APTA DC & Maryland 2023 Annual Conference

Orthopedic Management for Pregnancy-Related Pelvic Girdle Pain: Debunking Common Treatment Myths

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Howard Community College

Speakers Disclosures

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Nothing to disclose.

Session Learning Objectives

1. Identify the risk factors and clinical presentation for pregnancy-related pelvic girdle pain
2. Demonstrate appropriate examination techniques, manual therapy modifications, and therapeutic exercises for the antepartum population
3. Implement evidence-based practice into clinical care for patients with pregnancy-related pelvic girdle pain

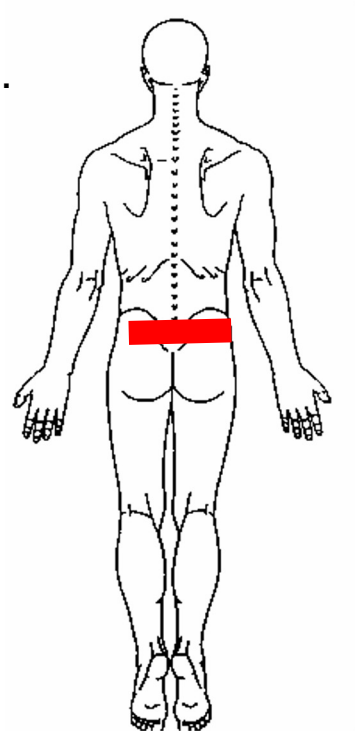
Course Outline

- ❏ 2:30-2:45 - Introductions and review of pregnancy-related pelvic girdle pain
- ❏ 2:45-3:00 - Discussion of current practice patterns for pregnancy-related pelvic girdle pain
- ❏ 3:00-3:45 - Literature review and debunking common myths
- ❏ 3:45-4:20 - Demonstration and practice of evaluation and treatment strategies
- ❏ 4:20-4:30 - Wrap up, Questions

Paper and pen time!

1. Pelvic pain is a normal part of pregnancy
2. Pelvic pain will go away as soon as the baby is born
3. Pelvic pain is worse because of postural changes and poor alignment
4. The hormone relaxin makes the pelvis unstable thus increasing the risk for pregnancy related PGP
5. Motion palpation tests for pelvic asymmetries are reliable and should be utilized in this population
6. Manipulations are safe to use on patients that are pregnant
7. Support belts should be worn to stabilize the pelvis

A.



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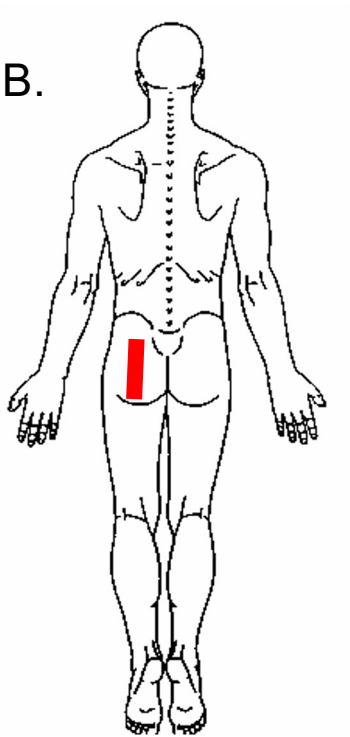


A patient walks into your clinic…

Defining Pelvic Girdle Pain

"Pain that is experienced between the posterior iliac crest and the gluteal fold, particularly in the vicinity of the sacroiliac joint. The pain may radiate into the posterior thigh and can also occur in conjunction with/or separately in the symphysis."[1].

Defining Pelvic Girdle Pain: Prevalence

- Estimated to effect 56%-72% of antepartum population

- Persistence into PP estimated up to 25%
  - 10% will continue to have pain for 1-2 years[2].

Risk Factors Pelvic Girdle Pain in Pregnancy

- Strong Evidence
  - Multiparity
  - Increased BMI
  - Gluteus medius and PF dysfunction
  - Smoking in the antepartum period
  - Work dissatisfaction
  - Lack of belief of improvement[2].

Red Flags and Differentials

Red Flags for Pregnancy

- H/o trauma
- Unexplained weight loss
- H/o cancer
- Steroid use
- Drug abuse
- HIV or immunosuppressed state
- Neurological symptoms
- Fever[2].

Red Flags for Pregnancy

- Special considerations for symptoms associated with referred pain due to UTI in the lower abdomen/pelvic or sacral region

- Failure to improve functionally, pain that does not reduce with rest and/or severe disabling pain would require a medical specialist referral[2].

Differentials for Pelvic Girdle Pain

- Hip dysfunction
  - Femoral stress fracture due to transient osteoporosis
- Diastasis Rectus Abdominus (DRA)
- Pelvic Floor Dysfunction
- Lumbar Spine[2.]

Differentials for Pelvic Girdle Pain

- Pelvic floor screen
  - Coccyx Motion Palpation (CMP)[3].
- Clinical tests for femoral stress fracture:
  - Patellar-Pubic Percussion Test
  - Fulcrum Test[4].

Other considerations

Vagina bleeding	Feeling dizzy or faint	Shortness of breath before starting exercise	Chest pain
Headache	Muscle weakness	Calf pain or swelling	Regular, painful contractions of the uterus[5].

Current Clinical Practice

Join Mentimeter - two ways to join
link or QR code

https://www.menti.com/alg2j2zcskio

Current Clinical Practice

- **Dufour et al 2018**
  - Surveyed pelvic and ortho PTs knowledge of CPG for pregnancy-related pelvic girdle pain
    - Most PTs were aware of CPG but did not translate into clinical practice
  - PTs use other PTs as resources rather than research

    - Barriers:
      - Lack of time
      - Lack of access to journal articles
      - Lack of knowledge in application of recommendations[6].

Literature Review and Debunking Myths

Truth or Myth?

Pelvic pain is a normal part of pregnancy.

MYTH

Pelvic pain during pregnancy

- Pelvic pain is common during pregnancy, but not normal
  - Before 20 weeks: 33-50%
  - After 20 weeks: 60-70%

- Persistent pain into postpartum: 7-25%[2].

Truth or Myth?

Pelvic pain will go away as soon as the baby is born.

MYTH

Clinical Course

- Persistence into PP estimated up to 25%
  - 10% will continue to have pain for 1-2 years[2].

Truth or Myth?

The hormone relaxin makes the pelvis unstable thus increasing the risk for PGP.

MYTH

Relaxin and PGP

A systematic review from 2012 found no proof that higher rates of relaxin correlate to more pain

"3 out of 4 high quality studies could not find a positive association between relaxin and pelvic girdle pain."[7].

Peripheral joint laxity increases in pregnancy but does not correlate with serum relaxin levels[8].

Truth or Myth?

Postural changes and poor alignment during pregnancy significantly correlate with PGP

MYTH

Postural Changes

"The magnitude of postural changes during pregnancy was not indicative of the intensity of LBP and PGP in the antepartum population" (CPG)[2].

"PPGP presentation is now more broadly understood to be a reflection of sensitivity of tissues and not tissue instability, injury or harm."[9].

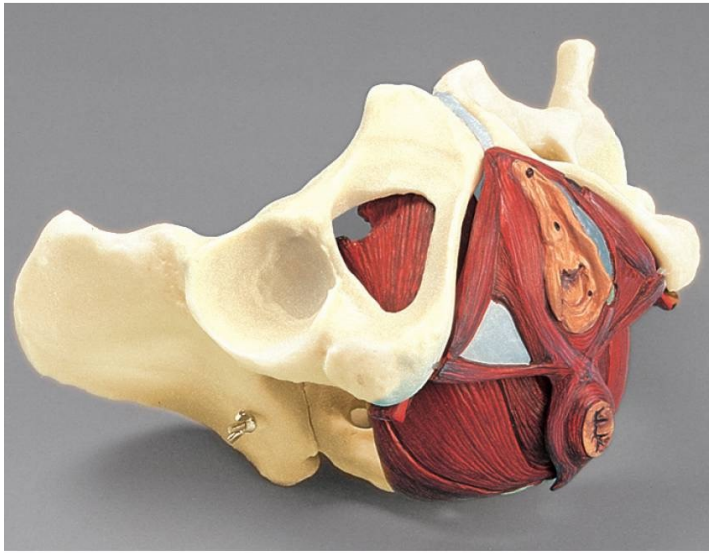
Truth or Myth?

Motion palpation tests for pelvic asymmetries are reliable and should be utilized in this population

MYTH

Special Tests

- Common motion palpation tests:
  - Gillet
  - Forward Flexion Test
    - have poor inter-rater reliability and diagnostic accuracy[10].



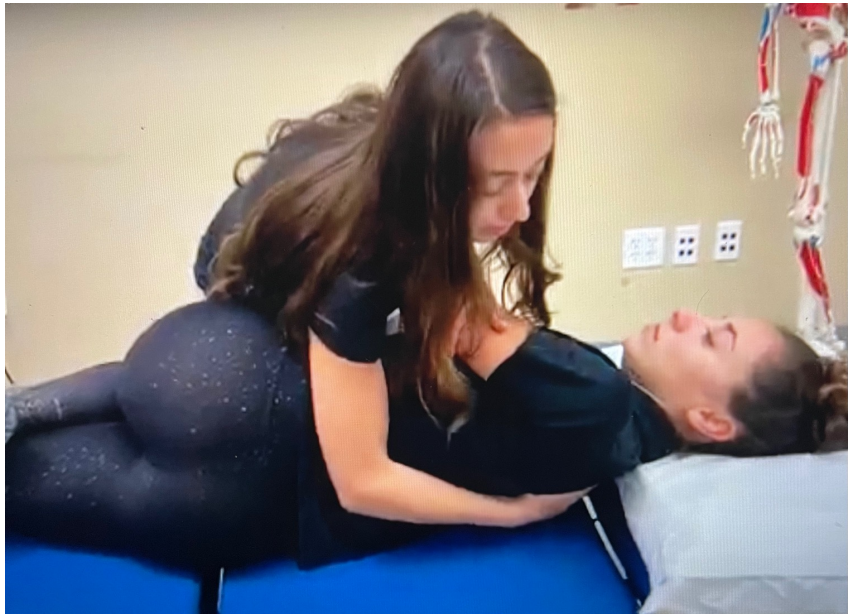
Truth or Myth?

It is unsafe to perform high velocity low amplitude thrust manipulations on this population

MYTH

Manipulations

- “Clinicians may or may not utilize manual therapy techniques including HVLAT manipulations for the treatment of LBP and PGP in pregnancy”
- All studies in CPG reported little to no side effects in the healthy antepartum population
- Based on weak evidence[2].



Truth or Myth?

Support belts should be worn to stabilize the pelvis

MYTH

Support Belts

- Support belts can be used but provide the proper education
  - Creating sensory-motor change through proprioceptive input
  - Similar to tape effect[9].

Post test

1. Pelvic pain is a normal part of pregnancy
2. Pelvic pain will go away as soon as the baby is born
3. Pelvic pain is worse because of postural changes and poor alignment
4. The hormone relaxin makes the pelvis unstable thus increasing the risk for pregnancy related PGP
5. Motion palpation tests for pelvic asymmetries are reliable and should be utilized in this population
6. Manipulations are safe to use on patients that are pregnant
7. Support belts should be worn to stabilize the pelvis

All myths except #6

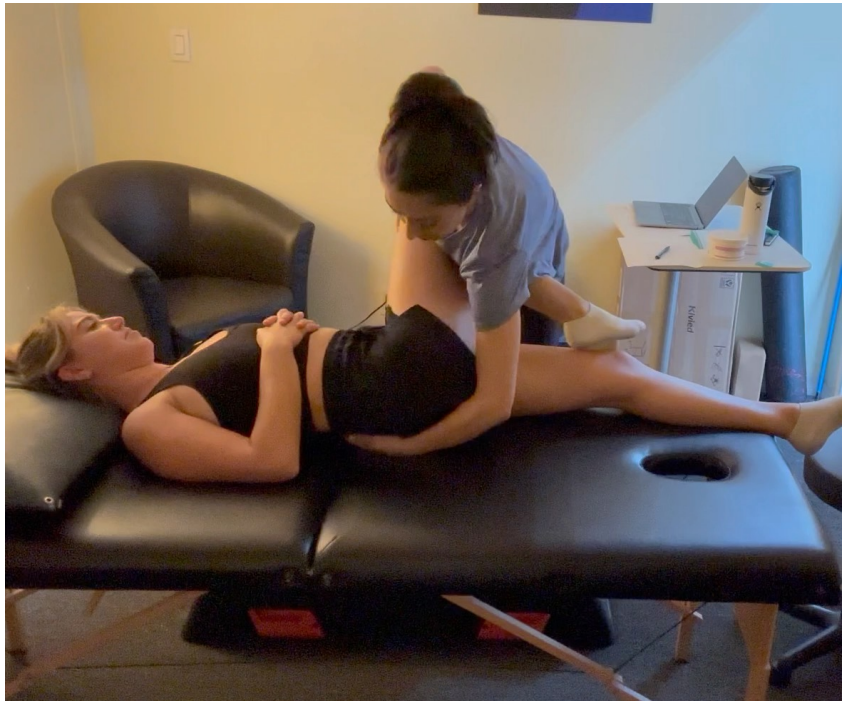
Evaluation

Diagnosis

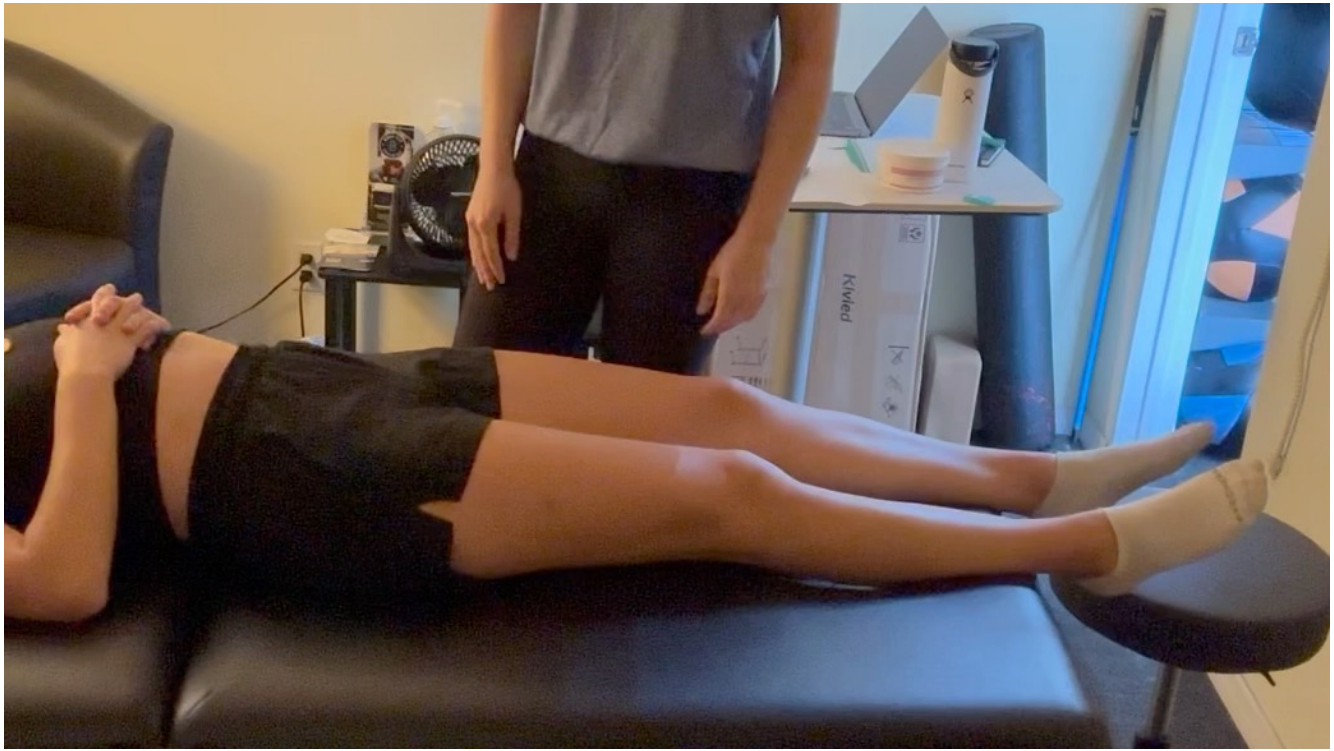
- Thorough history and evaluation including:
  - Active SLR
    - Sn: 0.53; Sp: 0.83
  - Thigh Thrust
    - Sn: 0.76; Sp: 0.67
- Active SLR and Thigh Thrust = strongest diagnostic accuracy for PGP[11].
- 1 of 3 positive findings for:
  - Lunge
  - MMT of hip
  - PROM of hip = LR+ 4.2
- 2 of 3 positive findings for:
  - ASLR
  - Gaenslen
  - Thigh thrust = LR+ 3.5

Diagnosis

- P4 test positive in 100% of patients classified as having PGP[12].



Diagnosis



Prognosis

Risk Factors for Persistent Pain into Postpartum:

Strong Evidence

- Early onset (before 14 weeks of pregnancy)
- Multiple pain locations
- High number of positive Pelvic Pain Provocation Tests (PPPT's)
- Work dissatisfaction
- Lack of belief in improvement[1].

Prognosis

Eldon et at from 2016 – 345 patients

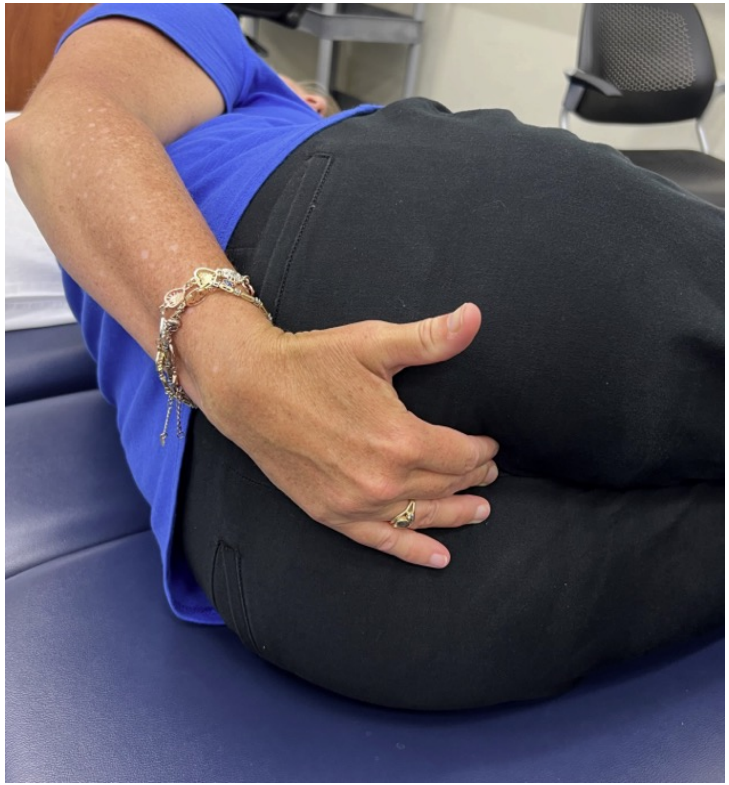
- 11 year f/u 10% with continued pain
  - Earlier LBP (Odds Ratio, OR = 2.28)
  - Positive symphysis pubis test (OR = 2.01)
  - Positive Faber (Patrick's) test (OR = 2.22)
  - Positive modified Trendelenburg test (OR = 2.20)
  - High number of bilateral positive pain provocation tests (OR = 1.79)

- Pelvic pain provocation tests:
  - Posterior pelvic pain provocation test (P4)
  - Distraction test
  - Compression test
  - Sacral thrust
  - MATtest

Prognosis – Pelvic Floor Screen

Coccyx Motion Palpation (CMP)

- Position hand over sacrum and middle finger over the coccyx
- Ask the patient to perform a PFM contraction
- Assess if there was movement in the coccyx indicating proper contraction
  - Contract
  - Relax
  - Bear down
- Symmetry? Difficulty? Delayed? Unable?



Early referral

Patients that wait to be treated > 3 months postpartum have worse prognosis compared to early referral[1].

What can we do as therapists to help improve prognosis?

Evaluation and Prognosis Summary

- What special tests can help confirm pregnancy-related pelvic girdle pain?
- What are three risk factors for developing pregnancy-related pelvic girdle pain in postpartum?
- When is it appropriate to treat a patient postpartum?

Treatment

Anatomy Considerations when treating PGP

- Biomechanics of SIJ - most stable in nutation, mobility better for labor
- Glute max, erector spinae, thoracolumbar fascia and biceps femoris attach to pelvic ligaments and SIJ
- Coccyx
  - glute max attachment, PF attachment
  - increased coccyx flexion will impact lumbopelvic mobility
- Deep hip rotators

Support Belts

Level D evidence

Clinical considerations:

- Utilize ASLR test as a pre and post test assessment for use of belt
- Trial belt with functional movement patterns or provocative movements
- Educate appropriately[2].

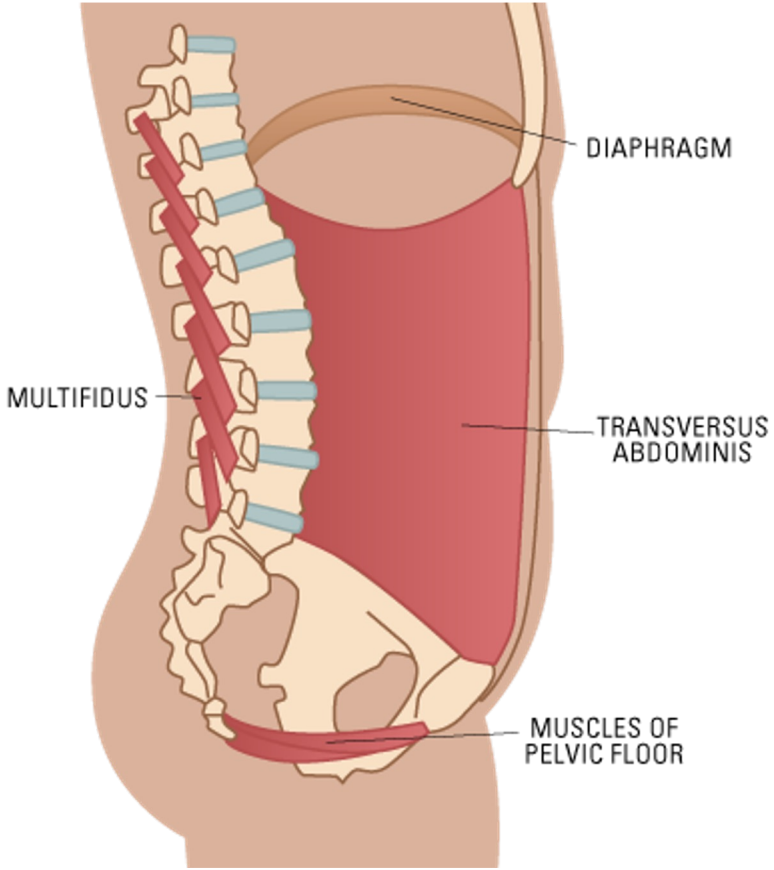
Challenge: Can you provide PT education without using the words stable or stability?

Exercise

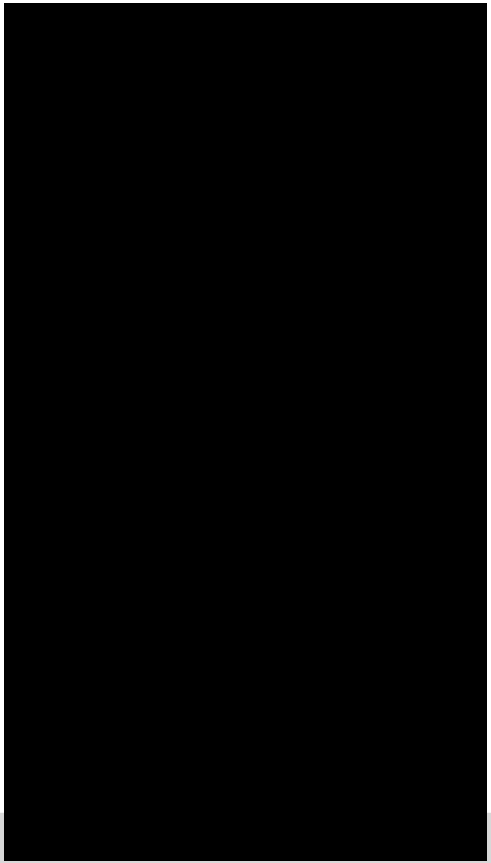
Clinical Considerations:

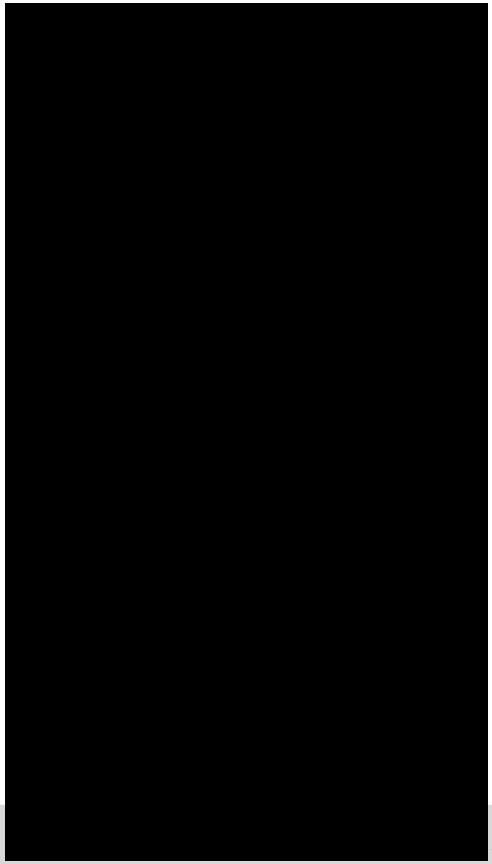
- A recent systematic review found only 2 articles that had appropriate set/repetition to improve muscle hypertrophy[13].
- 2 Systematic reviews and recent RTC included in the 2017 CPG were nonspecific in application of exercise with heterogeneous groups[2].
- Consider moving beyond the often prescribed “posterior pelvic tilt”

Exercise Considerations



Exercise Considerations: Moving past posterior pelvic tilts…





Exercise Considerations: Moving past posterior pelvic tilts…

Creative Breakout

- Determine exercises or movement modifications to help someone that has pain with:
  - Rolling over in bed
  - Walking
  - Sit to/from stand
  - SLS

Manual Therapy

Clinical Considerations:

- Modifications for pregnancy
  - Quadruped or sidelying
  - Supine?

Manipulations

- Sidelying lumbopelvic
- Seated thoracic with towel

Mobilizations

- Seated thoracic mobilizations CPAs
- Seated thoracic rotations/TL junction
- S/I sacral mobilizations CPA for nutation (birthing positions)

Manipulations

Breakout

Practice:

- Seated thoracic mobilizations
- CPAs
- Rotational mobilizations
- Sacral mobilizations
- Lumbopelvic mobilizations

Last but not least…using a biopsychosocial approach

- Moving away from “pelvis is unstable”
- Having the belief that the pain will go away
- Safe, Stable, Self-manageable[9].

Challenge: Provide patient education about pelvic pain without using the words pain, instability, or alignment

Wrap-up

- Any myths surprise you?
- Write down one evaluation skill, one treatment skill, and one patient education that you want to remember for clinic
- Questions or concerns?

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