Pelvic Health
Beyond Kegels

Hello!
- Abby Inman PT, DPT
  - DPT from UW Milwaukee 2015
  - Caregiver at Aurora Health Care
  - Pelvic Health Clinic since June 2016

Intro
- What do Pelvic PTs do?
- What are Kegels?
- Pelvic Floor Anatomy-Quick Review
- Pelvic Health with clothes on--you can do it!
- Topics
  - Nutrition
  - Pain Science
  - Pelvic and/or Low Back Pain
What do Pelvic PTs do?

Is it Women’s Health?
Pelvic Health?
Health?

Bladder, Bowel, Sexual Dysfunction, Pregnancy, Pelvic Pain

Kegels

Dr. Arnold Kegel

- Invented the Kegel perineometer which measured vaginal air/squeeze pressure
- attributed with inventing pelvic floor muscle exercises or “Kegels” for the diagnosis of “genital relaxation”
- From Lansing Iowa, spent most of his career at USC as an Assistant Professor and researcher in Gynecology.
- Here is the original citation for his foundational work

Kegels = the conscious, active, concentric contraction of the pelvic floor muscles
What about eccentric contraction?

Pelvic Drop or Reverse Kegel

**Self Lab---Let's Try it**

- Squeeze and lift your pelvic floor muscles
  - Classic cues to think about:
    - Stop the flow of urine
    - Hold back gas
    - Imagine you are trying to pick up a blueberry or a pea with your pelvic floor muscles

  - Do it again
    - What are your abdominals muscles doing?
    - How about your glutes?
    - Are you breathing?
Self Lab---Let's Try It

- Relax your muscles back to resting baseline
- Now try the pelvic drop
  - If you can sit/straddle something like a bunched up towel, a sweatshirt, pool noodle this can provide sensory feedback of this range of motion
  - Classic cues:
    ■ Melt pelvic floor muscles into chair
    ■ Widen your sit bones
    ■ Push your pubic bone and coccyx away from each other
    ■ Let your muscles drop to your feet
    - Sometimes easier to do in supine

Kathe Wallace has a great handout on her website about this!

Palpation

External
- Informed Consent
- Entry Level DPT-no special training
- Clothes on, privacy preferred, offer 3rd person

Internal
- Informed Consent
- Not entry level, unless taken a course as a 3rd year SPT
- Draping, privacy required, offer 3rd person

All you ortho PTs can be my eyes and ears for me! If you're comfortable, try a couple things, if it doesn't work, have a pelvic floor PT to refer to!

External Palpation

What are you looking for?

Complete excursion/AROM of pelvic floor muscles
  
a. Ask patient/client to squeeze, relax, and bulge
Repeat squeeze, ask for a hold, count how many seconds
  
  Breathing mechanics? Accessory muscles? Pain?
Please don’t add Kegels to your patient’s HEPs/treatment without evaluation.

Pelvic PT typical treatment course:
1x/week for 6-8 weeks

HEP:
8-12 Maximal contractions, hold for 6-8 seconds
3-4 quick squeezes afterward
2x/day

Protocol used by Morkved & Bo in multiple studies

Sagittal View
“Epidemiological data combined with evidence supporting the effectiveness of noninvasive interventions related to physical therapy to address these priorities (e.g., health education and exercise) are highly consistent with the promotion of health and wellness and the ICF. Given their commitment to exploiting effective noninvasive interventions, physical therapists are in a preeminent position to focus on prevention of these disabling and lethal conditions in every client or patient, their cure in some cases, as well as their management. Thus, a compelling argument can be made that clinical competencies in 21st century physical therapy need to include assessment of smoking and smoking cessation (or at least its initiation), basic nutritional assessment and counseling, recommendations for physical activity and exercise, stress assessment and basic stress reduction recommendations, and sleep assessment and basic sleep hygiene recommendations. The physical therapist can then make an informed clinical judgment regarding whether a client or patient needs to be referred to another professional related to one or more of these specialty areas. The prominence of physical therapy as an established health care profession and its unique pattern of practice (prolonged visits over prolonged periods of time) attests further to the fact that physical therapists are uniquely qualified to lead in the assault on lifestyle conditions.”

—Elizabeth Dean PhD, PT

Can PTs talk about nutrition?

**APTA/House of Delegates:**

APTA’s position is that it is “the role of the physical therapist to screen for and provide information on diet and nutritional issues to patients, clients, and the community within the scope of physical therapist practice.”

**WI Laws:**

It is legal for all to perform individualized nutrition counseling. Effectively, only RDs are eligible for state recognition. This law is a Licensure Without Exclusive Scope of Practice. This law certifies dietitians only. There is no non-RD pathway to certification. Certification gives you the right to use the title “dietitian,” or use any title or initials that represent or may tend to represent the person as certified or licensed in a nutrition-related field. While certification is not required, you may not claim to provide dietetic services as defined in the law. 448.78
Are we doing this?

What are some ways you might be discussing nutrition related topics in your clinics and practices now?

- Inflammation
- Osteoarthritis
- Obesity
- Autoimmune disease
- Prediabetes and Type 2 Diabetes
- Anyone healing from surgery

Movement -> Physiology -> Nutrition

We pride ourselves on being movement experts.

But what if our patients/client don’t have the building blocks to move?

Movement is dependent on physiology
Physiology is nutrition dependent

Movement is Nutrition Dependent
Starting the Conversation Questionnaire

Where everyone can start

Foods that Hinder:
- Artifical Sweeteners
- Colors/Numbers
- High Fructose Corn Syrup
- Preservatives and Artificial Flavor Enhancers
- Soft Drinks–Diet Soda
- Trans-Fats

Foods that Heal:
- Clean Water & Clean, Whole Foods
- Cultured/Fermented Foods
- Gluten-Wise Approach
- Gut Barrier Protectors–Gelatin and Bone Broth
- Healthy Fats
- Healthy Proteins
- Low Glycemic Index

What do I do? Nutrition in my practice...
- Fluid intake
  - Bladder irritants
  - Constipation
- Bowel irritants
  - IBS
  - Fecal Incontinence
  - Food sensitivities
- Fiber
- Postpartum considerations
- Pelvic Pain
  - Food sensitivities
  - Inflammation
Fluid Intake
Not just water
But how much is enough?
Weight?
Activity Level?

Bladder Irritants
Doesn’t mean you give everything up, just be aware when symptoms of urgency/frequency are present.
Caffeine
Acidic
Artificial Sweeteners
Carbonation
Alcohol

How to have a Good Poop
https://www.mamanatural.com/how-to-poop/
**Constipation Epidemic**

Sit too much
Eat crappy
Don’t drink enough water
Busy lives
Upregulation of sympathetic nervous system
Back pain?

**Fiber**

Recommendations are 25-38 grams daily. (US Dietary Guidelines 2015)

Women on lower end, men on higher end

Average American eats 10-15 grams

**Fiber**

Whole Foods vs. Supplements
GI recommendations
Abdominal/Colon Massage

Case Study
33 year old female patient
POTS, Mast Cell Activation Syndrome, anxiety, migraines, IBS

Referred for abdominal pain and constipation

Case Study
4 sessions
Track fiber, fluid intake
Change toilet position
Begin colon massage daily
Pelvic Floor coordination
Postpartum Considerations
Ligament laxity due to continued hormone levels and breastfeeding
Connective tissue support
Healing and Nourishment
Bone Broth, Collagen,

Pelvic Pain and Nutrition
- Elimination Diets
- Food sensitivities
- Hormone Balance

Ideally, I would love to have a RD in my clinic with me…
- Insurance issues
- Doesn’t exist at this time

Resources
- Jessica Drummond DCN, CNS, PT, NBC-HWC
  - Integrative Women’s Health Institute
- Academic Consortium for Integrative Medicine & Health
- Joe Tatta PT, DPT
- Herman & Wallace has a Nutrition course
Break?

Special Topics: Pain Science

Big Names:
- Adriaan Louw
- Lorimer Moseley
- David Butler

Pelvic Health Specific:
- Sandy Hilton
- Carolyn Vandyken
- and many others

All the rage...

Pain Neuroscience
Mind/Body Approach
Why Pain Hurts
Explain Pain
Opioid Epidemic
I borrowed these next few slides...

With permission :)

Barbara Cortes is a Director at Aurora and is a Certified Pain Specialist

She teaches 3 pain science modules at Aurora

What is it?

**Pain Neuroscience Education**

AKA

- Neurophysiology of Pain Education
- Pain Physiology Education
- Pain Biology Education
- Pain Neurophysiology Education
- Explain Pain

What is Pain?
### Definition of Pain

- Multisystem **OUTPUT** activated by the brain based on perceived threat (Moseley 2003)
- Other systems activated
  - Language (scream or whistle)
  - Endocrine System (↑ adrenaline, ↑ heart-rate)
  - Respiratory System
  - Digestive System
  - Sympathetic / Parasympathetic

### Traditional Treatment

- RICE
  - Exercise – ROM, Strength, Coordination
  - Neuromuscular Re-education – Posture Balance
  - Therapeutic Activity
- Modalities – TENS/ IFC / US/ Cold Heat
- Manual Therapy – Restricted soft tissue and joints
- Neuropysiologic

### Pause...

Part of the problem in a pelvic focused setting, is not a lot of access to traditional modalities…

I feel this fits right into my practice because I was already looking for what else?
What Else Can Be Done …

➢ fMRI - indicated widespread activation during abdominal stabilization
➢ Patient was instructed to work on spinal stabilization program
➢ Stabilization every hour x five minutes x one week
➢ fMRI – upon return to clinic – same brain activation found

Brain Activation Case Study
 Mosely 2005
➢ fMRI – indicated widespread activation during abdominal stabilization
➢ Patient was instructed to work on spinal stabilization program
➢ Stabilization every hour x five minutes x one week
➢ fMRI – upon return to clinic – same brain activation found

Then, did a one-on-one PNE session and re-scanned...

After Pain Neuroscience Education
fMRI Brain Activity Markedly Reduced
↑ SLR and ↑ Forward Bending
Pain Science
What do I do with it?
- Teach and empower patients
- Use language they can understand
- Stories, metaphors, pictures, drawings

Homunculus
Brain’s map of the body

Pelvis located next to the feet

Similar concept of addressing the joint above and below area of concern…
**Homunculus – Use It or Lose It Story**

- With regular use and movement of our body, the maps in our brain stay sharp and crisp, it's easy to move and easy to determine right and left
- Lack of movement from pain, a cast, surgery make the maps blurry – this happens quickly
- The brain becomes concerned activates our alarm system and may send a pain message
- This is normal and does not mean something is wrong

**Let's Practice!**

Explain the homunculus and body map to your neighbor

Switch!

**True or False?**
When part of your body is injured, special pain receptors convey the pain message to your brain.

Pain only occurs when you are injured.

The timing and intensity of pain matches the timing and number of signals in danger messages.

Nerves have to connect a body part to the brain in order for that part to be in pain.

In chronic pain, the central nervous system becomes more sensitive to danger messages from tissues.

The body tells the brain when it is in pain.

The brain can send messages down your spinal cord that can increase the danger messages going up the spinal cord.

Nerves can adapt by increasing their resting level of excitement.

Chronic Pain means an injury hasn’t healed properly.

Receptors on Nerves work by opening ion channels (sensors) in the wall of the nerve.

The brain decides when you will experience pain.

Worse injuries always result in worse pain.

When you are injured the environment that you are in will not have an effect on the amount of pain that you experience.

It is possible to have pain and not know about it.

Nerves can adapt by making more ion channels (sensors)
- Second order messenger nerves post-synaptic membrane potential (excitement) is dependent on descending modulation
- Nerves adapt by making ion channels (sensors) stay open longer
- When you are injured, chemicals in your tissue can make nerves more sensitive
- In chronic pain, chemicals associated with stress can directly activate danger messenger nerves

How did you do?

Answers
1. False
2. False
3. False
4. False
5. True
6. False
7. True
8. True
9. False
10. True
11. True
12. False
13. False
14. False
15. True
16. True
17. True
18. True
19. True
How to apply in the clinic

- Patient education
  - With warm up or during manual therapy treatment
- Graded Motor Imagery
- Mindfulness
- Breathing exercises
- Daily movement
  - Walking!
  - Cancer rehab data
    - 1 minute walk...

Case Study

58 year old, G5P3, referred for pelvic pain

- Medical Intervention: received bladder instillations, using bioidentical hormone cream, and using vaginal valium suppositories.

Symptoms:
- heavy pressure suprapubically, “bladder pressure”
- deep tailbone and inner thigh pain with increased activity
- increased pain with stress
- urinary frequency to relieve the pressure

Case Study

Patient with difficulty distinguishing bladder filling and urgency from pelvic floor tension

Smudgy homunculus

Started PNE during initial evaluation

Started dilator program, laterality training, graphesthesia, 2-point discrimination to improve sharpness of body map and pelvic sensations
“The art of Pain Neuroscience is to teach people that pain comes from the Brain without making them feel like it is all in their head!!!!”

- Adrian Louw

Break?

Pelvic and/or Low Back Pain
Other Considerations

Previous Abdominal or Pelvic surgeries

-- Address connective tissue dysfunction
-- Pelvic floor attachments to the sacrum
-- Obturator internus

What else could be contributing to your low back pain patients?

Constipation? From opioids?
Gynecological/Urological Cancer Radiation Treatment

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Constipation, Low Back Pain, Opioids

Spending time on toilet, sitting, bending, straining
- pressure on discs?

Aspirin/NSAIDs/Opioids: Codeine, Morphine sulphate, Oxycodone, Methadone, Tramadol, Fentanyl.
- slows down GI motility

Bend and strain more
Dangerous Cycle!

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Previous Surgical History

Hysterectomy
Prolapse Repair as fixation is to sacrospinous ligaments
Cesarean Scar Management
Abdominal scar tissue
Men (and women) Hernia Repairs
Cancers
Men and Women
--- Gynecological: cervical, ovarian, uterine, vaginal, vulvar
  ● 12% in 2014 of all new cancer diagnoses
--- Prostate
  ● 1 in 9 Men (American Cancer Society)

Cancer Treatments and Pain
Surgery
Radiation
  ● External beam, brachytherapy (internal)
--- Scarring
--- Fibrotic Tissue

Survival Rates
Really good for these types of cancer
This is why we need to pay attention to this potential history in our patients
May be contributing to symptoms
We’ve all been taught cancer signs for red flag screening, but what about the lingering effects from successfully treated cancer?

Connective Tissue Dysfunction

Connects everything!

Pelvic floor muscles attach to the coccyx and sacrum via connective tissue

Obturator internus fascia

Endopelvic fascia
Neurodynamics

Pelvic Nerves are shaped like fish hooks

Makes it harder to slide or glide them like we are able to do in the extremities

Manual Therapy

Couple traditional manual therapy techniques with specific connective tissue release and neurodynamic principles.

- Skin rolling
- Myofascial release
- Dry needling
- Manual trigger point release
- Strain counterstrain
Clear everything
Anterior
Posterior
Abdominal
Home Program too with self release and movement

Obturator Internus
https://www.youtube.com/watch?v=wxl7CIR6DNI

Pesky muscle!
Pudendal nerve runs through it

What to do?
Be creative!
Move!

- What are your patient/client’s hobbies?
  - How do they like to move?
- Different planes
- Combines motions to move the whole pelvis
- Stretching or full motion
- Start small when needed and work your way up
- Combine with manual therapy
  - In clinic or out

You can make a difference for your chronic pain patients

Questions?
References


Thanks!

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