Duke University School of Medicine

Physical Therapy in Women's Health Care

Carol Figuers, PT, EdD
Professor
Doctor of Physical Therapy Division
Duke University School of Medicine

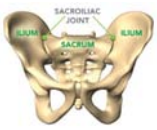
OBSTETRICS

Objectives: The student should be able to:

- Understand the roles and responsibilities of the physical therapist in working with obstetrical patients during and after pregnancy and childbirth
- Recognize physical therapy interventions for pregnancy & postpartum

Hormonal Changes & Pelvic Girdle

- **Instability of joints**
- **SI dysfunction main cause of "back pain" in women***



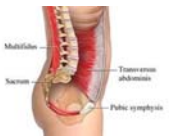
*Garras et al. Single-leg-stance (flamingo) radiographs to assess pelvic instability: How much motion is normal? *J Bone Joint Surg Am*. 2008.

PT Interventions – Back Pain

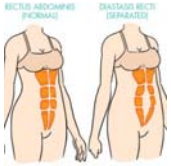
- Symmetrical body movements
- Small ranges of motion
- "Baby Hugger" belts
- Isometric exercises around pelvis and stabilization
- Body mechanics

Boissonnault JS, Klenstinski JU, Pearcy K. The role of exercise in the management of pelvic girdle and low back pain in pregnancy: A systematic review of the literature. JOWHPT, 2012.

Transverse abdominis strengthening



Check for Diastasis Recti



Transversus Abdominis strengthening

Tips for Managing Back Pain

- Posture & Body Mechanics
  - Avoid carrying objects on one hip (assymmetry)
  - Avoid crossing legs
  - Carry loads in middle
  - Change positions frequently
  - Get muscles "ready" to move
  - Support lumbar spine
  - Watch body mechanics with ADL's

Tips for Managing Back Pain

- Dealing with pain
  - Have partner massage back
  - Use moist heat for 30 min. at a time or less
  - Ice the area for 10 min. 4-5times/day (especially irritated SI)

Suggestions for Healthy Exercise

- Mild to moderate exercise at least 3 times/week
- Modify INTENSITY of exercise – not to exhaustion
- ACOG* recommends using Borg scale of perceived exertion level:
  12 – 14 (somewhat hard)

*American College of Obstetrics & Gynecology

Exercise Precautions During Pregnancy

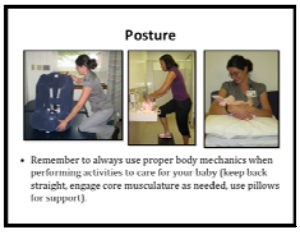
- Do not start a NEW, aggressive routine
- Avoid extremes of "range of motion"
- Avoid excessive stress to joints such as ankles, sacroiliac, pubic symphysis
- Be sure to replace fluids and calories (300kcal/day more)

Physical activity and exercise during pregnancy and the postpartum period. Committee Opinion. American College of Obstetricians and Gynecologists. Number 650. December 2015.

Postpartum

- Time frame
- When to start exercise?
- Need medical clearance?
- Areas to rehabilitate

Education

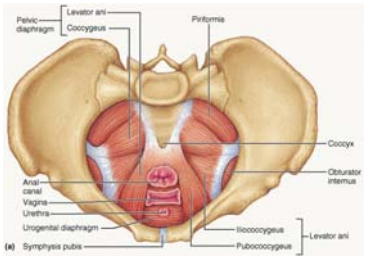


PELVIC FLOOR DYSFUNCTION

Objectives: The student should be able to:

- Recognize the types, causes and symptoms of urinary incontinence
- Identify the most common types of female pelvic pain
- Describe the role of the physical therapist in evaluation and intervention for pelvic floor dysfunction

Pelvic Floor Dysfunction – Urinary Incontinence & Pelvic Pain

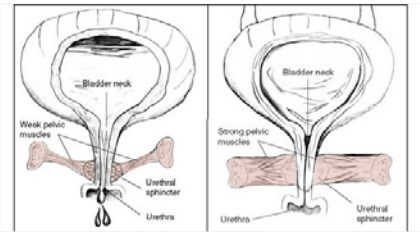


Types of Urinary Incontinence		
Type	**Possible Mechanism**	**Symptoms**
Stress Incontinence	Urethral hypermobility Pelvic floor damage Chronic stress to pelvic floor	Leaking with cough, laugh, sneeze, movements
Urge Incontinence	Detrusor muscle instability	Leaking with "trigger" (key in door, water sounds) Frequent urination
Mixed Incontinence	Combined mechanisms of stress and urge	Combined cues
Overflow Incontinence	Decreased contractility of detrusor muscle Urethral obstruction	Chronic dribbling of urine Urinary frequency

**Figuers 2009

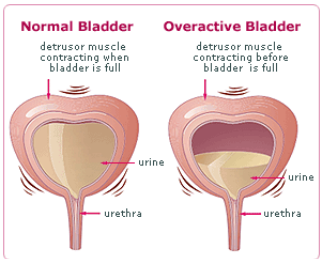
Major Types of Incontinence

- STRESS



Major Types of Incontinence

- URGE



Prevalence of Urinary Incontinence

- Affects more than 13 million Americans
- 85% of these are women
- 2-16% of young, nulliparous women
- 30% of women over 65 years old
- 1 in 4 women with UI never discussed with provider
- Prostate gland enlargement and surgery may pose risk

Documented Risk Factors Associated with Incontinence

- Immobility
- Diminished cognition
- Medications
- Smoking
- Fecal impaction
- Low fluid intake/dehydration
- Environmental barriers
- High impact physical activities
- Diabetes
- Stroke
- Estrogen depletion
- Pelvic muscle weakness
- Pregnancy, labor, delivery

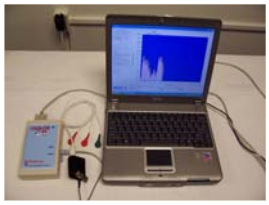
Physical Therapy Examination

Physical Therapy Examination

- Modified pelvic exam to isolate pelvic floor muscles
- Coach on avoiding substitution of gluteal, abdominal and hip adductor muscles
- Test for pelvic floor muscle strength (0-5) and endurance (seconds)

Biofeedback Assessment

- EMG electrodes
- Prompt patient to perform contraction and relaxation of the pelvic floor
- Quick flicks
- Baseline work/rest session to calculate work and rest averages in microvolts



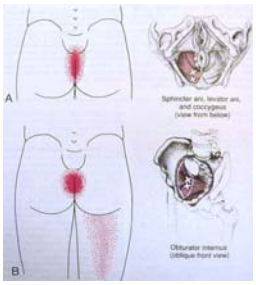
Interventions

- Home program of pelvic floor muscle exercises (Kegels)
- Functional Kegels
- Healthy bladder habits
- Urge suppression drill

Pelvic Pain – Acute vs. Chronic

- CHRONIC PELVIC PAIN = pain in the pelvic area lasting for at least 6 months
- Recurrent pelvic pain = episodic ailments such as dysmenorrhea or dyspareunia
- Acute pelvic pain = pain lasting less than one month

Pelvic Floor Muscle Trigger Point



- Palpate levator ani
- Obturator internus
- Radiating symptoms

Pelvic Pain Interventions

- Stretching
- Pelvic floor muscle exercise (increase circulation; downtrain)
- Desensitization (dilators)
- Skin care
- Relaxation

References

- Figuers, C. Physical therapy management of pelvic floor dysfunction. In Women's Health Care in Physical Therapy: Principles and Practices for Rehabilitation Professionals, Glenn Irion and Jean Irion (eds), Philadelphia, PA. Lippincott Williams & Wilkins. 2009.
- Figuers, C. Physical therapy management of pelvic pain. In Women's Health Care in Physical Therapy: Principles and Practices for Rehabilitation Professionals, Glenn Irion and Jean Irion (eds), Philadelphia, PA. Lippincott Williams & Wilkins. 2009.
- Boissonnault J, Klestinski J, Pearcy K. The Role of Exercise in the Management of Pelvic Girdle and Low Back Pain in Pregnancy:A Systematic Review of the Literature. Journal of Women's Health Physical Therapy, Volume 36 • Number 2 • May/August 2012.
- Nygaard I. Idiopathic Urgency Urinary Incontinence. N Engl J Med 2010;363:1156-62.

Case Study #1 Obstetrics

- 32 y/o female, 28 weeks IUP presents for evaluation and treatment of "back pain". She works F/T as a lab research assistant. She c/o pain in right buttock/side, difficulty with sit to stand, pain in prolonged sitting, stair climbing
- Palpation, pain provocation tests, gait analysis suggest hypermobility of right sacroiliac joint and unstable pelvic girdle. Asymetrical movements (e.g. stairs) reproduce pain
- Treatment consisted of instruction in home exercise program of pelvic girdle stabilization exercises, education on body mechanics, wearing maternity binder when active or at work to prevent pain

Case Study #2 Pelvic Floor

- 45 y/o female G3P3 with chief c/o stress urinary incontinence which impacts her daily activities (she won't leave the house on bad days)
- She lives with her children (ages 8-12) and husband and carpools, manages the house, but changes her clothes "a lot" due to urinary accidents
- Internal manual muscle testing of levator ani reveals strength of 3/5 with endurance hold for 3 seconds
- Home pelvic floor exercise program of 10 repetitions (hold 3, rest 6) 4 separate times/day
- Patient education including healthy bladder habits, avoiding val salva

Questions?