

# Abstract #488: Prevalence of pelvic floor myofascial pain on examination in a cohort exam study of adult women



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## Background

- **Pelvic floor myofascial pain (PFMP)** is characterized by the presence of trigger points or tender points within the pelvic floor muscles, often associated with local or referred pain
- Prevalence estimates for PFMP are largely derived from clinical populations of women with pelvic floor disorders or pelvic pain conditions
- Prevalence in the general, community-dwelling population is unknown

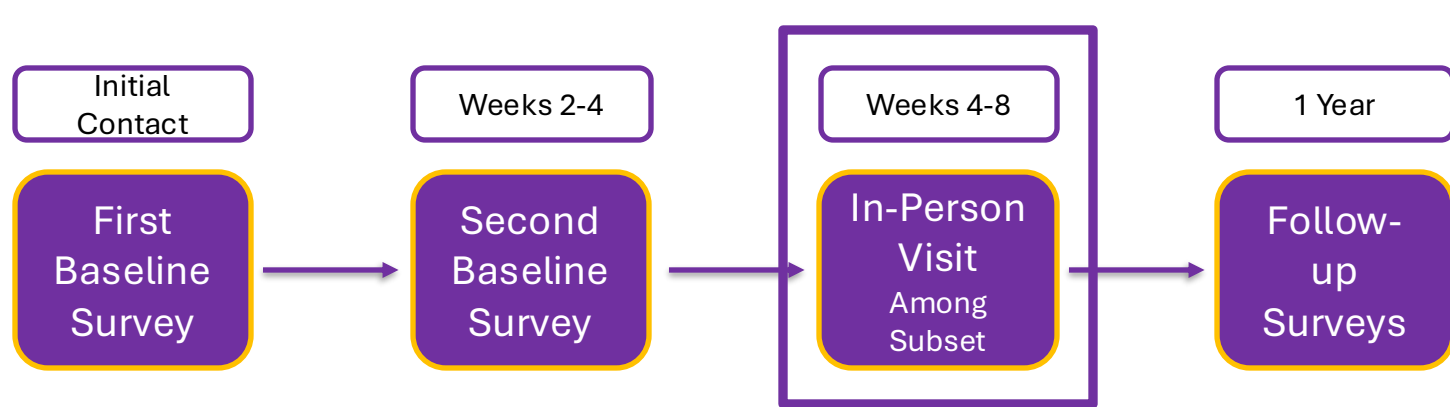
## Objective

To describe the prevalence of pelvic floor myofascial pain on muscle palpation/tenderness in a population of community-dwelling adult women and to examine factors associated with pelvic floor myofascial pain on palpation

## Study Design and Methods

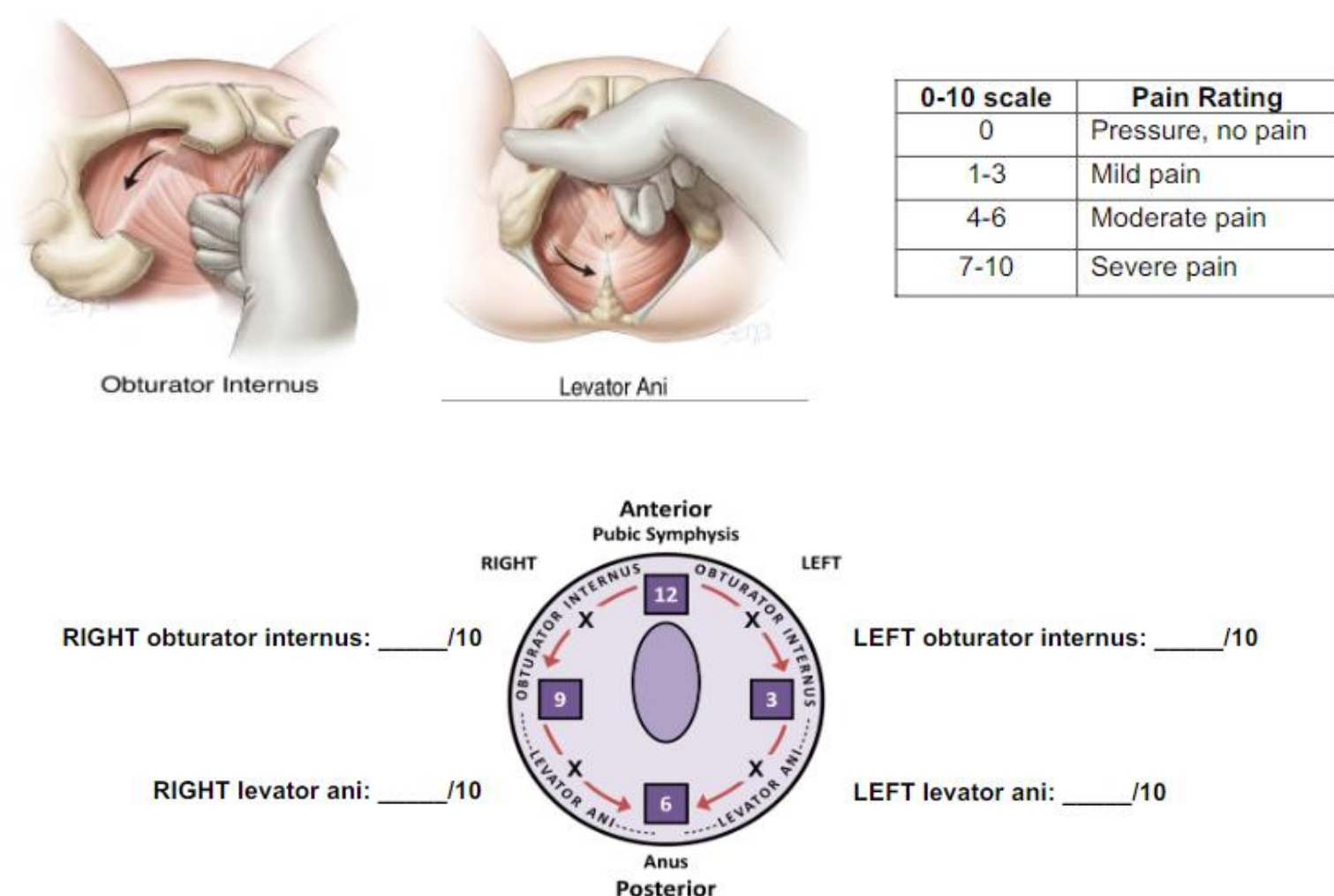
### RISE for HEALTH

- Regionally-representative population-based prospective cohort study conducted by the **Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium**
- Survey-based followed an in-person assessment designed to capture social, physical, and biological variables potentially associated with bladder health
  - PLUS developed the **Bladder Health Scale (BHS)** and the **Bladder Function Index (BFI)** to assess *bladder health*



- 502 out of 520 participants completed the in-person visit:
  - Baseline survey (BHS/BFI, medical history & pain)
  - Physical examination (musculoskeletal and pelvic, figure)
    - Tenderness rated 0-10 in 4 sites
      - Obturator internus muscle (bilaterally)
      - Levator ani muscle (bilaterally)

Obturator Internus and Levator Ani Myofascial Pain Screening Examination



## Results and Interpretation

Demographic characteristics	N=502
<b>Age [mean (SD)]</b>	50.2 (17.5)
<b>Race/ethnicity [n (%)]</b>	
Non-Hispanic, Asian	28 (5.6)
Non-Hispanic, Black	65 (12.9)
Non-Hispanic, White	332 (66.1)
Hispanic	59 (11.8)
<b>Education</b>	
High school/GED or less	33 (6.6)
Vocational or associate degree	63 (12.5)
Bachelor's degree	175 (34.9)
Graduate degree	163 (32.5)
<b>Employment</b>	
Full-time employed	240 (47.8)
Part-time employed	83 (16.5)
Retired	118 (23.5)
Unemployed	13 (2.6)

Clinical characteristics	N=502
<b>BMI (kg/m<sup>2</sup>)</b>	
<25	174 (34.7)
25-29	134 (26.7)
30+	174 (34.7)
<b>Parity/Mode of Delivery</b>	
Nulliparous	233 (46.4)
1 Vaginal	57 (11.4)
2+ Vaginal	166 (33)
Cesarean only	42 (8.4)
<b>Medical History</b>	
Diabetes	69 (13.7)
Anxiety or Depression	135 (26.9)
Pelvic surgery, fracture, injury, cancer or radiation	128 (25.5)
Pelvic pain (includes IC/BPS, endo, CPP)	44 (8.8)

Pelvic floor myofascial tenderness	Left Side N (%)	Right Side N (%)
	<b>Obturator Internus (OI)</b>	
0 (No pain)	292 (56.2)	326 (62.6)
1-3 (Mild)	142 (27.4)	125 (24.0)
4-6 (Moderate)	56 (10.8)	42 (8.0)
7-10 (Severe)	12 (2.4)	9 (1.8)
	<b>Levator Ani (LA)</b>	
0 (No pain)	315 (60.6)	329 (63.2)
1-3 (Mild)	139 (26.8)	130 (25.0)
4-6 (Moderate)	33 (6.4)	35 (6.8)
7-10 (Severe)	14 (2.6)	8 (1.6)

	PFMP with palpation	
	Obturator Internus (OI)*	Levator Ani (LA)*
<b>Body mass index (kg/m<sup>2</sup>)</b>		
<25	Reference	Reference
25-29	2.47 (1.17, 5.30)	2.16 (1.00, 4.71)
30+	1.41 (0.72, 2.76)	1.53 (0.77, 3.07)

## Conclusions

- While most community-dwelling adult women had no pelvic floor myofascial tenderness, about 10% had moderate-to-severe PFM tenderness
- We hypothesize that mild PFM tenderness (reported by 25%) may be a precursor to moderate-to-severe tenderness and should be studied in a longitudinal sample.
- Being overweight (but not obese) was associated with higher prevalence of PFM tenderness
- Future work will explore whether there is an association between PFM tenderness and bladder health or lower urinary tract symptoms

## References

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- 2) Brubaker L, Barthold J, Fitzgerald CM, Kenton K, Lewis CE, Lowder J, Lukacz ES, Markland A, Meister M, Miller J, Mueller ER, Rudser K, Smith AL, Newman DK; Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. The RISE FOR HEALTH study: Methods for in-person assessment and biospecimen collection. *NeuroUrol Urodyn.* 2023 Jun;42(5):1011-1021. doi: 10.1002/nau.25108. Epub 2022 Dec 27. PMID: 36573845; PMCID: PMC10290574.
- 3) Meister MR, Sutcliffe S, Ghetti C, Chu CM, Spitznagle T, Warren DK, Lowder JL. Development of a standardized, reproducible screening examination for assessment of pelvic floor myofascial pain. *Am J Obstet Gynecol.* 2019 Mar;220(3):255.e1-255.e9. doi: 10.1016/j.ajog.2018.11.1106. Epub 2018 Dec 7.