The Hip and Pelvis
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What today is all about….

I could talk for days!

• 3 Key Points
  1. Centerpiece of our body
  2. Hips and pelvis are intimately linked
  3. The hips need everything!
It's all in the hips…

- Hip strength/mobility can influence the following:
  - Knee pain (Ireland, Powers)
  - Low back pain (Murray)
  - Lower leg injuries (Niemuth)
  - Opposite shoulder pain/dysfunction

Patterns of Injury Development:
The Joint-by-Joint Approach

<table>
<thead>
<tr>
<th>Joint</th>
<th>Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankle</td>
<td>Mobility</td>
</tr>
<tr>
<td>Knee</td>
<td>Stability</td>
</tr>
<tr>
<td>Hip</td>
<td>Mobility</td>
</tr>
<tr>
<td>Lumbar Spine</td>
<td>Stability</td>
</tr>
<tr>
<td>Thoracic Spine</td>
<td>Mobility</td>
</tr>
<tr>
<td>Scapula</td>
<td>Mobility/Stability</td>
</tr>
<tr>
<td>Gleno-Humeral</td>
<td>Mobility</td>
</tr>
</tbody>
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What about the PELVIS?
Gross Anatomy – Hip Joint

- Ball and socket
- Movements in multiple planes

Gross Anatomy – The Pelvis

- Pelvic position drives hip position!

Kinetic Chain Game - Pronation

- Foot Pronation
- Tibial Internal Rotation
- Femoral/ Hip Internal Rotation
- Pelvic Anterior Tilt
Kinetic Chain Game - Supination

- Foot Supination
- Tibial External Rotation
- Femoral/ Hip External Rotation
- Pelvic Posterior Tilt

But….it works the opposite way as well!

Kinetic Chain Game

The Battle for Pelvic Alignment

- External Obliques/ Lower Abs
- Spinal Erectors
- Glutes & Hamstrings
- Hip Flexors
Pelvic Alignment – Anterior Tilt

External Obliques/
Lower Abs

Hip Flexors

Spinal Erectors

Glutes &
Hamstrings

Glutes and Lower Abs are KEY!
Assessment

Hip Rotation - Supine

Hip Rotation - Prone
Front Plank
Quantity AND Quality!!!

Front Plank
Poor Quality

Leg Lowering
Squat

Squat – Quad Dominance

Squat – Knock Knees
Lunge

Lunge – Knee Cave

Lunge – Quad Dominance
Training

What did our assessment tell us?

• Primary limitations
  – Pelvic stability/alignment
  – Hip mobility
  – Hip motor control
  – Hip strength
  – Hip stability

What does a healthy body need?

• Symmetry
  – Mobility
  – Motor Control
  – Strength
But…. Athletes are different!

What does a healthy body need?
- QUALITY movement

Training Principles
Training Principles

Address asymmetries first!

Pelvic Stability/Alignment
- Phase 1 – McGill
- Phase 2 – Corrective
- Phase 3 – Dynamic Stabilization
Phase 1 - McGill
- Planks
- Side Planks
- Birddogs

Phase 1 – Quality is KEY!
Rectus dominant pattern

Phase 2 - Corrective
- Chop/Lift Variations
Phase 2 - Corrective  
• Split-Stance Push/Pulls

Phase 3 – Dynamic Stabilization  
• Push-ups  
• Split-Squats  
• Offset Loading  
• Everything can be stabilization work!

Phase 3 – Dynamic Stabilization  
• Poor stabilization
Hip Mobility

• HUGE Topic!

Hip Motor Control

• Hip flexion (above 90)
• Hip extension
• Hip abduction
• Hip external rotation

Hip Motor Control

• Hip flexion (above 90)
Hip Motor Control

Hip separation

Hip Motor Control

• Hip extension

Hip Motor Control

• Hip abduction
Hip Motor Control

• Hip external rotation

Hip Strength and Power

• Why is strength a bad word?
  – Squats
  – Deads
  – Power Cleans
  – Snatches

Trunk Extension
Hip Extension

Hip Stability

- Ability to prevent movement/motion
  - Starts at pelvis!
  - Single-Leg Work

Hip Stability
Hip Stability

Summary

• Remember our key points!
  1. Centerpiece of our body
  2. Hips and pelvis are intimately linked
  3. The hips need everything!

Thank You!

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