

Postural Restoration: Concepts and Treatment in the Athletic Training Room

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PRI Concepts Related to the Athlete

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- All athletes have lateralized functional patterns that are predictable, behavioral, strategical and neurological
- Reduction of 'symptom' related pain requires facilitation and integration of muscle in positions that inhibit dominant lateralization

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- Therefore, early on in treatment, position is addressed to properly work a muscle group. This is followed by pattern re-training and modification to restore unaltered, reciprocal movement such as arm swing, heel strike, toe off, rib internal rotation, inhalation and exhalation

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- Transverse kinetic movement (rotation) is dependent on hemispheric or unilateral sagittal plane competency, and frontal plane reciprocal stability

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Case Report: Soccer

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- 32 year-old Kansas City Wizards soccer player who presented with right ischial tuberosity tendonitis, left groin/abdominal impingement, and prior history of surgery for bilateral athletic pubalgia repair



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Objective Findings: 12/11/06

Test	Left	Right
Adduction Drop Test	+	+
SLR	90°	90°
FA IR	38°	28°
FA ER	42°	34°
Adduction Lift Test	2/5	3/5
HG IR	20°	20°
Shoulder Horizontal Abduction	30°	30°
Shoulder Flexion	155°	155°

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Initial Assessment:

The patient presents with an anteriorly tilted pelvis bilaterally evident by the positive adduction drop test bilaterally. The patient also has forward torsion of the left innominate. This is causing the patient's sacrum and lumbar spine to be oriented to the right, as well as flexed, for which the patient is compensating by rotating back to the left and extending through his low back.

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This is also affecting the patient's scapulo-thoracic positioning leading to the decreased shoulder internal rotation bilaterally.



In addition, this pelvic position is shifting the patient's center of gravity to the right.

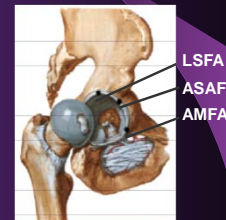
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Treatment Plan:

- 1) Treat left anterosuperior acetabular femoral (ASAF) impingement

Three most common impingement syndromes seen in the clinic:

1. Anterosuperior AF impingement (ASAF)
2. Anteromedial FA impingement (AMFA)
3. Laterosuperior FA impingement (LSFA)

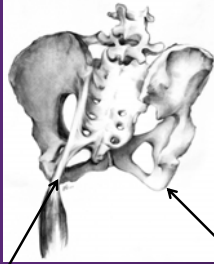


Netter (Plate 458)

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Treatment Plan Continued:

2) Treat right ischiofemoral tendonitis by reducing concentric demands on right ischial tuberosity



Eccentric Site



Concentric Site

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1st Treatment Session:

1) Right Sidelying Adductor Pull Back



2) Left Sidelying Knee Toward Knee



3) Left Sidelying Right Glute Max



*These above exercises reduced the concentric "pull" of the right hamstring.

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2nd Visit:**12/19/06**

Patient was neutral at the pelvis with (-) adduction drop test bilaterally. HG IR limited bilaterally with 50°. Right adduction lift test 3+/5.



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2nd Treatment Session:
(Maximized Left A on F)

1) Wall Short Seated Reach (with adduction)



2) Step Through



3) Standing Right Step Around



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4) Left Sidelying Left Flexed Adduction with Concomitant Right Extended Abduction



5) Retro Stairs with Glute Max



6) Retro Reciprocal Walking



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3rd and Final Visit:**1/12/07**

Patient reports that he is feeling great! No longer feels any pinching in the groin, inguinal crease or back.



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3rd and Final Visit: 1/12/07

Test	Left	Right
Adduction Drop Test	- (+)	- (+)
SLR	85° (90°)	85° (90°)
FA IR	45° (38°)	40° (28°)
FA ER	45° (42°)	40° (34°)
Adduction Lift Test	5/5 (2/5)	5/5 (3/5)
HG IR	90° (20°)	70° (20°)
Shoulder Horizontal Abduction	45°+ (30°)	45°+ (30°)
Shoulder Flexion	175° (155°)	175° (155°)

* Values in parentheses are initial visit objective findings

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3rd and Final Treatment Session:

(Maximized right trunk rotation, frontal plane movement associated with left AF IR and sagittal thoracic flexion)

1) Standing Resisted Trunk Around with Right AF IR and Right Trunk Rotation



2) Standing Resisted Trunk Around with Left AF IR, Right Trunk Rotation and Bilateral Scapular Stabilization



3) Resisted Single Leg Lateral Dips



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4) Resisted Single Leg Lateral Dips with Eversion



5) Prone Adduction Alternating Reciprocal Hamstring Curls



6) Squat



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Case Report: Baseball

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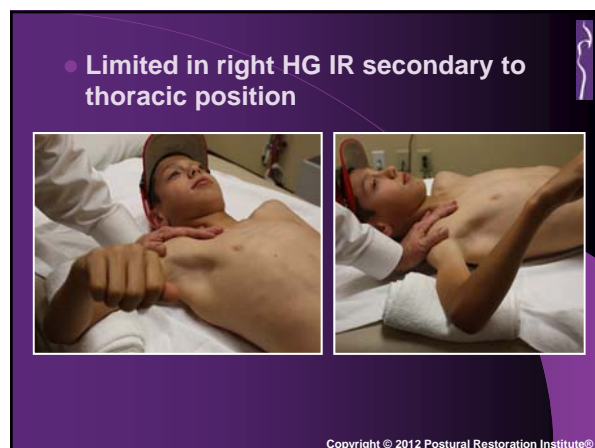
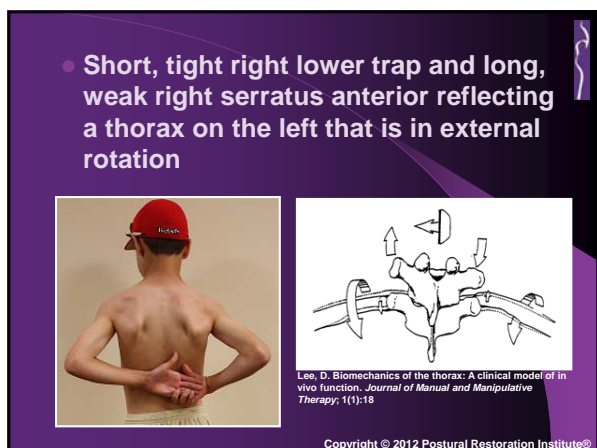
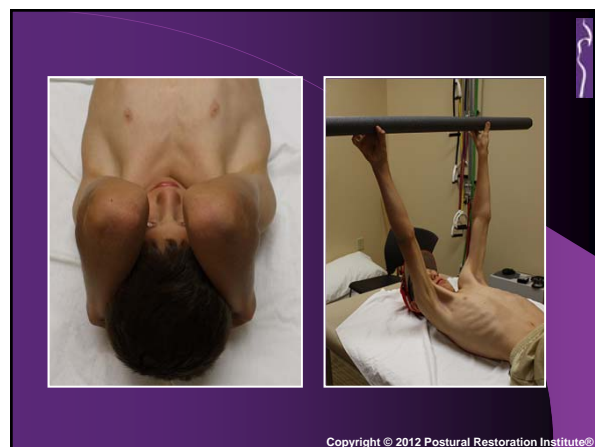
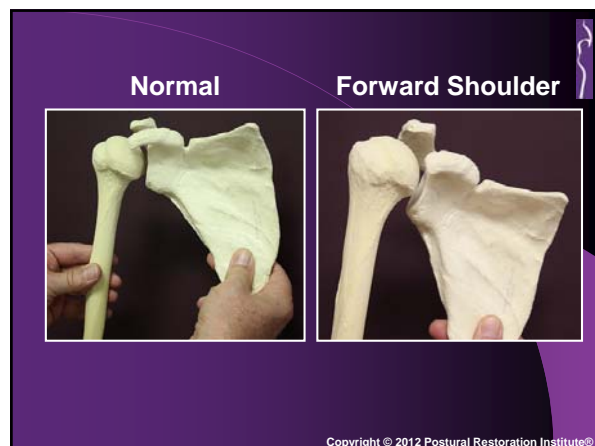
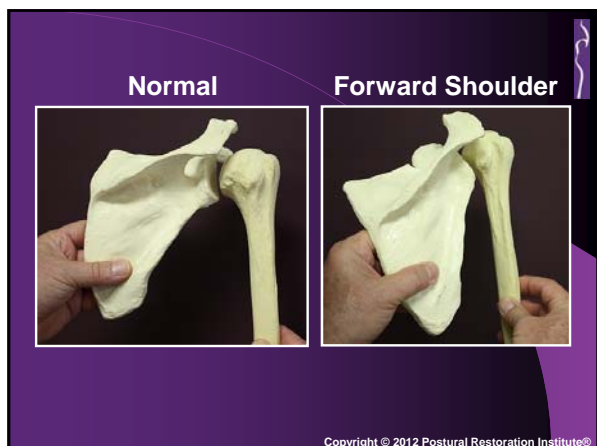
- 11 year-old baseball pitcher with a history of flexor carpi ulnaris tendonitis and an overactive right brachial polyarticular muscle chain

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- Presented with forward rounded shoulders



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- Limited in right HG flexion secondary to short, tight right intercostals



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- Excessive right HG ER secondary to long subscapularis



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- Compared to the left



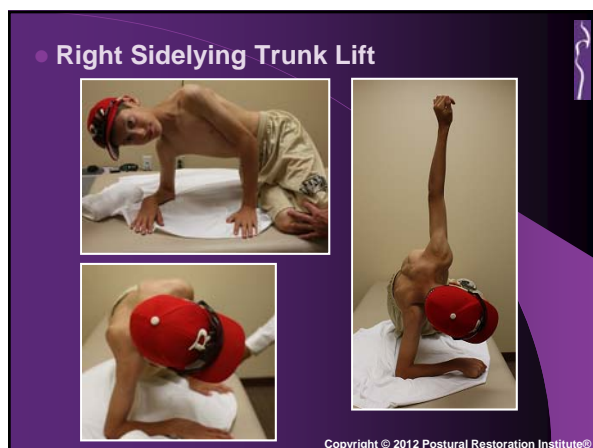
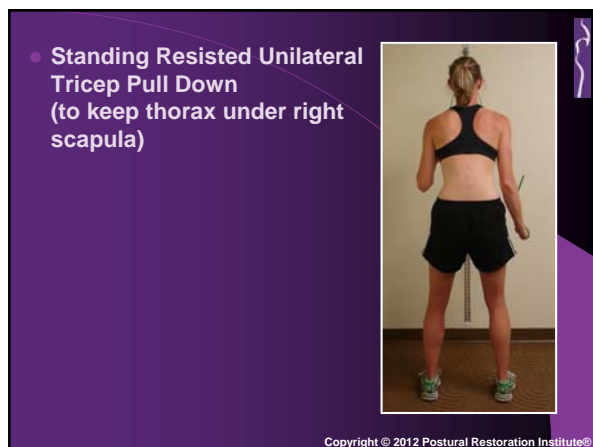
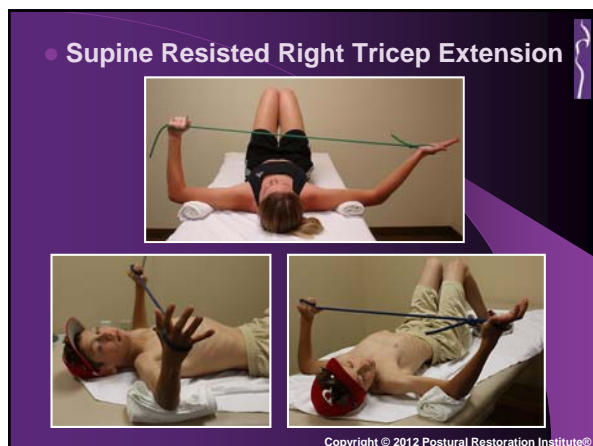
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- Initiated a PRI program to establish more appropriate symmetrical, reciprocal thoracic/rib cage function.

Internal rotation (IR) of ribs is required for forward arm swing and external rotation (ER) of ribs is required for the "cocking" phase of pitching.

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- **Right Sidelying Trunk Lift**

- Immediate improvement noticed in scapula position



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- **Achieved a full standing thoracic-pelvis PRI squat**



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- **Maximized left rib internal rotation (IR) to increase right thoracic expansion, rib external rotation (ER) and periscapular strength**



Exhale

Inhale

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- **After full thoracic flexion, initiated a right serratus anterior program.**

Seated Resisted Serratus Punch
with Left Hamstrings



Standing Supported Resisted
Serratus Punch



Standing Resisted Low Trap Press Through



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Seated Resisted Serratus Punch
with Left Hamstrings



Standing Supported Resisted
Serratus Punch



Standing Resisted Low Trap Press Through



Modified All Four Press Up



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- Then finished his program with subscapularis strengthening during dynamic scapulo-thoracic stabilization

Supine Resisted Right HG IR with Weighted HG ER



Supine Resisted Right Tricep Extension with Right HG IR



Supine Resisted Right HG IR with Left HG ER



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