

Biased Inter Limb Abdominal Alternation Influence on Low Back Tension and Hip Rotation Limitation

By Ron Hruska

Individuals who move themselves forward with their appendages operating under the influence of a Left AIC and Right BC pattern, usually move their right UE forward and left LE forward, with coactivated right abdominals. This predominant inter limb abdominal phenomenon is reinforced by the poor inter limb integrated left abdominals during left UE and right LE forward placement resulting in:

Low Back Tension

- Over use of the right quadratus lumborum and multifidi.
- Over dependency on the left lower trapezius and long head of the triceps.
- Over extension of the left low back primarily secondary to positional influence of the left psoas on spinal orientation.
- Over placement and regulation of the center of mass on the right side of L1.
- Over reliance on the concentric function of the right lateral intercostals.
- Over active use of the right thoracic crura for inspiratory regulation of spinal security.

Hip Rotation Limitation

- Over use of left gluteals, iliacus, psoas, and rectus femoris for femoral compensatory external rotation.
- Over development and activity of left tensor fascia latae for femoral positional based hip flexion.
- Over shortened left piriformis and obturator internus as compensatory external rotators.
- Over lengthened left ischiocondylar adductor magnus and vastus lateralis, as internal rotators, secondary to the compensatory external rotation of the femur.
- Over shortened right tensor fascia latae and pectineus as positional internal rotators.
- Over reliance on the right adductor magnus muscle positional concentric function.
- Over dependency on the right vastus lateralis as a compensatory abductor and internal rotator.

By implementing horizontal alternating reciprocal inter limb abdominal strength, followed by vertical, upright forward alternating reciprocal inter limb abdominal function, one should be able to reduce the results found from poor inter limb integration of the left abdominals.

90-90 Supported Wall Leg Lift with Alternating Resisted Arm Reach (*Integration – Supine #19*)

90-90 Supported Alternating Crossover with IO/TA (*Integration – Supine #20*)

90-90 Supported Alternating Crossovers (*Integration – Supine #21*)

Forward Alternating Reciprocal Resisted Respiratory Reach (*Integration – Standing #100*)