



CLINICAL PEARLS:

Treatment of Hypertonic Pelvic Floor Muscle Dysfunction


Susan Kellogg Spadt, PhD, CRNP,IF, FCST
Director: Female Sexual Medicine
Academic Urology Center for Pelvic Medicine

Professor: OBGYN
Drexel University College of Medicine
Philadelphia, PA

Professor: Human Sexuality
Widener University: Chester, PA

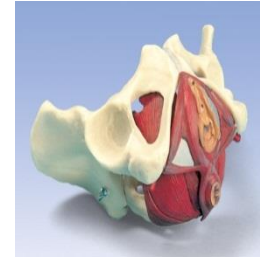
Clinical Associate Faculty:
Thomas Jefferson University
Rutgers/Robert Wood Johnson School of Medicine
University of Pennsylvania

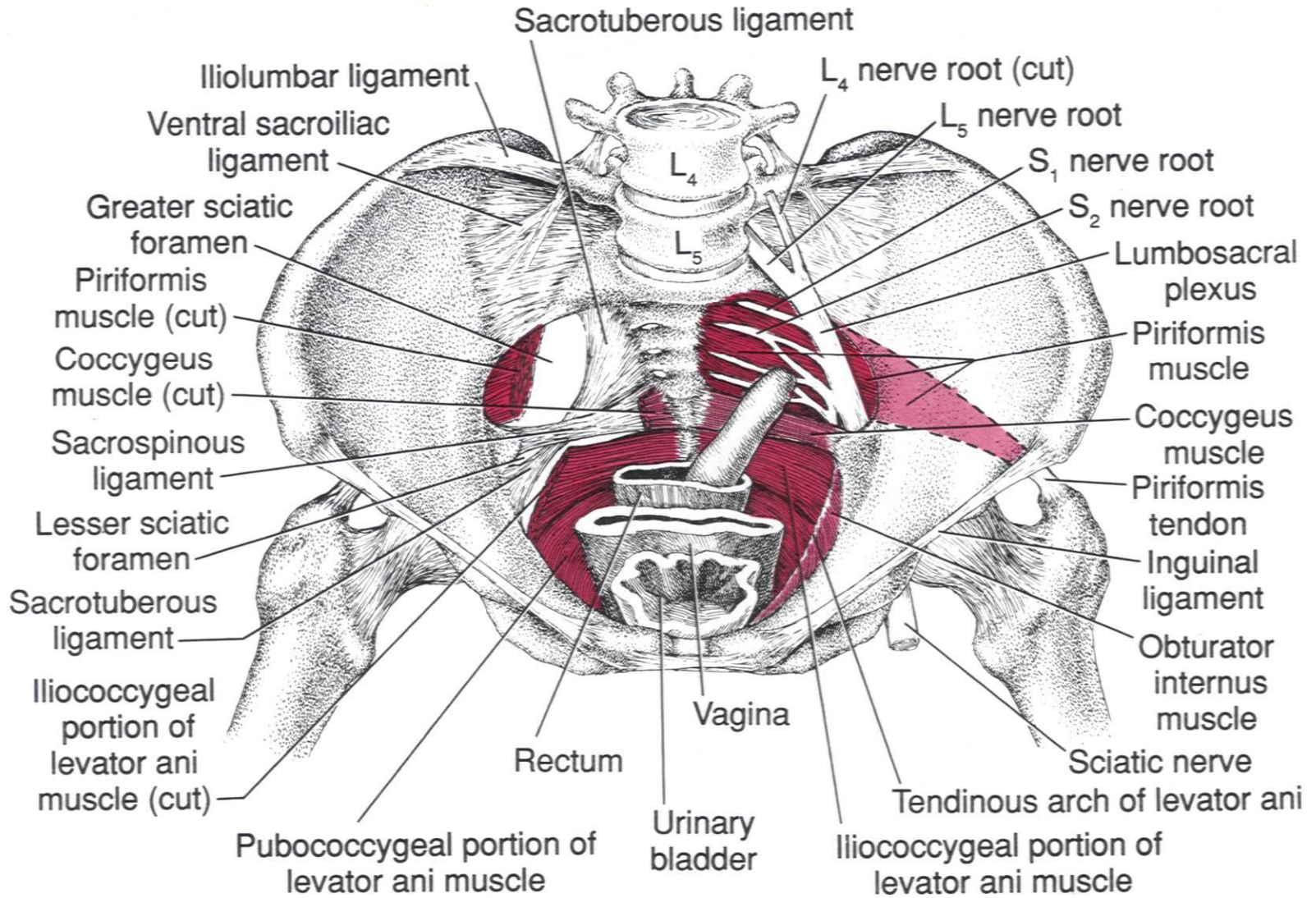
doctorkellogg@yahoo.com

- 
-
- Dr. Kellogg is a consultant/speaker with Shionogi, Sprout, Neogyn, Novonordisk and Sempra

Behavioral approaches to the medical examination: Clinical pearls

- *Goal assessment
- *Education -models of A&P vagina, vulva, PFM
- *De-emphasize psychopathology
- *Review of visit parameters
- *Graduated exam schedule with sub-goals
- *Reassurance RE: “who is in control”
 - participation in mirror exam
 - pt. touches w QTIP & inserts speculum
 - counting before digital exam “1,2,3...”
 - performing bulge technique





Quantifying PFM Hypertonus

- Muscle hypertonus:

- 0 No pressure/ pain with exam.
- 1 Comfortable pressure with exam.
2. Uncomfortable pressure with exam.
3. Moderate pain with exam, traction.
- 4 Severe pain with exam, unable to perform PFM ctx.



Whitmore KE, Kellogg Spadt S, Fletcher E,. Issues in Incontinence. 1998;1:2-10.





When hypertonus is identified....

Triage to manual P.T.

Add referrals to massage, psychotherapy, acupuncture, urology, gastroenterology as desired/required



Medical Adjuvant Treatment: HTPFD

Assess for “HTPFD-related conditions”

- *constipation
- *anal fissures
- *hesitancy
- *urgency
- *post void residual

Medical Adjuvant Treatment: HTPFD

Myorelaxant drugs

(relax skeletal muscle/ inhibit spasm)

-matakolone 800-1600mg

-cyclobenzaprine 5-10 mg

-tizanadine 2-8 mg

Medical Adjuvant Treatment: HTPFD

Anxiolytic + myorelaxant

(binds to benzodiazepine sites on GABA_A receptor)

-diazepam 2mg QD-TID

-lorazepam 1mg QD - PRN

-alprazolam .25-.50mg prn or
before activity

Medical Treatment: HTPFD

Suppository Rx-

-PV or PR suppositories:

*diazepam 5-10mg (QD-BID)

*baclofen 10 mg (QD)

*belladonna/opioid 12.5/30 (PRN)

Suppositories used to facilitate local muscle relaxation and inhibit spasm most often in conjunction with PT and dilators, daily, then 3x per week, then PRN

Medical Adjuvant Treatment: HTPFD

Tricyclic antidepressants (increase serotonin and norepinephrine + anticholinergic activity)

- amitriptyline
- nortriptyline

SNRIs (increase serotonin/norepinephrine/reduce ms. pain)

- duloxetine
- milnacipran

Gamma aminobutyric acid (GABA) Analogues

(halts formation of new synapses)

- gabapentin
- pregabalin

Multimodal RX with diazepam suppositories

- Rogalski et al 2010
- N=26
- 21 premenopausal, 5 menopausal; 8 multiparous; 18 nulliparous.
- 100% HTPFD; 85% dyspareunia/PVD, 81% CPP, 61% IC
- Interventions: PT, TrP injx and 10 mg diazepam vaginal suppositories, inserted nightly for 30 days.



Adjuvant treatment: contd

- 25 /26=“ improved sexual comfort”
- Abstinence reversed in 6/7
- Perineometry baseline muscle pressures decreased significantly, both at rest and post-voluntary contraction return to rest.
- Visual analog pain ratings decreased significantly with palpation of PFM muscles evaluated pre and post-therapy.

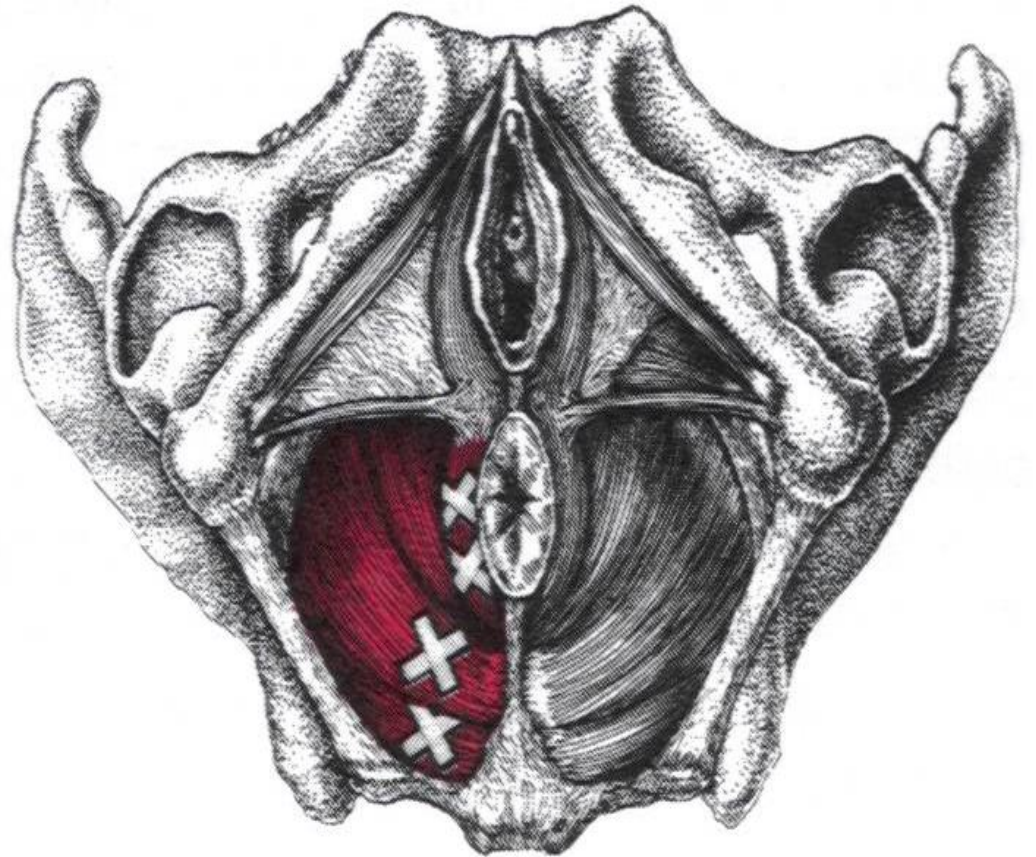
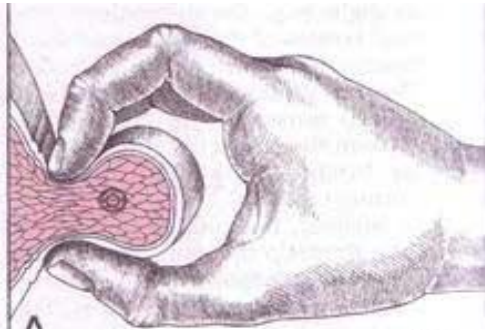
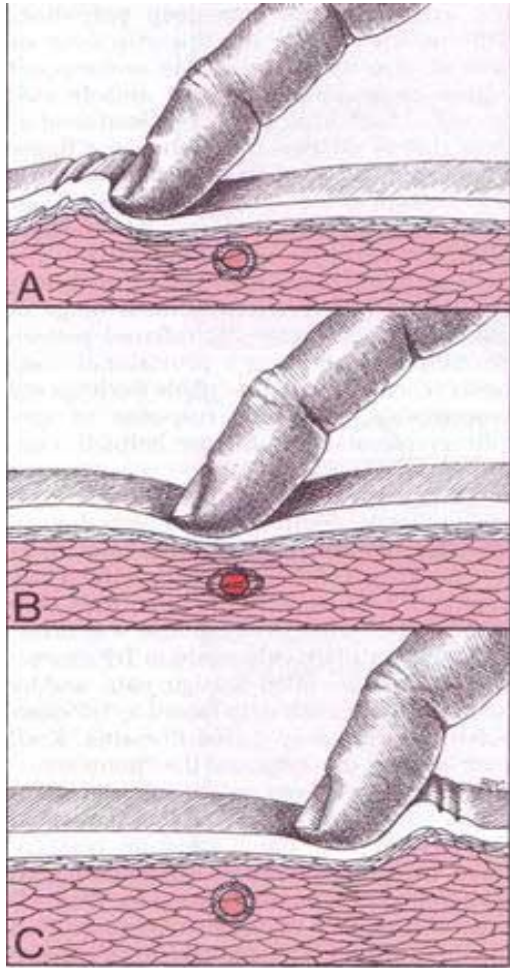
Medical treatment: HTPFD

- Carrico et al 2010
- F/U: Safety and efficacy of diazepam suppositories
- 11 pts (IC-PFD) V5-10 supp. TID
- After 30d: 64% “moderate/marked improvement” and no s/e
- Serum levels WNL (mean 0.29 (0.2-1.0 mcg/ml)
- 36% mild drowsiness; no respiratory suppression; no pain worsened

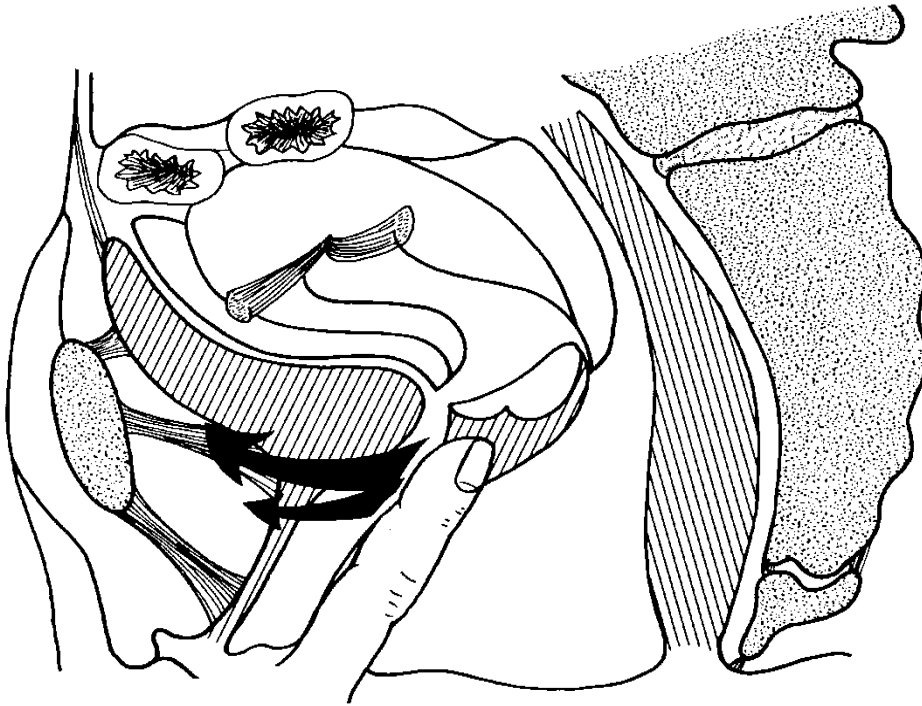
HTPFD and myofascial pain

- **HTPFD associated with:**
- **“Myofascial pain”** a condition in which there may be several trigger points limited to a particular muscle area of the body.
- The pain and spasm associated with trigger points can lead to a vicious pain cycle in which pain causes more spasm and spasm causes more pain.

Triggerpoints



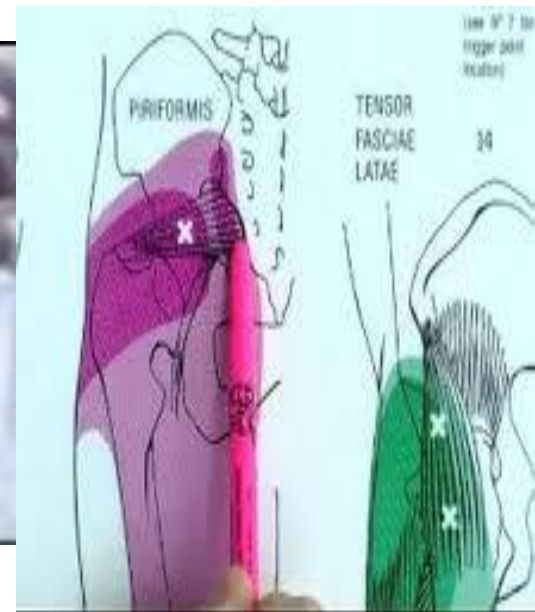
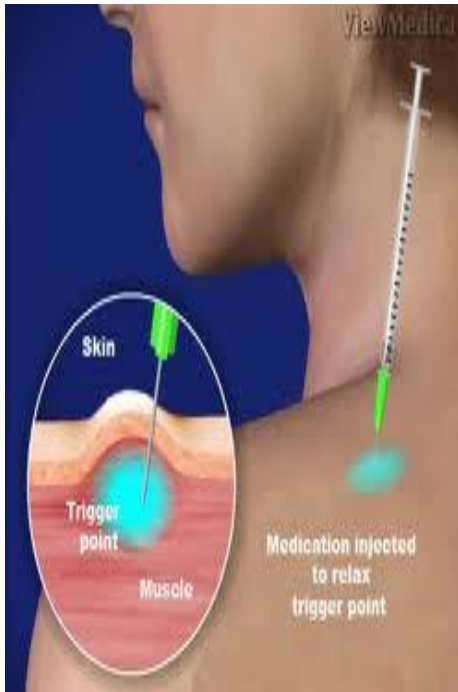
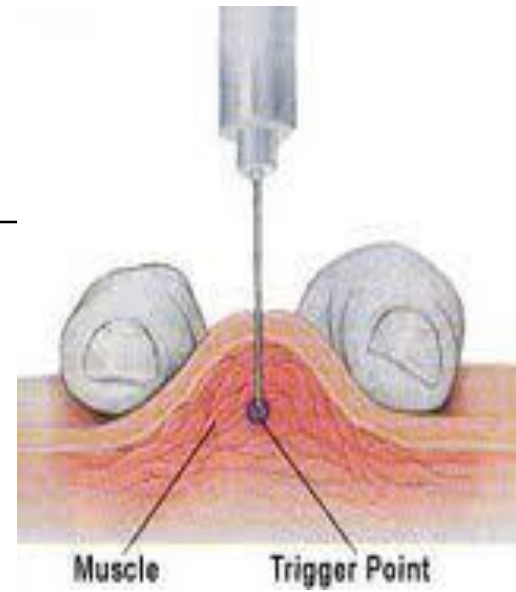
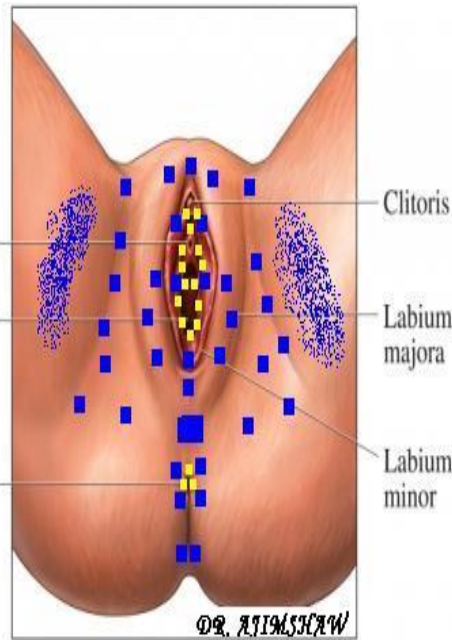
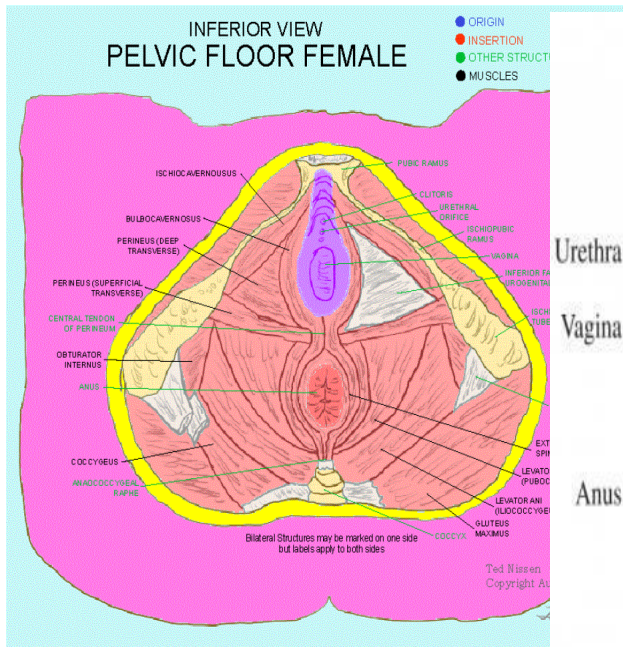
Manual therapy alone is often effective for TrPs and myofascial pain



- Breaks pain-spasm-pain cycle
- Restores normal length tension relationship
- Increases blood flow
- Restores normal muscle / sexual function

Triggerpoint needling

- **TrP needling:** a method of directly inactivating TrP's -particularly those refractory to myotherapy.
- TrP is penetrated with fine needle, eliminating TrP as a painful focus.
- Needle inserted w/o medication (or lidocaine and antiinflammatory medications can be added.)



Medical Treatment: TrP injx

PFM TrP Injx

Objective: Inactivate a taut muscle band unresponsive to manual PT

- Typically require a series (1-8). Each session results in longer sustained relief.
- ID TrP: digital palpation (elicits local twitch and pain)
- 21-25gauge needle/ 1-3ml local anesthetic
- Some clinicians add cortisone or traumeel to lidocaine

Medical Treatment: HTPFD

PFM TrP Injx

-Kang et al. N=104 Levator spasm

Lidocaine .5cc /triamcinolone .5cc

Painfree 30.1%/moderate to mild relief 64.7%

-Langford et al N=18 Levator spasm

Bupivacaine and lidocaine 5 ml/TrP

Painfree 33% / 39% >50% improvement in s/s

Medical Treatment: HTPFD

PFM TrP Injx

-Doumouchtsis et al 2010

N=53 perineal pain/ dyspareunia

10ml bupivacaine/100mg hydrocortisone/1500 u
hyaluronidase 2 injections 1 month apart

*27 /53 painfree

*16/53 mild pain but able to resume intercourse within
8 weeks

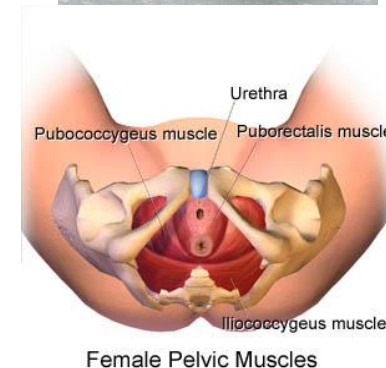
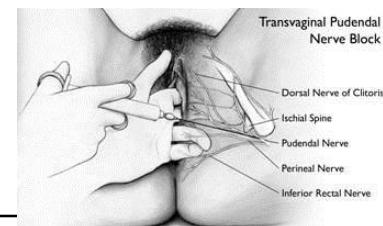
Medical Treatment: HTPFD

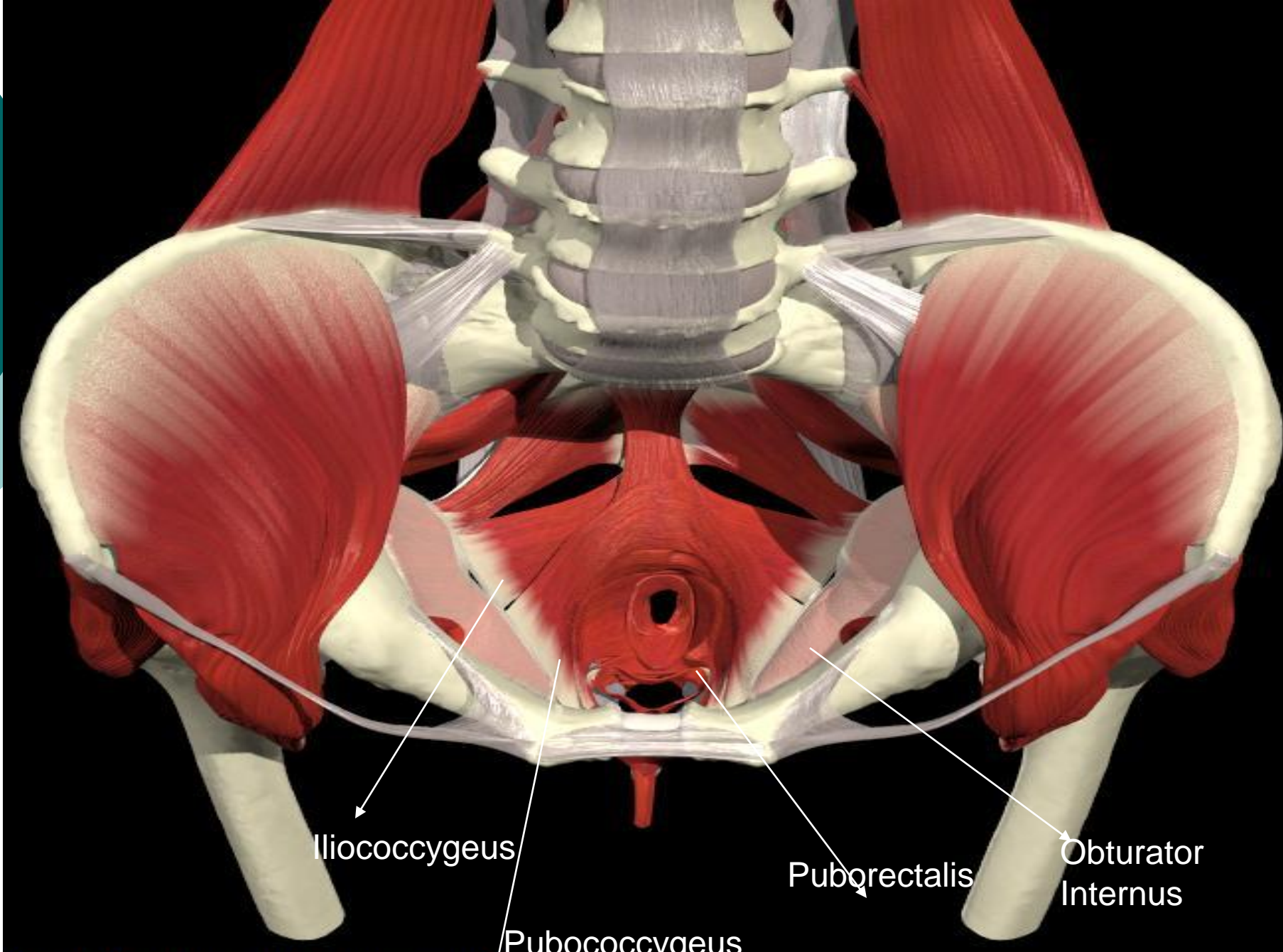
OnabotulinumtoxinA injections

-Objective:

- block of release acetylcholine at the NMJ
- direct anti-nocioceptive activity
- blocks release of local neurotransmitters involved in pain signaling

*Results in secondary decrease in central sensitization at the dorsal horn
(by decreasing SubsP and glutamate)





Iliococcygeus

Pubococcygeus

Puborectalis

Obturator Internus

Medical Treatment: HTPFD

Ghazizadeh 2004: **Botulinum toxin** injections for Vaginismus

- 150-400u in 24 women moderate- severe vaginismus (p PT)
- Injx to puborectalis +/- pubococcygeus
- 18/24 able to have intercourse painfree
- 4/24 mild pain
- 1/24 no change

Medical Treatment: HTPFD

Jarvis 2004 :**Botulinum toxin** injections for CPP

N=60 (RCT) drug vs saline injx

- 80u into puborectalis/pubococcygeus

NO previous or concurrent PT

At 6 mos = all sexual pain scores reduced

Intravag pressures significant difference between groups

Medical Treatment: HTPFD

Abbott 2006 ;2010

Botulinum toxin injections for CPP/PFM spasm

N=30 drug vs saline injx

-20-80u into puborectalis/pubococcygeus

Change for Rx group significant for dyspareunia,
pelvic pain, intravag pressures scores

2010 Review of the literature: Concludes PFM PT
= first line RX

Botox reserved for persistent cases only

For HTPFD/ Vaginismus: PT and CBT

PO meds, suppositories, TrP injections, Botulinum toxin
as adjuvants =

MORE RANDOMIZED CLINICAL TRIALS NEEDED!

- **THANK**
- **YOU**
- **FOR**
- **YOUR**
- **KIND**
- **ATTENTION!**