

Post-Operative Rehabilitation Protocol Following Pudendal Nerve Decompression

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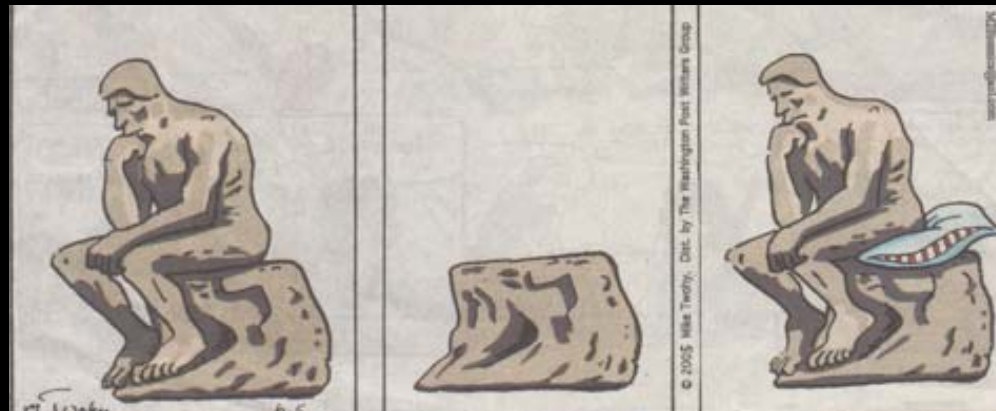
**Pelvic Health and Rehabilitation Center
San Francisco, California**

2001 - 2007

- Evaluated over 500 patients with PN
- Evaluated and treated 51 post-operative patients:
 - 36 patients: Transgluteal Decompression and Transposition
 - 15 patients: Trans-Ischial-Rectal Decompression

Persistent post-operative pain and dysfunction

- 51/51 patients: unable to sit without pain
- 51/51 patients: urinary and/or bowel and/or sexual dysfunction



Physical Therapy Evaluation

- Connective Tissue Restrictions
- Myofascial Trigger Points
- Adverse Neural Tension
- Pelvic Floor Dysfunction
- Structure and Biomechanics

Connective Tissue Restrictions

Panniculosis: increased texture thickness with acute tenderness upon pinch-rolling in the subcutaneous tissue



Mechanisms for formation of Subcutaneous Panniculosis (SQP)

- Result of visceral referred pain
- In dermatomes associated with the nerve roots of an inflamed peripheral nerve
- Superficial to muscles with Myofascial Trigger Points (MTrPs)
- Superficial to areas of joint dysfunction

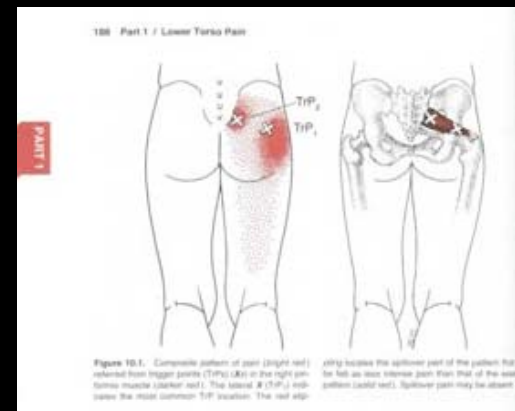
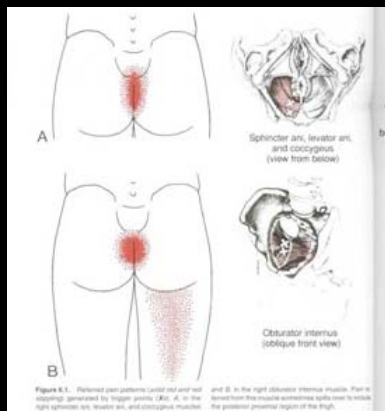
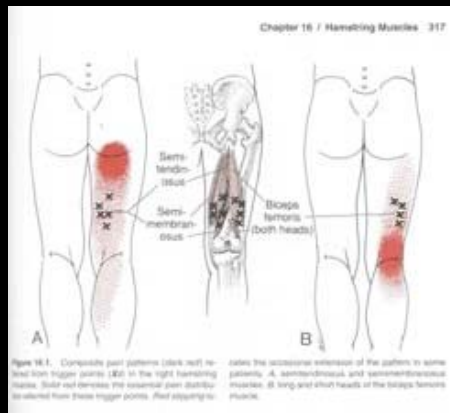
Sites of SQP in patients with persistent post-operative pain



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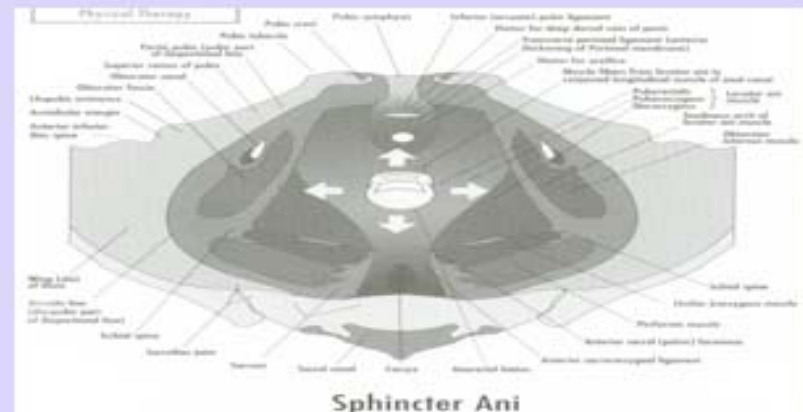
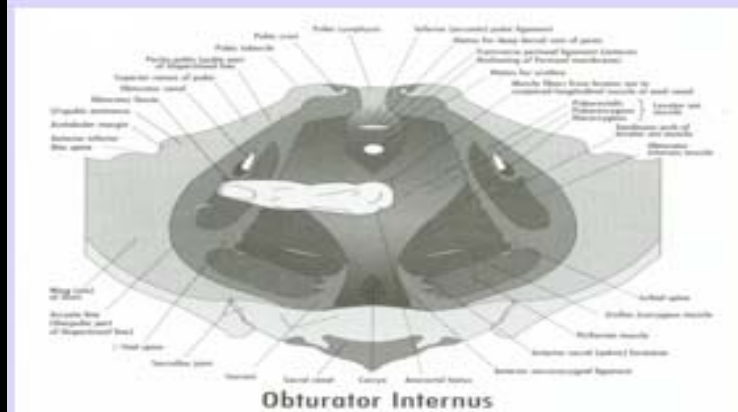
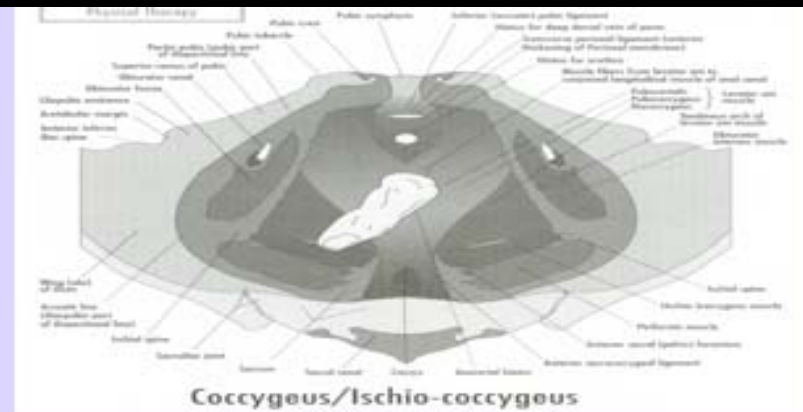
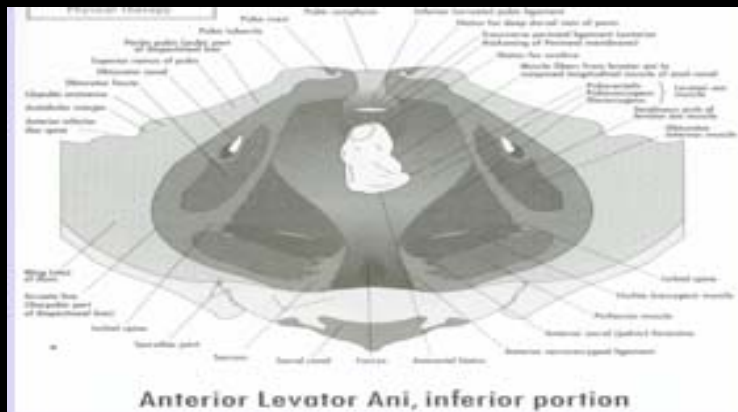
Myofascial Trigger Points (MTrPS)



Adverse Neural Tension



Pelvic Floor Dysfunction: Source or Symptom of Pudendal Neuralgia?



David Wise, PhD: Headache in the Pelvis

Structure and Biomechanics

- Sacro-iliac joint dysfunction
- Lumbar spine, hip, lower extremities
- Foot
- Neuromuscular control
- Strength, stability, flexibility

Physical Therapy Treatment Plan

- Mobilize restricted connective tissues
 - Lower extremities, abdomen, gluteal region, low back
 - Distribution of the Pudendal Nerve: medial to the ischial tuberosities and inferior pubic ramus, labia, scrotum, suprapubic region, posterior thigh, lateral to rectum
- Connective Tissue Manipulation, Dry needling

Physical Therapy Treatment Plan

- Eradicate myofascial trigger points
 - Obturator internus, piriformis, adductors, multifidi, gluteal group, quadratus lumborum, rectus abdominus, obliques, bulbospongiosis and ischiocavernosus, levator ani
- Manual therapy, dry needling, trigger point injections

Physical Therapy Treatment Plan

- Reduce adverse neural tension
 - Dorsal pudendal nerve branches, perineal branch, inferior rectal branch, Alcock's Canal, ischial spine
- Connective tissue manipulation, nerve glides, PNB if patient cannot tolerate physical therapy

Physical Therapy Treatment Plan

- Eliminate Pelvic Floor Dysfunction
 - Lengthen short pelvic floor, eliminate MTrPs, normalize motor control (concentric contraction, , eccentric lengthening, volitional 'drop'), strengthen if weak*
- Vaginal/rectal MFR, PNF, TPIs, PNB if patient cannot tolerate RX, pelvic floor 'aerobics'

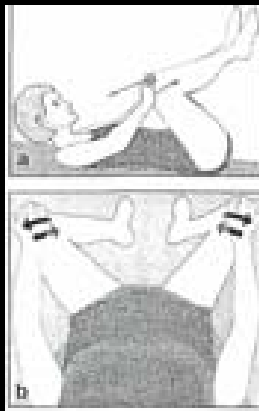
Physical Therapy Treatment Plan

- Normalize structure and mechanics
 - SIJD (hypermobility), pelvic obliquity, LLD, foot alterations, core strength and neuromuscular control, LB and hip mechanics
- Manual therapy techniques, prolotherapy, stabilization belts and exercises, orthotic devices

Home Exercise Program and Lifestyle Modifications

- ***Unique per patient***
- Generally: ice massage and contrast baths to PN distribution, spouse-trained in CTM and MFR, paradoxical relaxation
- Cushion use, sit until pain increases
- Cardiovascular exercise daily
- Stretching and strengthening ONLY after MTrPs eradicated

Home Exercise Program and Lifestyle Modifications



- *Unique per patient!*
- PNF D2 for pelvic floor relaxation
- Nerve glides, self-mobilization

Physical Therapy Treatment Plan: Frequency and Duration

- 1 - 4 hours/week
- 12 weeks - 24 months
- Short-term hyperprotection vs long-term quality of life
- Multi-disciplinary management

CC: 'Pain with Sitting'



- **CONNECTIVE TISSUE MANIPULATION**
 - Bony pelvis, posterior thigh, gluts
- **Neural mobs**
 - PFeCuN, PN
- **MTrPs**
 - OI, HS
- **Lengthen PF**
- **HEP: ice massage, cardiovascular exercise, lidoderm patches**

CC: 'Foreign Object in Rectum'



Fig. 4a, b. Showing 'bent position' the pelvic floor musculature is actively inhibited by asymmetric contraction of the hip flexors, adductors and external rotators. a lateral view, b view from above

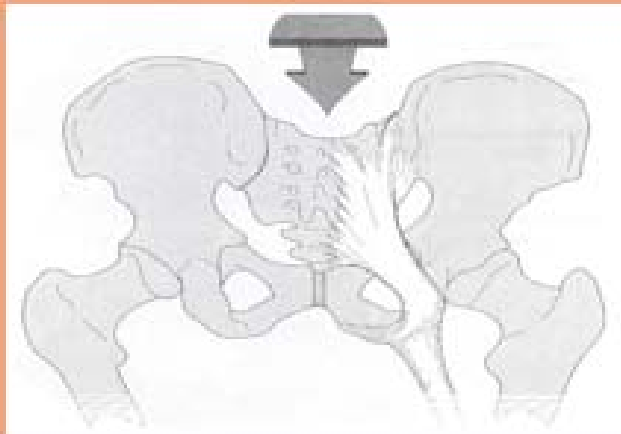
- Lengthen Short Pelvic Floor
- MTrPs: iliococcygeus
- Emphasize PNF D2
- HEP: drops, squatting drops, paradoxical relaxation, fluid loading

CC: Genital 'Hyper-arousal'



- **Connective Tissue Manipulation: Emph bony pelvis**
- **Neural Mobs: dorsal and main branches of PN**
- **Lengthen short PF**
- **Ice massage or contrast baths to PN distribution**
- **Paradoxical relaxation**

CC: 'line of pain through pelvis'



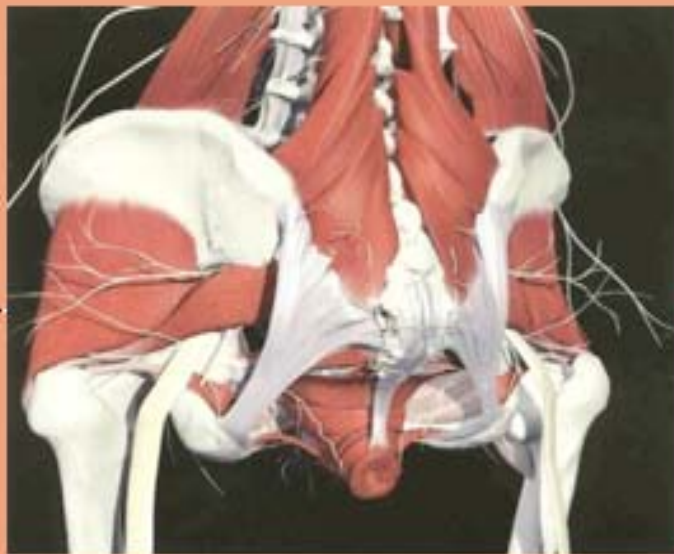
- Connective Tissue manipulation: emph all tissue from PS to coccyx
- PN mobs: all branches
- Correct SIJD
- Hip ER MTrPs

'Post-Ejaculatory/Orgasm pain'



- Neural mobs: dorsal PN branches
- Lengthen short PF
- Eliminate MTrPs: BS/IC
- Improve PF motor control
- HEP: emph drops and ice massage to PN distribution or vagina/rectal ice (in glove, 1/3 ETOH and 2/3 H₂O)

CC: PABM, constipation, difficult evacuation



- EAS MTrP
- INF rectal N
- Short PF/PR
- GI regulation
- Motor control- sheet assist
- Knees higher than hips

CC: male perineum/penile pain



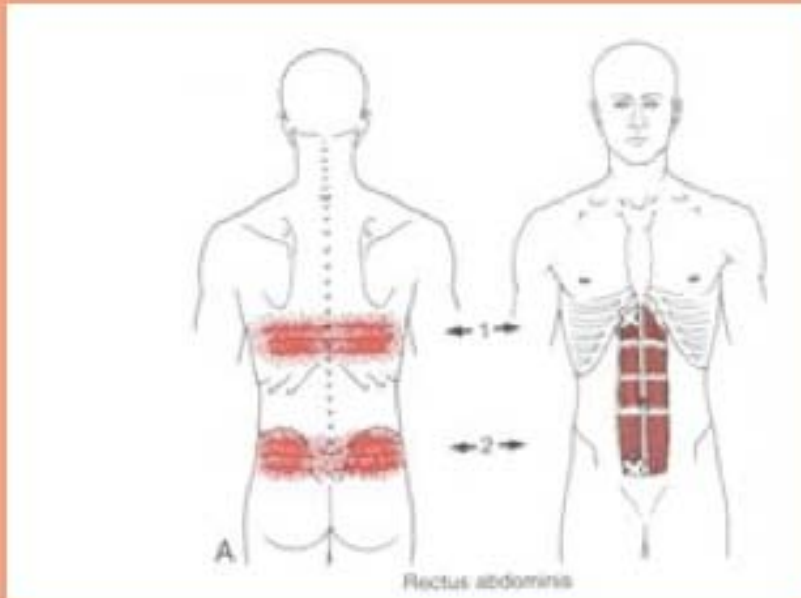
- Connective tissue mobs: perineum, scrotum, everything up to base of penis (suprapubic-ischial tub)
- MTrPs: perineal body, IC/BS
- Internal CT mob lateral to prostate/MFR at PS attachment
- Dry needling/lidocaine TPI

CC: Tailbone pain



- Neural mobs: 2-finger peri-rectal, bony pelvis
- Coccygeus MFR
- Coccyx mobs
- cushions

CC: Dysuria, Urinary frequency/urgency



- Internal CT/MM hypertonicity at PS
- CT at bony pelvis (emph suprapubic)
- MTrPs: RA, Adduct
- Motor control
- Behavior modification
- PNF D2
- Fluid loading

Questions?

Thank-you!