NSCA®
NATIONAL STRENGTH AND
CONDITIONING ASSOCIATION

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INDIANAPOLIS, IN

2.0 CEUS

#COACHES19

Conflict of Interest Statement

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

Why Develop a Model of Speed?

1. To capture sound movement patterns to allow efficient movement
2. To reduce the potential for injury due to incorrect joint mechanics and loading.
3. To have a structured teaching guide to follow
4. To allow for an accurate assessment.

Deceleration

Pure deceleration (stopping) is eccentric strength training

- 3-Phase Deceleration Strategy- Use the phase most important for your athlete, phase of training, or recovering from injury.
- What is it's purpose- there must be an intent to drive the action?
  - Stopping or reaccelerating
- Is the next action known or unknown?
  - Unilateral loading
  - Bilateral loading
- What are the positions and postures needed?
- What loading schemes are most beneficial to stopping vs reaccelerating?
- Do we want big or small joint angles?
  - Which loads the system best for stability

Model #1 Lateral Shuffle

What are the foundational postures, positions, force angles, leg recovery pathways/cycles…?

Points:

1. Push pull relationship btw back leg and front leg
2. We need flight/air time to reposition limbs to produce force again.
3. Pelvis lifts and lower in frontal plane to allow for leg clearance and leg extension during drive phase.

Model #2 Lateral Run (crossover)

What are the foundational postures, positions, force angles, leg recovery pathways/cycles…?

Points:

1. Push to Push- backside pushes so front side can push down/back
2. Backside push forces frontside to open- pelvis rotates
3. Shoulders should lead the charge

Model #3 Linear Acceleration

What are the foundational postures, positions, force angles, leg recovery pathways/cycles…?

Points:

1. Push and projection angles
2. Arm and leg separation
3. Consistent and steady rise and change in tempo

Change of Direction

- What are the foundational postures, positions, force angles, leg recovery pathways/cycles…?

Points:

1. Control levels- “Stay in the tunnel”
2. Reposition to create proper angles of deceleration and re-acceleration
3. Fairly straight leg position to promote SSC
4. Ankle/foot- dorsiflexed and (supinate to pronate)