Physical Therapy for Pelvic Floor Dysfunction

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Where are we at on the Caffeine Meter Mug?

Learning Objectives

By the end of this presentation, the course participant will be able to:

• Identify at least 3 patient medical diagnoses that may be appropriate referral for pelvic floor physical therapy
• Identify at least 2 pelvic floor physical therapy diagnoses
• Identify at least 2 pelvic floor physical therapy treatment techniques
Why am I here?!?

- How can physical therapy help my problem?
- PFM dysfunction often presents as an organ problem!

PT Evaluation Begins ...

Sometimes just listening can make all the difference in someone's life.

Physician or Nurse Practitioner Visit

- Male or female patient reports pelvic problems
- Bladder, bowel, and/or genital problems, SIJ
- Chief complaint
- Health history by chance
- Specific questioning
- Patients are often reluctant to discuss these problems because they are too embarrassed.
Common Chief Complaints

URINARY:
Frequency, urgency, nocturia, bedwetting
Incontinence: with cough, laugh, sneeze, exercise, running, jumping, lifting objects, ADLs, before/after void, during intercourse
Wears incontinence pads and/or diapers
Straining, retention, difficulty initiating stream, weak stream, slow stream, pain before/during/after void

Common Chief Complaints

• Bowel: Frequency, urgency, fecal incontinence, straining, constipation, IBS, pain before/during/after BM
• Genital: Painful intercourse, orgasm, tampon insertion, pelvic exams; PGAD (persistent genital arousal disorder), feels like "sitting on a ball", something protrudes through the vagina while straining on toilet
• General: Difficulty/Pain with sitting, ADLs, bike riding, exercise, household chores, work activities, wearing jeans, intimacy, caring for self and others
### Risk Factors for Supportive Dysfunction
- Strain with void/BM
- Pregnancy, childbirth
- Infections
- Surgeries
- Obesity, sedentary
- Improper posture, body mechanics
- Chronic constipation
- Chronic coughing, vomiting
- Neurological dysfunctions – PNS, CNS
- Menopause, aging

### Risk Factors for Hypertonia Dysfunction
- Pain in low back, SIJ, pelvis
- Muscle imbalance, poor core strength/flexibility
- Habitual PFM holding
- PFM clenching – CPP, IC, OAB
- Abdominal adhesions – C-section, Hysterectomy
- Childbirth injury
- Pelvic surgery
- Pelvic inflammatory conditions – IBS, endometriosis
- Sexual abuse, STDs, UTIs, yeast infections
- Dermatological conditions – lichen sclerosus/plains

### Common Medical Diagnoses
- **Urinary**: Incontinence (SUI/Ur/mixed), OAB, IC, PBS, cystocele
- **Bowel**: Incontinence, constipation, IBS, coccydynia, rectocele, levator ani syndrome
- **Vaginal/Genital**: Pudendal neuralgia, dyspareunia, vaginismus, POP, pregnancy, post-pregnancy, post-surgical, post-prostatectomy, prostatitis
- **General**: CPP, scar tissue/adhesions, post-surgical pelvic pain, fibromyalgia
### What is a Pelvic Floor Dysfunction Specialist?

- Licensed physical therapists + pelvic floor expertise
- Pelvic floor dysfunction evaluation and treatment is NOT taught in entry level PT programs
- Advanced pelvic floor classes with lecture and hands-on external and internal treatment
- Certifications 'now', not mandatory
  - 1 time a week for 6 visits
- **APTA Section on Women’s Health**
- **CAPP – Certificate of Achievement in Pelvic PT**
- **WCS – Women’s Health Clinical Specialist**
- **Herman and Wallace**
- **PRPC – Pelvic Rehabilitation Practitioner**

### Pelvic Floor PT Referral

- Suspect patient’s pelvic problem is musculoskeletal or nerve related
  - 728.2 Muscle weakness – SUI, UUI, FI
  - 728.85 Muscle pain – spasm
  - 729.1 Pelvic floor pain – myofasial myofascial restriction
  - 728.4 Ligament laxity – POP

* 619.8 Organ Prolapse not payable by BCBS
Pelvic Floor PT Referral

* EVALUATE AND TREAT *
- Manual therapy
- Therapeutic exercise
- Neuromuscular Re-education
- Self-care
- Home Program Instruction
- Modalities prn (Estim, IFC, US, heat, cold)

Pelvic Floor PT Referral

Typical treatment time:
- Duration
  - 1 hour sessions
- Pelvic floor weakness without pain
- Pelvic floor pain
  - 1-2 times a week for 12 visits

Pelvic Floor Muscles

- Function: support and control
- Skeletal muscles lining the bony pelvis and surrounding the urethra, vagina and anus
- Hammock - Pubic bone to coccyx and between ischial tuberosities
- 3 PFM layers
1st PFM Layer: Female

- **Ischiocavernosus**: Located under the pubic rami, maintains clitoral erection
- **Bulbospongiosus**: Surrounds/strengthens vaginal orifice and constricts urethra to expel last drops of urine; also maintains clitoral erection
- **Superficial Transverse Perineal**: Supports the lower vagina, introitus, perineum; connects with the ischial tuberosities
1st PFM Layer: Male
Ischiocavernosus
Bulbospongious
Superficial Transverse Perineal

- Bulbospongious muscle on lower shaft of penis
- Ischiocavernosus muscle covers crus of penis
- Superficial transverse perineal muscle

2nd PFM Layer: Female
Deep Transverse Perineal muscle, Urethral Sphincter, Compressor Urethra, Sphincter Urethrovaginalis
Urogenital Triangle: Female
Consists of urogenital diaphragm and superficial perineal muscles
Urogenital Diaphragm:
Part of the continence mechanism
3 PFM: urethrovaginal sphincter, compressor urethrae, sphincter urethrae
Superficial Perineal muscles:
Aid in sexual function
3 PFM: bulbocavernosus, ischiocavernosus, superficial transverse perineal

2nd PFM Layer: Male
Deep Transverse Perineal muscle
Sphincter muscle of Membranous Urethra
- Deep Transverse Perineal muscle: broader muscle under the superficial, between ischial tuberosities posterior to urethra
- Sphincter muscle of Membranous Urethra: surrounds the membranous part of the urethra; relaxes during micturation
3rd PFM Layer: Female
Pelvic Diaphragm = Levator Ani and Coccygeus

- **Levator Ani**
  - Pubococcygeus: pubovaginalis and puborectalis
  - Pubovaginalis "vaginal sling" - os pubis to perineal body and vaginal walls
  - Puborectalis "rectal sling" - pubic bone and obturator internus fascia to coccyx and rectal walls
  - Iliococcygeus: pubic rami and obturator internus fascia to coccyx
- **Coccygeus**
  - spine of ischium to anterior coccyx and S4
Levator Ani muscles: Female (superior)
Puborectalis, Pubococcygeus, Iliococcygeus

- Puborectalis: originates with the PC muscle from the pubis and passes inferorly on either side to form a sling around the rectum. This muscle creates the anorectal angle; a mechanism to keep the GI tract closed for bowel continence.
- Pubococcygeus: Origin at the body of the pubis and goes posteriorly to Insert along the midline posteriorly to the coccyx. PC is subdivided based on the association of the structures in the midline: Pubovaginalis, puboprostaticus, puboanalis
- Iliococcygeus: Origin is the fascia that covers obturator internus muscle and joins the same muscle on the other side in midline to form a ligament (raphe) that extends to form an aperture to the coccyx.

Pelvic Diaphragm: Levator Ani and Coccygeus

- Coccygeus muscles
- One on either side of the coccyx, triangular and overlie the sacrospinous ligament.
- Apices attach to tips of ischial spine.
- Bases are attached to the lateral border of the coccyx and adjacent margins of the sacrum
- Completes the posterior part of the Pelvic Diaphragm
- Flexes anteriorly and stabilizes the SI joint when PFM tense.
Levator Ani Muscles: Female (inferior)
Puborectalis, Pubococcygeus, Iliococcygeus

3rd PFM Layer
Pelvic Diaphragm = Levator Ani and Coccygeus

• Deepest layer of striated muscle which elevates the pelvic floor, resists the intra-abdominal pressure, and maintains closure of the vagina and rectum.
• Largest muscle group in the pelvic floor
• Responsible for most of the PFM function
• Responsible for most of the PFM dysfunction
• PFM fiber ratio is 70% slow twitch:30% fast twitch
• Pudendal nerve: proprioception and deep pressure

3rd PFM Layer: Male
Pelvic Diaphragm = Levator Ani muscles
Innervated by S2-S4
Pelvic Wall Muscles: Piriformis and Obturator Internus

- **Piriformis:**
  - Origin: Anterior surface of the sacrum between anterior sacral foramina
  - Insertion: Medial side of superior border of greater trochanter of femur
  - Innervation: Branches from L5, S1-2
  - Action: Lateral rotation of the extended hip, abductor of the flexed hip

- **Obturator Internus:**
  - Origin: Anterolateral wall of pelvis
  - Insertion: Medial surface of greater trochanter of femur
  - Lateral rotator of extended hip and abductor of flexed hip
  - Innervation: Nerve to obturator internus L5, S1
  - Makes a 90 degree bend around the ischium between the ischial spine and the ischial tuberosity

Levator Ani muscles: Male (superior)
Puborectalis, Pubococcygeus, Ilieococcygeus
**Anal Sphincter**

- Most superficial skeletal muscle
- Composed of:
  - Internal anal sphincter (IAS) - smooth muscle
  - External anal sphincter (EAS) - skeletal muscle
  - Fuse superiorly with puborectalis sling of the pelvic diaphragm muscle
- Function: fecal continence
- Innervation: S4 and pudendal nerve (inferior branch)

**Related Muscles:**

**Adductors and Iliopsoas**

- **Adductors:** pubic ramus and ischial tuberosity to femur
- **Iliopsoas:**
  - Psoas minor and major (T12-L5 vertebral bodies and discs) and iliacus muscle (medial iliac fossa)
  - Innervated by L2-L4
  - "Hidden Prankster" according to Travell and Simons: key muscle to treat in lumbopelvic dysfunctions
Nerves of Perineum: Female

Pudendal Nerve:
Inferior Rectal branch, Perineal branch, Dorsal nerve

• Inferior rectal branch
  - Anal canal, caudal third of rectum, skin around anus
  - Muscles: posterior portion of external anal sphincter

• Perineal branch
  - Inferior third of vagina and urethra, skin of scrotum/labia
  - Muscles: transverse perineum, bulbospongiosus, ischiocavernosus, urethral sphincter, anterior portion of EAS

• Dorsal Nerve of clitoris/penis
  - Skin of clitoris/penis
  - Muscles: ischiocavernosus?, bulbospongiosus?

2011 Prendergast and Rimmer, Inc., PHRC
Nerves of Perineum: Male

Pudendal Nerve
- Inferior Rectal branch, Perineal branch, Dorsal nerve

Pudendal Nerve
- Forms anteriorly to the lower portion of the piriformis muscle from S2-S4
- Leaves the pelvic cavity via greater sciatic foramen and enters the gluteal region
- Enters the perineum by passing around the sacrospinous ligament
- Exits the pelvic cavity at the lesser sciatic foramen, then around the peripheral attachment of pelvic floor then into the perineum
Pudendal Nerve

- Mixed nerve:
  - 50% sensory to perineum, penis, clitoris
  - 20% motor to PFM, EAS and EUS
  - 30% autonomic
- PN only peripheral nerve to have both somatic and autonomic fibers
- A patient can experience sympathetic upregulation symptoms with pudendal neuralgia due to its autonomic fibers
  - Increase heart rate, blood pressure
  - Decrease mobility of long intestine
  - Widens bronchial passageways
  - Constricts blood vessels
  - Pupil dilation
  - Perineum
- 2011 Prendergast and Rumener, Inc., PHRC

Dermatomes
Fascia

- Soft tissue connective tissue
- Encases organs, muscles, nerves, bones
- Manufactures collagen, a contractile protein
- Contains elastin, a rubber-like
- Avascular, but highly innervated
- Capable of changing its compensation in response to sensory input
- 60-90% water.

Fascial Injury

- Fascial injury results in connective tissue restriction
  - Dehydration
  - Tissue shrinks
  - Collagen fibers "cross link"
  - Decreased tissue mobility
  - Increase in collagen fiber matrix.
Pelvic Floor Function:
Supportive, Sphincteric, Sexual

- Supportive: supports pelvic organs from below against forces of gravity and increased intra-abdominal pressure. (ligamentous support from above)
- Sphincteric: closes urethra and rectum for continence during normal function and at rest. Incontinence is a symptom, from an impairment.
- Sexual: PFMs provide proprioceptive sensation that contributes to sexual appreciation. Vagina has very few sensory nerve fibers. Hypertrophied PFMs provide a smaller vagina and more friction against penis during intercourse -> stimulates more nerve endings (increased pleasure) -> orgasm strong PF contraction
  - Weak PFMs -> no orgasm
  - Men: PFMs assist in achieving and maintaining penile erection

**PFM dysfunction often presents as an organ problem!**

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Getting knocked down in life is a given

Getting up and moving forward is a choice!

Zig Ziglar

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Intravaginal/Intrarectal Examination

- Power: ability to contract arm grade 0-5/5
- Lift = supportive function
- Closure = sphincteric function
- PFM bulk = rehab potential/duration
- Endurance: ability to hold a slow-twitch muscle contraction and repeat the contraction; quality
- Resting tone between contractions: tone
- Coordination: PFM isolation or accessory in use
- Other Impairments: PF TPs, altered sensation, scars, adhesions can limit strengthening

"Internal PFM is the gold standard evaluation"
Manual PFM Evaluation

Pelvic Floor Muscle Strength Testing

<table>
<thead>
<tr>
<th>Muscle Grade</th>
<th>Descriptions</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Zero: No palpable contraction or squeeze</td>
</tr>
<tr>
<td>2</td>
<td>Trace: Elicits a contraction or squeeze with no displacement or lift</td>
</tr>
<tr>
<td>3</td>
<td>Poor: Contraction or squeeze pressure asymmetrical lift at various points with no displacement or lift</td>
</tr>
<tr>
<td>4</td>
<td>Good: Contraction or squeeze pressure and lift with displacement of the whole finger from an, post, and side walls of vagina (or rectum)</td>
</tr>
<tr>
<td>5</td>
<td>Strong: Contraction or squeeze pressure with full circumferential compression of whole finger displaced with an inward grip</td>
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</tbody>
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Muscle Interpreters by Carla Watson, PT and Holly Rosen, PT

Pelvic Floor Weakness

If my body were a car I would trade it in on a newer model. Everyone in town would smell or sputter my radiator leaks and my exhaust backfires.
**PFM Dysfunction: OAB and UI**

- **PFM Weakness**
  - PFM cannot adequately inhibit the detrusor
  - Detrusor > PFM activity
  - Early urge signals from the bladder are sensed as amplified "loud"
  - If PFM is too weak to maintain closure pressure around the urethra during the urge then incontinence occurs.

- **PFM Tension**
  - PFM cannot adequately inhibit the detrusor
  - PFM tension stretches or compresses the urethra
  - Urethral irritation from tension can mimic UI and cause urgency and frequency
  - Tension can compress pelvic floor blood vessels and nerves

**PT Intervention for OAB and UI**

- Kegel program
- Biofeedback
- Urge suppression techniques
- Bladder retraining
- Dietary irritant education
- Avoid constipation
- Minimize soft/irritative tissue restrictions
- Core strengthening
- Stress management

**Fecal Continence**

- Anal rectal angle
  - between the rectum and anal canal
  - Normal 50-100 degrees
  - Puborectalis "slings"
  - Increase in tone decreases the angle, closing the "flap valve mechanism" to maintain fecal continence
  - Weakness of puborectalis increases the angle allowing stool from the rectum into the anal canal and subsequent defecation.
Fecal Incontinence
- Puborectalis weakness - increases anorectal angle and disrupts the "flap valve mechanism"
- EAS +/or IAS weakness
- Chronic constipation - mega colon
- Rectocele - impaired sensory input and function
- Anorectal reflex impaired
- Colonic transit time too fast
- Stool volume/consistency
- Cognitive function - can't respond to urge
- Functional mobility impaired - slow gait, difficulty undressing

PT Intervention Fecal Incontinence
- Kegel program
- Biofeedback
- "Holding on" technique
- Bowel retraining
- Balloon training
- Dietary irritant education
- Avoid constipation
- Minimize soft connective tissue restrictions
- Core strengthening
- Stress management

Organ Prolapse Symptoms
- Cystocele, Uterine Prolapse, Rectocele
- Falling out feeling
- Lower abdominal pressure worse as the day progresses
- LBP
- Post void residual
- Constipation
- Bristol Stool Type 1 or 2
- "Splinter\" to perineum or posterior vaginal wall for BM
Prostate

• Men have 2 sphincters + PFM to control urine
• Proximal (internal) sphincter has smooth muscle in bladder neck, prostate gland and prostatic urethra
• Distal (external) end of prostate is under voluntary and involuntary control.
• Men do not have compressor urethrae

Prostatectomy

• Degree of prostate cancer dictates degree of resection of surrounding tissues, blood vessels and nerves. Proximal sphincter is usually removed.
• Typically, only PFMs and distal sphincter remain to maintain continence post-prostatectomy.
• Post-prostatectomy incontinence:
  • 50% bladder spasm with UI, frequency, nocturia
  • 35% sphincter damage with SU
  • 10% both with mixed incontinence

PT Intervention Post Prostatectomy

• Kegel program
• Biofeedback
• Urge suppression techniques
• Bladder retraining – timed voiding
• Dietary irritant education – increase H2O
• Avoid constipation
• Minimize soft/connective tissue restrictions
• Core strengthening
• Incontinence product education - pad inside of diaper
PFM Strengthening aka Kegels

Effective PFM strengthening program

• Active PFM without accessory muscles
• Verbal cueing
• Tactile cueing
• Daily HEP to build strength with minimal fatigue
• Supine → sitting → standing → functional exercises
• Muscle function is position specific
• Train fast and slow twitch muscle fibers

Most people are unsure if they are doing a proper Kegel

Common Mistakes

• Butt squeeze
• Thigh squeeze
• Breath holding
• Doing a few every once in a while
• Do only laying down
• Kegel while voiding
• Buy gadgets to do the work

Thoughts Become Things...
Choose The Good Ones.
PF Dysfunction - Hypertonus

- Increased PF tension/spasm → microscopic/clinch pain, urogenital and/or colorectal dysfunction
- Prolonged pressure on nerves and blood vessels → pain
- Can trigger pelvic pain, urinary frequency/urgency, constipation and dyspareunia
- Treatment goal: normalization to decrease pain and improve function

Chronic pelvic pain:
- Pudendal neuralgia/PGAD
- Vulvodynia/interstitial cystitis
- Interstitial cystitis
- PF tension myalgia
- Levator ani syndrome
- Piriformis syndrome
- Vaginitis/Acute
- Coccygodynia
- Intestinal spastic
- Post-surgical pain
- Pelvic fractures

Pelvic Floor Symptoms

Trigger points

Shortened Weak Pelvic Floor Muscles

Frequency, Urgency, Pain

Increased need to suppress Urgency/Frequency

Slow relaxation, Muscles Points, Voiding

How Patients Describe Pelvic Pain

- Sharp
- Throbbing
- Tender
- Aching
- Dull
- Shooting
- Raw
- Ripping

- Prickly
- Burning
- Cremping
- Gnawing
- Pinching
- Stretching
- Stabbing
- Shards of glass
Chronic Pelvic Pain Syndrome

Prolonged, constant, strong pain is physically and mentally exhausting → emotional and behavior changes

- Physical symptoms
  - Pain > 6 months
  - Illness treatment ineffective
  - Pain is stronger than what would be expected
  - Change in sleep patterns
  - Constipation
  - Decreased appetite
  - 'Slow motion' body movements
  - Decreased physical activity

- Emotional symptoms: depression and anxiety

- Behavior changes: stay in bed, miss work, no longer enjoying sexual activities

RPS November 2014 www.pchp.org

Chronic Pelvic Pain

4 Main Characteristics:

- Problem at site of origin: injury where pain first started, i.e., Ovarian cysts, UTI, scar tissue

- Referred Pain: 2 nerve types to spinal cord
  - Visceral: organs
  - Somatic: skin, muscles
  - CPP: PFM/abdominal muscles/skin ↔ bladder

- Trigger Points: abdominal muscle wall tenderness

- Brain: influences emotions and behavior. Depression the brain allows more pain ↔ spinal cord resulting in more pain.

RPS November 2014 www.pchp.org

Chronic Pelvic Pain: Male

Often diagnosed as "Prostatitis"

- Pain
  - Low back
  - Groin
  - Tailbone
  - Perineal
  - Periurethral
  - Pubic
  - Rectal - sitting on a golf ball
  - During/after ejaculation

- Urinary symptoms
  - Frequency
  - Urgency
  - Nocturia
  - Dysuria
  - Decreased stream
  - Hesitancy
  - Incomplete emptying

- Reduced libido
- Difficulty sitting

- Anxiety
- Depression
Pelvic Floor Disconnect

- Chronic pelvic pain
- Neurological inhibition: no conscious connection with PFM
- Unable to contract or relax PFM efficiently
- Hypertonus or PFM spasm is weak musculature
- A "tight" muscle is not a strong muscle
- Muscle has to be the right length to be the right strength
- Too long = weak muscle contraction
- Too short = weak muscle contraction

Other Reasons for Pelvic Pain

- Faulty posture
- Improper body mechanics
- Strenuous activities of daily living
- Sedentary lifestyle
- Obesity
- Poor core strength
- Decreased muscle flexibility
- Limited joint range of motion
- Asymmetries in body alignment
- Degenerative changes in the musculoskeletal system commonly found in spine, hips...
PT Intervention for Hypertonus

- Mobilization for pain relief
- Heat, cold, ultrasound, phonophoresis, electrical stimulation (TENS, EMS)
- Biofeedback (EMG) to decrease muscle hypertonicity
- Serial vaginal dilators
- Posture/breathing mechanics
- Core strengthening
- Flexibility normalized
- Stretching, balance, management
- Pilates, yoga, myofascial release
- HEA
- Yoga, Rolfing, massage, guided imagery, pain sexual therapy, biofeedback

Manual techniques to mobilize the musculoskeletal system
- Soft tissue mobilization
- Connective tissue mobilization
- Scar tissue mobilization
- Skin rolling
- Trigger point release
- Myofascial release
- Visceral manipulation
- Cupping, massage
- Skeletal muscle stretching

Serial Vaginal Dilators

Vaginal dilators
- restore vaginal capacity
- expand the vagina in width and depth
- provide elasticity to the tissues
- allow for comfortable sexual activity.

Smooth plastic, rubber, or glass cylinder-shaped objects that come in a variety of graduated sizes and weights.

- Dyspareunia
- Hypertonic PFM
- Vaginismus
- Vestibulodynia
- Vaginal atrophy
- Vulvar dermatoses
- Vaginal agenesis
- Post-radiation adhesions
- Psychogenic dyspareunia

Dilator Therapy

Syracuse brand

Lelo brand
Connective Tissue Restrictions

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Impairments</th>
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<tbody>
<tr>
<td>Genital hypersensitivity</td>
<td>Neural inflammation</td>
</tr>
<tr>
<td>Clothing intolerance</td>
<td>Adverse neural tension</td>
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<tr>
<td>Decreased sitting tolerance</td>
<td>Suboptimal muscle function</td>
</tr>
<tr>
<td>Itching</td>
<td>Pelvic floor dysfunction</td>
</tr>
<tr>
<td>Pain</td>
<td>Trigger points</td>
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<tr>
<td>Poor tissue integrity</td>
<td></td>
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<tr>
<td>Color changes</td>
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Connective Tissue Evaluation for Pudendal Neuralgia

- Vulvar Tissue
- Gluteal Crease

Scar Tissue Mobilization

- Abdominoplasty Scar
- C Section Scar
Connective Tissue Mobilization

Skin Rolling Friction  Cross-Fiber Friction

- Connective Tissue Mobilization
  - Cross-fiber friction and deep transverse friction
  - Apply directly to the restricted tissue
  - Facilitates healthy scar formation
  - Mechanical action across tissues causes broadening and separation of fibers
  - Encourages parallel fiber arrangement and fewer cross-connections that limit movement
  - Prevents normal tissues from adhering to the scarred area "adhesions"
  - Mechanisms: chronic pain and inflammation

Cupping Massage

- Releases soft tissue, scars and restricted fascia
- Vacuum produces separation of tissue layers
- Enables water absorption and blood flow to restricted tissues
- Reduces congestion

ACE Massage Cupping
massagecupping.com
Referred Pain from Trigger Points

Sphincter ani, levator ani, and coccygeus muscle TrPs

- Refer poorly localized pain
- Coccyx, anal, and distal sacral pain
- "Coccygodynia" although the coccyx is usually normal and non-tender
- Also called "Levator ani syndrome" since the levator ani is the muscle TrP causing referred pain to the coccyx


http://www.triggerpoints.net
Referred Pain from Trigger Point

Obturator Internus TrPs

• Vaginal pain
• Anococcygeal region
• Upper portion of posterior thigh
• "Obturator Internus syndrome" causes rectal pain and a feeling of fullness in the rectum

Truitt JD, Simon DG 1983 Myofascial pain and dysfunction: the trigger point manual, vol 2, Williams & Wilkins, Baltimore, p 311

Trigger Point Release

Trigger Point Release
Release of muscle tension by inactivating the trigger points that are causing the taut bands which are responsible for the increased tension

Trigger Point Pressure Release
Application of slowly increasing, non-painful pressure over a trigger point until a barrier of tissue resistance is encountered.

Contact is then maintained until the tissue barrier releases, and pressure is increased to reach a new barrier to eliminate the trigger point tension and tenderness.

Truitt JD, Simon DG 1983 Myofascial pain and dysfunction: the trigger point manual, vol 1, Williams & Wilkins, Baltimore, p 8

Myofascial Release

• "Myofascial restrictions that can produce tensile pressures of approximately 2,000 pounds per square inch on pain sensitive structures that do not show up in many of the standard tests."

• "Low load (gentle pressure) applied slowly will allow a viscoelastic medium (fascia) to elongate."

• "Myofascial Release can restore the necessary slack to the system to take the pressure off of the pudendal nerve. This helps to eliminate pain and improve the ability to sit, engage in intercourse, and maintain continence."

John E Sarns, PT www.myofascialrelease.com
Myofascial Release
Abdominal MFR
Pelvic Floor MFR

Visceral Manipulation

- "Gentle specifically placed manual forces that encourage normal mobility, tone and inherent tissue motion of the viscera, their connective tissue and other areas of the body where physiologic motion has been impaired."
- Inflamed tissues "dry out", become inelastic and lose their normal motion
- Restore physiologic motion to improve organ function

Visceral Manipulation Anterior Perineum

- Anterior perineum interacts closely with the bladder
- Defibrose the perineal body by stretching the superficial perineal, urogenital diaphragm, bulbocavernosus, ischiocavernosus, and superficial transverse perineal muscles.
- Good episiotomy treatment
- Directly affects the pudendal nerves

Pelvic Floor PT Day 1

- Subjective evaluation
- Patient education
  - Intake/output/pain leg
  - PPM anatomy, function, dysfunction
  - Environmental irritants
  - Proper sitting posture
  - Toiletting posture: avoid straining!
  - GI strategies for BM qd-qod
  - Self massage
  - Integrative medicine and other practitioners
- PFM EMG baseline
- Internal PFM assessment possible
  - Initiate PF strengthening if no pain/neck tension elicited

Good Toiletting Posture!
Pelvic Floor Day 2

- Hypotonic PF: SUI, UUI, MUI, FI, prolapse without pain or soft/connective tissue restrictions
- PFM not effectively closing urethra
- PF strengthening with Kegels-excellent outcomes!
- HEP Kegels + core strength; progressive positioning
- Biofeedback
- Estim if PF strength <3/5 mm
- If no pain, but have restrictions, before Kegels:
  - Biofeedback to downtrain PFM to normal resting tone
  - Manual PFM stretching
  - Breathing
  - Awareness of voluntary PFM contracting

Pelvic Floor Day 2

- Review completed intake/output/pain log
- Orthopedic evaluation
- External PF myofascial mobility
- Soft/connective tissue mobility trunk to knees
- Internal PF manual assessment
- Assessing for restrictions, tenderness, pain
- Plan of care and goals discussed with patient
- Discharge planning

Thank you!!