

# PELVIC FLOOR PHYSICAL THERAPY AND THE ONCOLOGY POPULATION: MANAGING SYMPTOMS OF THE DISEASE AND ITS TREATMENTS

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# Objectives

- Briefly review pelvic floor anatomy and function
- Discuss related anatomy to the pelvic floor
- Discuss possible causes of pelvic floor dysfunction after cancer treatments
- Review physical therapy management of common concerns after pelvic cancers and treatment

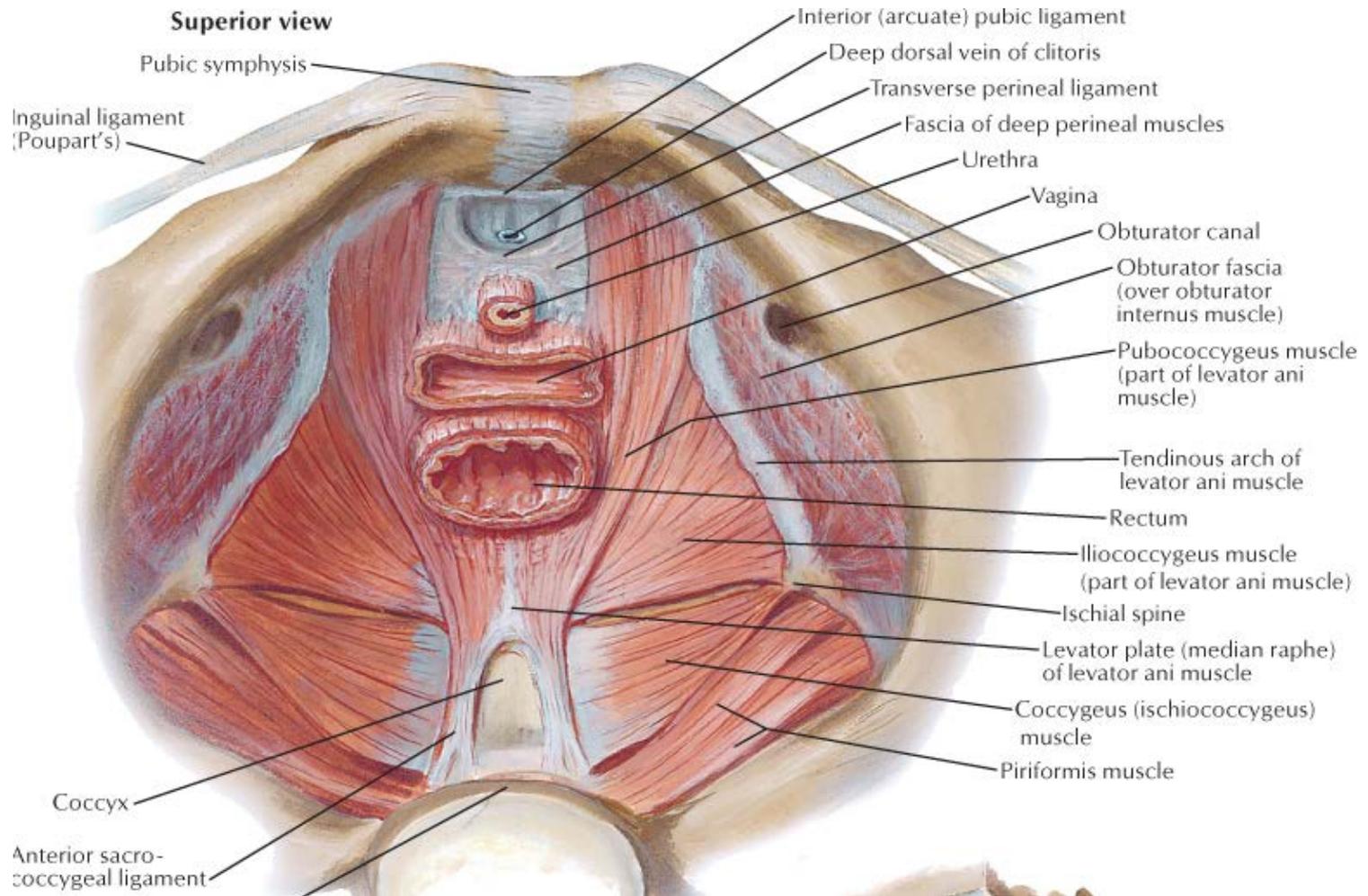
# PELVIC FLOOR ANATOMY

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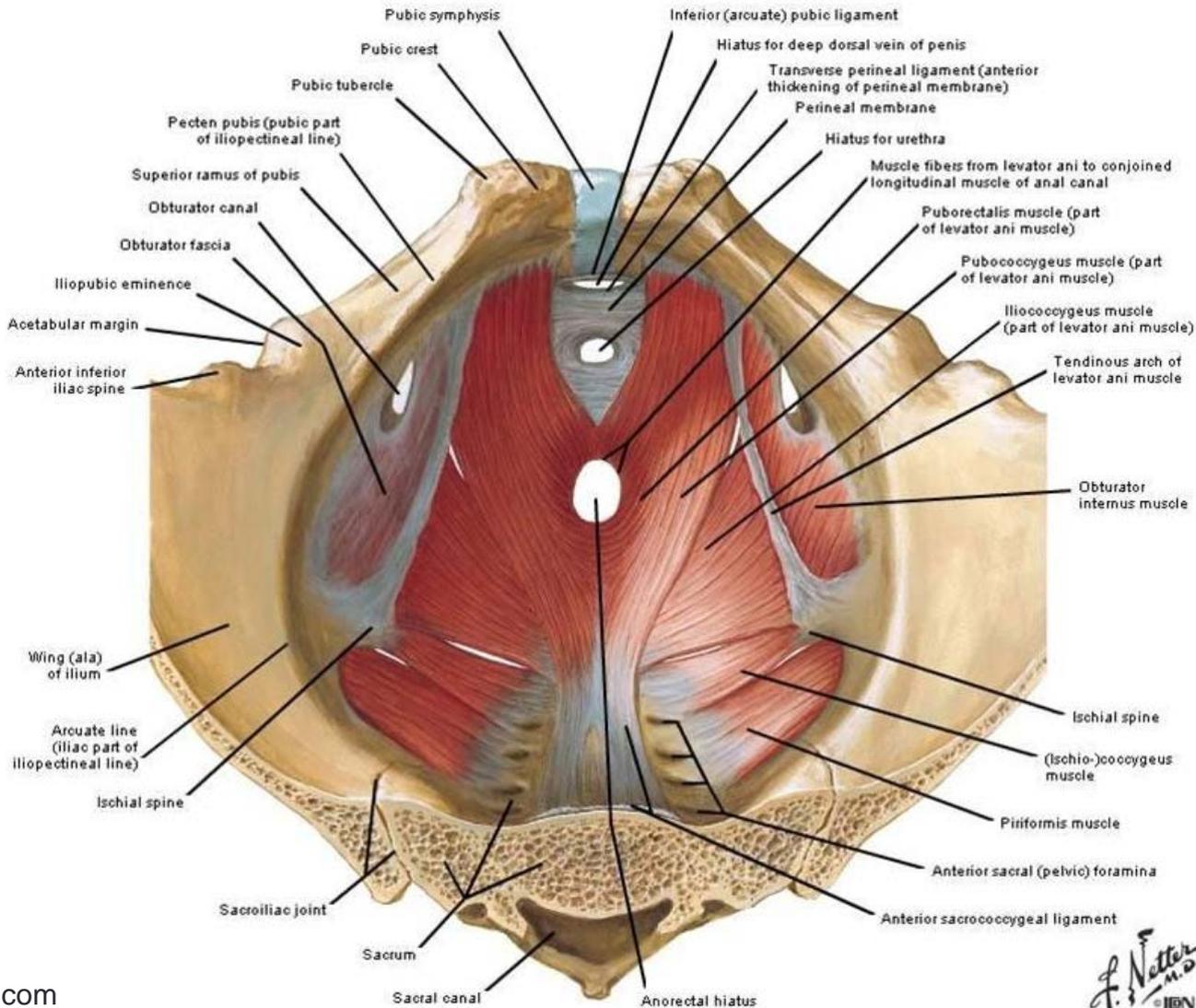
# Pelvic Floor Muscle (PFM) Functions

- Support pelvic viscera
- Maintain continence
- Postural stability
- Sexual function
- Assist in breathing

# Pelvic Floor Musculature (Female)



# Pelvic Floor Musculature (Male)



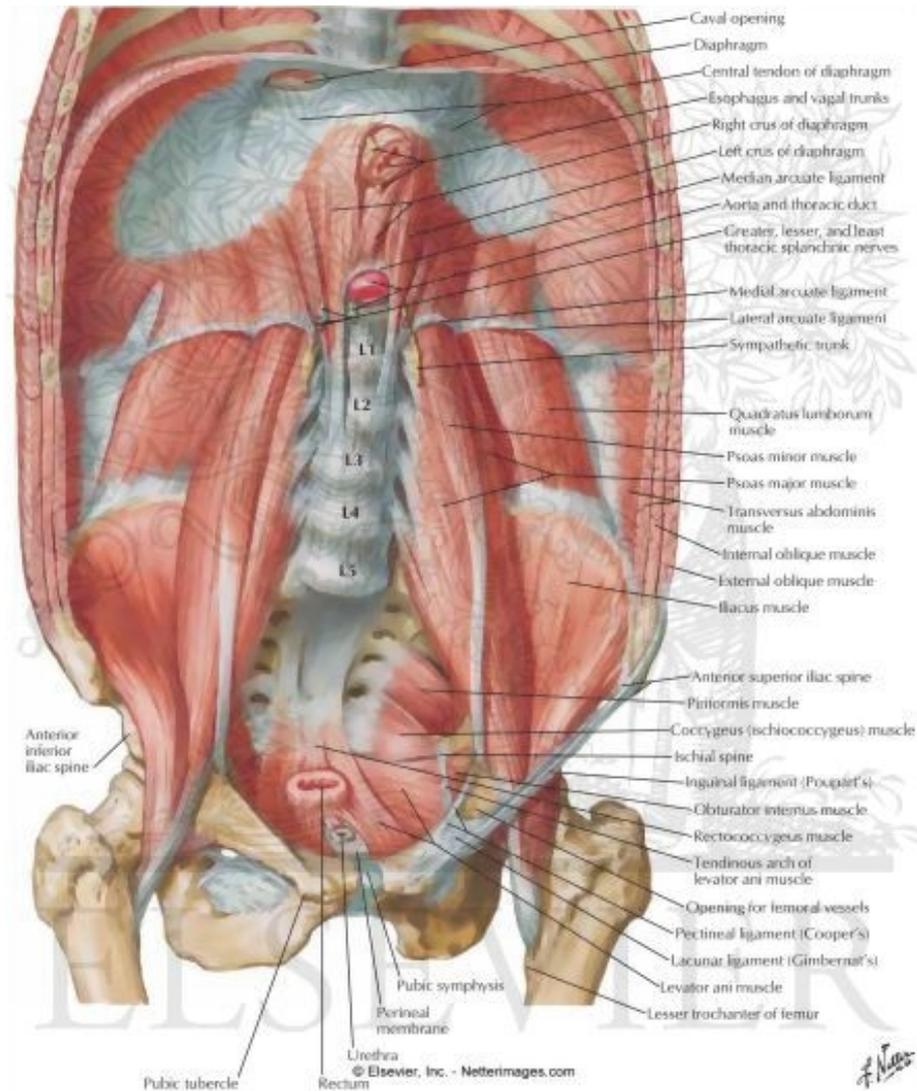
# RELATED ANATOMY

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# The Diaphragm and the Pelvic Floor<sup>1,2</sup>

- The diaphragm and pelvic floor work together as both respiratory and postural muscles
  - If this synergistic relationship is inhibited (i.e. not effectively using the diaphragm), the pelvic floor and it's viscera may be negatively impacted
- During inhalation, the diaphragm descends as does the pelvic floor
  - Inadequate breathing may lead to inappropriate muscle activation (thus, possibly over-firing of pelvic floor musculature)

# Posterior Abdominal Wall



# Abdominal Muscles and the Pelvic Floor

- Voluntary activity of abdominal musculature increases activity of pelvic floor<sup>3</sup>
- With gentle, tonic activation of PFM, Transversus Abdominis (TrA) produces greatest response<sup>3</sup>
- Maximum contraction of PFM produces activity in transversus abdominis (TrA), external oblique, internal oblique, and rectus abdominis (RA)<sup>4</sup>
  - RA response was minimal
  - With lumbar flexion, external oblique had the greatest activation
  - With lumbar extension TrA activity was greatest

# Hip Musculature and the Pelvic Floor

- Adductors and gluteals have synergistic contractions with the pelvic floor muscles in healthy females<sup>5</sup>
- Many hip muscles (piriformis, obturator internus and externus, iliopsoas, gluteals, hamstrings, and adductors) have referred pain patterns that may mimic and/or confound pelvic pain<sup>6</sup>

# PFM and Cancer Treatments

- “There is some evidence that radiation therapy has detrimental impacts on both PFMs’ structure and function”<sup>19</sup>
- Total mesorectal excision for rectal cancer may result in damage to pelvic floor innervation and could contribute to urinary and fecal incontinence<sup>22</sup>

# PELVIC FLOOR PHYSICAL THERAPY MANAGEMENT

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# Common Concerns Related to Pelvic Cancers

- Urinary incontinence
- Chronic pelvic pain
- Sexual dysfunction
  - Dyspareunia
  - Erectile Dysfunction

# URINARY INCONTINENCE

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# Urinary Incontinence

- May occur after surgical treatment of rectal cancer<sup>8</sup>
- 34% of women treated for the three main types of gynecologic cancer (cervical, endometrial, and ovarian) report urinary incontinence<sup>9</sup>
- May occur after prostatectomy or radiation therapy<sup>10</sup>

# Management of Urinary Incontinence

- Patient education
- Urotherapy<sup>13</sup>
  - Bladder diaries, timed voiding intervals, lifestyle modifications

# Management of Urinary Incontinence

- Pelvic floor strengthening
  - After brief verbal instruction, 51% of women use PFM incorrectly and 25% perform a valsalva maneuver<sup>11</sup>
  - A systematic review in 2010 comparing pelvic floor muscle training versus no treatment for urinary incontinence in women suggests that pelvic floor muscle training should be included in conservative management for women with stress, urge, or mixed urinary incontinence<sup>14</sup>

# Management of Urinary Incontinence

- Pelvic floor muscle strengthening
  - Pelvic floor muscle training with or without biofeedback reduces time to continence in men after radical prostatectomy<sup>12</sup>
  - A pelvic floor rehabilitation program improves pelvic floor dysfunction and quality of life in gynecological cancer patients<sup>16</sup>

# Management of Urinary Incontinence

- Posture Re-education
  - Upright sitting postures recruit greater PFM resting activity vs slumped postures<sup>15</sup>
- Abdominal and lower extremity muscle strengthening<sup>3,4,5</sup>

# CHRONIC PELVIC PAIN AND DYSPAREUNIA

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# Chronic Pain Syndromes in Cancer Survivors<sup>7</sup>

<b>System Affected</b>	<b>Pain Syndrome</b>	<b>Incidence</b>
GI/urinary/pelvic	Chronic pelvic pain, chronic enteritis, proctitis, cystitis, tenesmus Associated urinary or fecal urgency is common Radiation-related adhesions	Cervical cancer: 38%
Genital	Dyspareunia: secondary to menopause, decreased vaginal lubrication from radiation, vaginal stricture/fibrosis from radiation	34-58%; women experience more of an impact than men

# Management of Chronic Pelvic Pain

- Correct faulty breathing patterns<sup>1,2</sup>
- Manual therapy techniques
  - Myofascial techniques directed at the pelvic floor are better than global therapeutic massage<sup>17</sup>
- Address musculoskeletal dysfunction
  - Musculoskeletal disorders exist in most women with chronic pelvic pain<sup>18</sup>
- Graded exercise

# Sexual Dysfunction

Do you ask your patients about their sexual health?



# Why Don't We Talk About Sex<sup>23</sup>

- Fear of 'opening a can of worms'
- Lack of time
- Lack of resources and training
- Concern about knowledge and abilities
- Worry about causing offense
- Personal discomfort
- Lack of awareness about sexual issues
- Lack of knowledge about sexuality of opposite gender
- Bias towards non-heterosexual sexuality
- Bias towards elders engaging in sexual activity
- Lack of knowledge about religious components
- Lack of understanding of ethnic minority groups

# Management of Erectile Dysfunction

- Pelvic floor strengthening
  - A case series in 2009 suggests that pelvic floor muscle exercises seem to result in improved erectile function in men after radical prostatectomy<sup>20</sup>
- Psychological and sexual counseling also beneficial<sup>21</sup>

# Management of Dyspareunia

- Education
- Lubrication
  - Coconut oil?
  - pH balanced, preservative, glycerin and paraben free
- Position modification
- Vaginal dilators
  - Vaginismus and vaginal stenosis
  - Role for prevention of stenosis in patients treated with radiation for cervical cancer<sup>24</sup>
- Pelvic floor re-training<sup>24</sup>
- Psychosocial counselling<sup>24</sup>

# In Summary...

- Pelvic floor physical therapy may be an effective conservative treatment option for symptoms and side effects related to pelvic cancers and their treatments

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QUESTIONS?

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Thank you!