## Kneeling Counter Stretch

**Recommended Time:** 1min.

**Primary Muscular Involvement**:

- An aggressive demand is placed on the shoulder girdle stabilizers: supraspinatus, teres minor, infraspinatus, subscapularis, teres major, latissimus dorsi, clavicular portion of the pectoralis major and the deltoids.
- Bilateral erector spinae and paraspinal engagement.
- Elongation of the inferior sternal fibers of the pectoralis major.
- Relaxation of the abdominals.
- Moderate stretching and relaxation of the gluteus maximus due to the hip flexion.
- The rectus femoris is active in stabilizing the pelvis.
- The iliopsoas major and iliacus are slightly active in pelvic stabilization—via positional contraction—inc psoas flexing the vertabrae of the spine (T12, L1-5) and the pelvis on the femur through reversed origin-insertion action (on a fixed thigh).

**Functional purpose**:

- To reduce torso rotation and/or humeral rotation asymmetries that occur as a result of mid and upper thoracic muscle disparities, including latissimus and paraspinal disparities. This occurs by using the block as a frame of reference not allowing the torso to rotate.
- To force the torso, dropping between its two points of support (hips and arms), to automatically be put into bilateral extension throughout the lumbar and thoracic spines.
- Although a symmetrical exercise, the muscles are put in positional contraction rather than requiring bilateral engagement and therefore can be used early in a sequence addressing sagital deviations of the spine (C-curve and S-curve scoliosis). In such a case there is elongation of spinal erectors on the side of contracture and recruitment on the apex side of the scoliosis. Also addresses internal and external obliques whose dysfunctions can contribute to rotation in the coronal and sagital planes.
- The greatest emphasis is placed on the thoracic back because of the primary axis of rotation created at the shoulders.
- To reduce vertebral body transverse rotation (as seen in scoliosis), as well as lateral offsets at lumbar and thoracic sections. This is accomplished through the frames of reference used in the position forcing elongated bilateral extension, thus traction-like pull on each segment.
- The lumbar spine goes to extension due to the gravitational pull on the viscera. This allows the pelvis to rotate anteriorly (secondary axis of rotation).
- To reduce pelvic rotation (both in the sagittal and transverse planes). This is accomplish through the fixed femur position, using the floor as the frame of reference not allowing the pelvis to rotate (transverse plane) but rather only rotate anteriorly.
- To teach true hip extension (relative to the thorax) on a vertical load, by the femur being fixed in a constant 90-degree angle at the knee joint. Rectus femoris assists to actively stabilize in this position.

- Requires a bilateral engagement of the erector spinae to stabilize the spine once it's in the extended position.
- Can assist in reducing unwanted motor unit activity in trapezius 1 & 2 by the repositioning of the scapuli on the thorax.
- Can be used when a standing counter stretch cannot be performed properly.
- It can be used to eliminate a torso rotation due to unilateral erector engagement.
- Will effectively address the thoracic back with minimal hip involvement.

**Contraindication**:

- History of glenohumeral dislocations or subluxations
- History of a glenoid labral tear
- An active rotator cuff impingement or tear
- Excessive kyphosis (thoracically bound) that may inhibit scapular retraction, thus causing excessive glenohumeral strain
- The inability to support one's self in the described position