

2021 NSCA PERSONAL TRAINERS VIRTUAL CONFERENCE

#NSCAPT21

CONFLICT OF INTEREST STATEMENT

I have no actual or potential conflict of interest in relation to this presentation.

DON'T MAKE IT AWKWARD

ABDOMINAL AND PELVIC FLOOR CONSIDERATIONS FOR TRAINING WOMEN

Objectives

- Visualize Abdominal and Pelvic Floor Anatomy
- Identify Prevalence of Core and Pelvic Floor Disorders
- Explain Intra Abdominal Pressure
- Describe Risky Practices and Effective Training Strategies
- Coach with Confidence

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ABDOMINAL AND PELVIC FLOOR CONSIDERATIONS FOR TRAINING WOMEN

Visualize the Abdominal Anatomy

Abdominal Wall

- Transverse Abdominis
- Rectus Abdominis
- Internal Obliques
- External Obliques

Anterior / Posterior

Superior / Inferior

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Let's Talk About Pelvic Floor Anatomy

- Not often discussed in exercise science course work
- Often skipped in skeletal mechanics or kinesiology courses
- Rarely addressed in strength and conditioning certifications
- Often sexualized

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Anatomy of the Pelvic Floor

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What Should We Know About Diastasis Recti?

Abdominal separation of 2 cm or more in the rectus abdominis

Check Point	% of Population
Gestation Week 21	31%
6 Weeks Postpartum	60%
6 Month Postpartum	45.4%
12 Months Postpartum	32.6%

Sperstad, Tennfjord, & Hilde, et al, 2016

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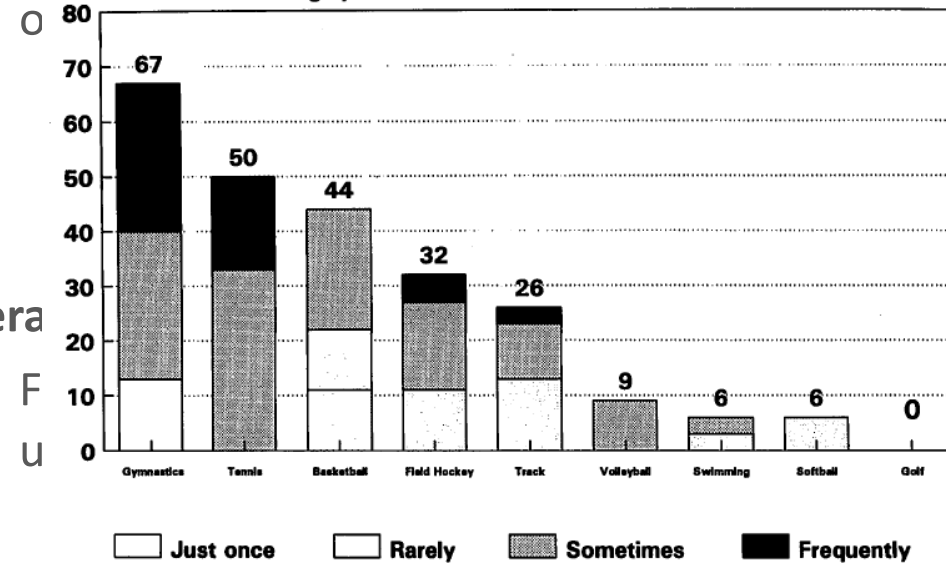
Urinary Incontinence in Elite Nulliparous Athletes

INGRID E. NYGAARD, MD, FAYE L. THOMPSON, ATC, SARAH L. SVENGALIS, BS,
AND JOHN P. ALBRIGHT, MD

• LOSS OF bladder or bowel control, leakage of urine
% incontinent during sport

• Overall

• Frequency
U



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What Should We Know About Pelvic Floor Disorders?

Prolapse

- Descent of one or more of the pelvic organs (uterus, vagina, bladder, or bowel) into or out of the levator hiatus.

Emptying Disorders

- Difficulty urinating or voiding

Pain

- Discomfort to the lower back, pelvis, or bladder and/or urethra

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Prevalence of Pelvic Floor Disorders

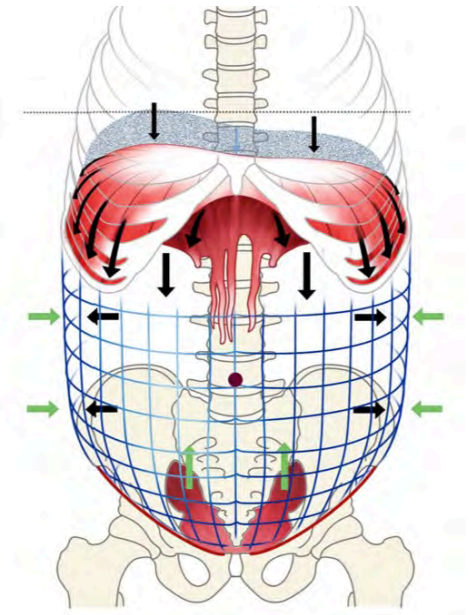
- **Pelvic floor disorders impact 25% of all women.**
(Bo, 2004; Braekken, 2010)
- **11% of all females in the USA will have surgery for SUI or POP.** 58% require a second surgery for reoccurrence after initial surgery.
(Bo, 2004; Braekken, 2010)
- **Approximately 29% of women with POP are symptomatic.**
 - 40-51% of women with POP have stage II or greater

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Intra Abdominal Pressure (IAP)

- **Pressure** concealed within the abdominal cavity, resulting from the interaction between the abdominal wall and viscera.
- IAP changes with breathing, posture, and muscle contraction.



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Count the Cost

- What happens if... you make it awkward or uncomfortable for your client?
- What happens if... you completely ignore abdominal and pelvic floor concerns?
- What happens if.... you program exercise that is too intense or generates too much intra abdominal pressure?

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Describe Risky Practices

1. Too much, too soon.
2. Assuming that strong, fit women have strong and healthy pelvic floor muscles. *Exercise specificity matters.*
Middlekauff et al., 2015
3. **Fatiguing the pelvic floor** with exercise without providing a rest or bathroom break.
Ree, Nygaard, & Bo, 2007

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Describe Risky Practices

4. Repetitive Impact Exercise

- Paratrooper recruits experienced decreased support.
Larsen & Yavorek, 2007

5. Strenuous Physical Activity in Teen Years

- Raised odds of POP
Nygaard, Shaw, Bardsley, & Egger, 2013

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Effective Training Strategies

Normalize Language

- When you are comfortable and use appropriate language, you give permission for your client to do the same.

Ask Meaningful and Appropriate Questions

- Recognize barriers, symptoms, and opportunities for education

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Helpful Questions to Ask

“I want to keep you safe and help you get the most out of your training program. Because pressure management is such an important part of training, I have four questions for you related to your core and pelvic floor.”

1. **“Do you have any abdominal or pelvic floor concerns that you’d like to talk about before we get started?”**
2. **“Do you regularly perform pelvic floor exercise?”**
3. **“Do you leak urine with physical activity like jumping, coughing, or sneezing?”**
4. **Do you have pelvic pain or heaviness after exercise?**

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Effective Training Strategies

- **Thoughtfully select the mode of exercise**

Is impact appropriate?

Limit high ground reaction force, plyometrics, jumping, and bouncing activity for those with unresolved dysfunction.

Consider Line of Pull

The better we understand and visualize anatomy, the better we can select appropriate exercises. What fibers are we trying to activate?

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Effective Training Strategies

Be Clear on What You Want To Accomplish

- Resist Force: Eccentric contractions, isometric contractions, or anti rotation
- Produce Force: Concentric contractions

“How Do I Reduce IAP?”

- Exhale during contraction (be aware that there is a stability trade off due to reduced spine stiffness)
- Change posture: Feet on the floor, sit down, or lie down
- Assist your client with loading
- Reduce the load or speed of movement

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Effective Training Strategies

Know When You are Out of Scope

- Collaborate with Women's Health Professionals
 - Physical Therapists, OBGYN, Urogynecologists

Provide Education

- You may need to be a safety advocate for your client

Have fun!

- It's just skeletal muscle. No need to make it awkward.

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Coach with Confidence - Summary

- 1. Recognize the prevalence of dysfunction**
25% of all women have pelvic floor dysfunction impacting posture, balance, strength, and pelvic support.
- 2. Support women by asking appropriate questions, normalizing language, and providing modifications**
to support abdominal and pelvic floor health.
- 3. Select appropriate exercises, at the appropriate intensity.** When needed, modify exercise to reduce IAP during exercise. Examples: Exhale, reduce load, change posture, and reduce exercise intensity.

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**Thank you for your time,
attention, and questions!**

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