiparous women followed from 6 weeks to 6 months postpartum
- Symptoms of bulging inside the vagina was significantly higher in the control group compared with the PFMT group both at baseline and after the intervention
- More randomized controlled trials are needed before strong conclusions can be drawn on the effect of PFMT on POP in this particular population

Due to the high prevalence of POP in the general female population, early prevention and treatment should have high priority.

1. Bo, K et al. 2015

## Limitations

- 6 weeks to 6 months postpartum – hormonal status still changing and may negatively influence outcomes
- 16% of control group still performed PFMT
- Small sample, need to study both primiparous and multiparous
- Intervention was group PFMT classes – individualized training may be required for treating POP

1. Bo, K et al. 2015

## Postpartum PFMT and POP

- It remains uncertain whether postpartum PFMT improves POP symptoms because of very low-quality evidence.
- PFMT is without adverse effects and can be used as treatment for prolapse

1. Wu, YM et al. 2018  
2. Braekken, H et al. 2010

## Pelvic Physiotherapy Management of PGI

### Goals of PT Treatment:

- Education: anatomy, physiology, prevention, pessaries and other supportive devices etc.
- Pressure mechanics - decreasing Valsalva, minimizing constipation
- Proper defecatory mechanics
- Pelvic floor management with ADL's, movement
- PFI

1. Igualada-Martinez, P. ICS 2018

## Pregnancy Related PGP

"...Pain is experienced between the posterior iliac crest and the gluteal fold, particularly in the vicinity of the sacroiliac joints...may radiate in the posterior thigh and can also occur in conjunction with or separately in the symphysis....the endurance capacity for standing, walking and sitting is diminished....exclusion of lumbar causes...reproducible by specific clinical tests."

1. Vleeming et al. Eur Spine J 2008; 17(6):794-819.

## Pregnancy Related PGP

### Prevalence of PGP:

- Persistent PGP into the postpartum period has been estimated at 7-25%
- Most cases tend to resolve within the first year postpartum but 8-10% struggle with PGP up to 2 years postpartum
- Some persistent cases characterized by kinesiphobia and other psychological symptoms

1. Clinton, S et al. 2016  
2. Dufour et al. 2018  
3. Simonds A. et al, 2022

## Pregnancy Related PGP

### Risk Factors for PGP:

- History of LBP or PGP in previous pregnancies
- Pain with rolling in bed and with weightbearing
- Increased BMI
- Multi-parity and CS
- Breast/Chestfeeding
- Presence of depressive symptoms, work dissatisfaction and lack of belief of improvement

1. Clinton, S et al. 2016  
2. Simonds, A et al. 2022



## Pregnancy Related PGP

- Words Matter! Acknowledge the link between pregnancy and fear
- Consider other mechanisms at play such as: stress, fear, catastrophizing, inflammation & gut microbiome and quality of sleep
- Initiate care before 3 months postpartum to reduce likelihood of chronicity

1. Dufour, S. 2018

## PT Management of Pregnancy Related PGP

- Education: normal changes postpartum, pain science, biomechanics/movement strategies
- Supportive belts and manual therapy (but not in isolation)
- (Pain free) Exercise for PF, back and hips
- Address any psychosocial concerns contributing to PGP (e.g. allaying fear and catastrophization)

1. Simonds, A et al. 2022  
2. Dufour, S. 2018

## Take Home Messages

“PFMT is an appropriate first-line treatment for women who develop UI during pregnancy or postpartum and probably offers additional benefits in preventing prolapse and improving sexual function, AI, and labour and delivery outcomes.”

1. Woodley S. et al. 2021

## Take Home Messages

- Always ask clients about their pelvic health status (esp. UI)
  - Consider starting PFMT preventatively in the antenatal vs. just in the postnatal period
  - Perinatal UI, OASIS, POP and PGP clients may be offered conservative PT management
  - Better quality research is required to determine best protocols when it comes to PFMT in the perinatal population for UI, AI/OASIS, and POP
- into consideration the whole person when managing perinatal pelvic health

Thank you!

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