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**Course description:** Pelvic floor dysfunction among female runner is said to be “an epidemic” by some sports medicine experts. Statistics show at least one in every four women reports having one or more pelvic-floor disorders, defined as urinary incontinence, fecal incontinence, and pelvic organ prolapse. But these are only the reported cases. Much research has noted the importance of a strong “core” for female athletes, but the pelvic floor musculature is not often included in this need. The pelvic floor musculature can play a major role in core stabilization, injury prevention and performance enhancement for the female runner.

**Keywords:** Female runner, Pelvic floor dysfunction, PT Management spectrum

**Speakers**

- Kari Brown-Budde PT, DPT (Board certified specialist in Sports Physical Therapy)
- Angela Dukaric-Page PT
- Phil Page PhD, PT, ATC (Fellow, American College of Sports Medicine)
- Teresa L. Schuemann PT, DPT, ATC (Board certified specialist in Sports Physical Therapy)

**General Outline**

10:00 – 10:05 am Introduction of the Session: Teresa Schuemann
10:05 – 10:25 am The role of the “core” for postural stability: Phillip Page
10:25 – 10:45 am Evaluation & Assessment of the Female Runner: Kari Brown-Budde
10:45 – 11:10 am Pelvic Floor Screen & Preliminary Management techniques: T Schuemann
11:10 – 11:30 am Pelvic floor evaluation & Complicated management: Angela Page
11:30 – 11:50 am Return to running management: Kari Brown-Budde
11:50 – 12:00 pm Questions & Answers - whole panel

**Session Objectives**

Upon completion of this session, the participant will be able to:
1. Understand the role of the ‘core’ musculature in providing intra-abdominal pressure and postural stability
2. Complete an evaluation of a female runner.
3. Complete a pelvic floor musculature screen and provide preliminary management techniques.
4. Understand the necessity for a referral for a more complete pelvic floor evaluation and management by qualified physical therapy colleagues.
5. Design a complete rehabilitation program for a female to address all components of her needs and allow full return to running.
The role of the “core” for postural stability (Phil Page)

*What is “core stability”? Historical Global Perspectives*
- US
  - Australia
  - Canada
  - Europe

*The “Core System”: from Structure to Function*
- Muscular Anatomy
- Sensorimotor Function

*The Role of the Core in the Movement System*
- Developmental Perspective
- Chain Reactions

*The Role of the Core System in Dysfunction*
- Stability vs. Mobility

Are Core Stability & Athletic Performance related?

**Evaluation & Assessment of the Female Runner** (Kari Brown-Budde)

*Key Female-Specific factors / red flags from history / examination:*
- Pregnancies
- Childbirth – type of birth (caesarian or vaginal)
- Urinary or fecal incontinence and type
- h/o low back or hip pain
- Other

*Mobility*
  - Spine
  - Pelvis
  - LE

*Stability*
  - Trunk
  - Pelvis
  - LEs

*Tissue*
  - Trunk
  - Pelvis
  - LEs

*Functional*
  - Special testing
Screening
Work and ADL specific
Sitting, standing, caretaking, lifting

Sport specific – running analysis
If Appropriate / When Appropriate
Video Running Gait Analysis
Potential Gait Retraining

Pelvic Floor Screen & Preliminary Management techniques (Teresa Schuemann)

Screening Questions
Do you: (Yes/No)
Accidently leak urine when you exercise, play sport, laugh, cough or sneeze? (muscular tone)
Need to get to the toilet in a jury or not make it there in time? (urgency)
Constantly need to go to the toilet?
Find it difficult to empty your bladder or bowel?
Accidently loose control of your bowel – or accidently pass wind?
Have a bulge or feeling of heaviness, discomfort, dragging or dropping in the vagina? (prolapse)
Suffer from pelvic pain or experience pain during or after intercourse?

Surface Palpation
Landmarks
Regions
Anal triangle
Urinary triangle
Musculature
Adductors
Adductor magnus
Adductor brevis
Gracilis
Adductor longus
Pelvic floor (PF) musculature (mimic of Piriformis syndrome)
Obturator Internus
Gemelli

Objective Measures
Muscular Contraction
Palpable - Yes/No
Resultant movement (anal winking, genitalia nodding)
Symmetry
Look for “buttock grippers”
Lateral rotation by OI
Increased tone/contraction of PF
Resultant Anterior hip pain and possible impingement (Lee & Lee)

Soft Tissue Techniques
Deep Tissue Massage
Instrumented Assisted Soft Tissue Mobilization (IASTM)
Dry Needling
Neuromuscular training
- Contract/relax
- Sustained contraction
- Flicking
- Biofeedback (contraction/pooching)

Pelvic floor In-depth evaluation & management (Angela Page)

Pelvic Floor History
- Births
- Trauma
- Gynecological conditions

Bowel and Bladder History
- Urine/Fecal leakage
- Constipation
- Family History
- Pain

External Assessment
- Tissue health
  - atrophy, errythema, discharg
- Painful palpation
- Prolapse
- Transverse Abdominus coordination

Intravaginal Assessment
- Superficial vs. Deep
- Tissue bulk
- Painful palpation
- Hypertonus/Muscle spasms
- Numbness
- Scarring
- Pelvic Floor Strength
  - Laycock scoring system
  - Strength and endurance

Pelvic Floor Dysfunction
- Incontinence
- Prolapse
- Dyspareunia
- Vaginismus/Levator Ani Syndrome

Physical Therapy Intervention
- Neuromuscular Re-education
- Intravaginal electrical stimulation
- Manual therapy
- Pelvic Floor/Transverse Abdominus coordination
Bladder Retraining

**Return to running management** (Kari Brown-Budde)

*How and When?*
- Heal Tissue
- Move Well
- Retrain Movement / Return to Running

*Factors for Return to Running*
- Prior Level of activity / mileage
- Type and severity of injury / dysfunction
- Stage of Injury
- Event and Distance Running - Specific Needs

*Risk Factors for Reinjury*
- Must address due to high rate of recurrence in runners
- Extrinsic
  - Training Errors
  - Inadequate Equipment
- Intrinsic
  - Metabolic
  - Musculoskeletal

*Timelines*
- Injury / Dysfunction type dependent

*Current Physical Status*
- Isolated Work
- Combined Movements / Joints / Power
- Progress Length, Velocity, Load, Complexity
- Surface, Speed, incline

*Running Specific Kinematic / Functional Tests*

*Running Gait and Technique through Gait Analysis*

*Progression through Return to Running Program*

**References**


