

Core Statics II

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Remember those old school iron workers? These guys had some massive cajonies! Safety harness? What's that? Hard hat? Who needs one? Hey...where did Paul go? Check out those dudes on the left side. Don't mess up the rotation!

These guys understood the idea of building a strong framework and foundation. That is the idea we are discussing here. In [Core Statics Part I](#) – we showed all the benefits and basic concepts to stabilize the athlete during movement. In Part II of this article series we will continue on with more complex movements while still facilitating and forcing unwavering balance and stabilization of the core musculature (and the entire body mechanism.)

Core Statics –Side Shuffle –AD’s

What are AD’s? Alan DeGennaro’s. Alan, an incredible sport performance coach (you’ll remember he helped Dave Tate, with his mobility assessment and correction) (3), had a similar preloaded movement in his *Needs Analysis for Baseball (4)* presentation back in 2001 at the NSCA PA State Clinic I attended. The only difference was he was facing the position of the band attachment, but the band was still wrapped around his back and locked around his shoulder as I am demonstrating. He was stepping and engaging 20-30 degrees torso rotation to show imbalances and correction of movement. This exercise is a variation upon Alan’s original idea.

Key Points:

- § Bands anchored at any level (midline in picture)
- § Athletic Position / Movement – see [Core Statics Part I](#)
- § With each step, the goal is to keep the torso in the exact same position, parallel to the force directed along the line of the stretched band
- § Reverse the lower body lateral movement to return back to the starting point, and go again.
- § What you’ll notice
 - Your breathing will become labored with each step, as the stabilization requirement increases
 - The dynamic stabilization of your shoulders, spine, hips, knees and ankles will be significant
 - Preventing and statically controlling the rotational torque across the spine requires significant control and focus



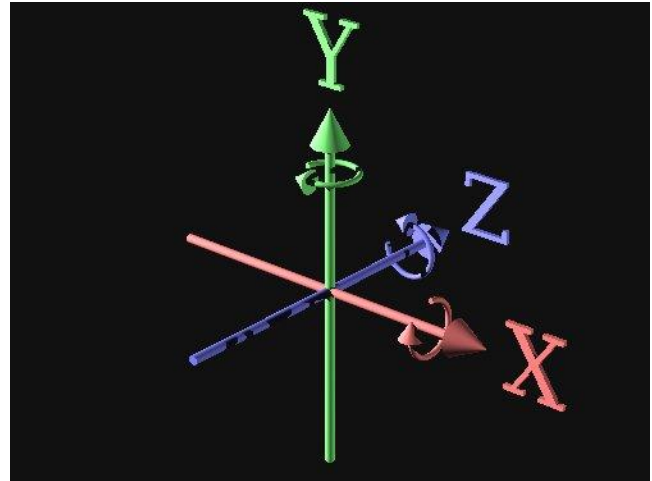


Core Statics – Movement

Up until this point, we've seen lower body (trunk) movement with stabilization and balance, in addition to, progressive loading of the static / fixed torso.

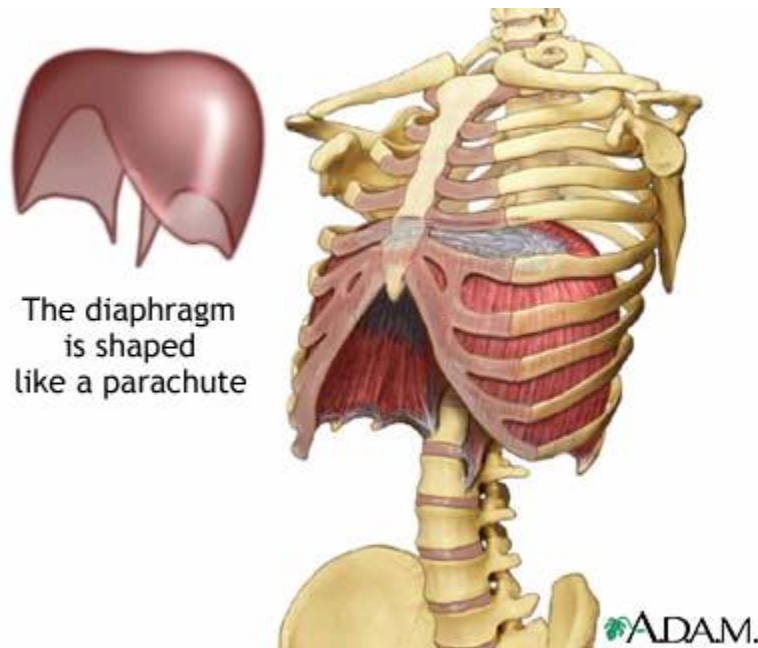
Now, we are going to add motion to the upper body which will;

- § increase the difficulty of the movement
- § facilitate coordination and firing of the muscle groups that cross each other, and therefore must sequentially or simultaneously fire (along with the balancing contraction of the antagonists)
- § proprioception / kinesthetic awareness - one's sense of movement as it relates to movement of the body and how it is oriented in 3-dimensional space.
- § instability training has the potential to have a functional transfer to sporting skills requiring balance.
- § the forward / lateral / backwards / rotational motion against the band tension will positively impact quickness, agility and core centering



Core Statics –Side Shuffle –AD’s w/Motion

Now we are going to hit the AD’s with rotational upper body movement. Take the movement laterally as it is described above and randomly rotate your torso against the resistance of the band (or with each step.) Focusing on the segmental contraction across the abdominals – from the TA out and across the obliques. This contraction is generated first with the breathing.



Because the torso is under tension, your breathing will already be labored. For greatest potential strength, your breathing should be initiated with the diaphragm with the sensation of your belly “filling with air.” Once it is full, contract hard and rotate. The foundation you will feel during the movement will be unwavering.



Another variation would be to hold the band in your hand (at 90 degrees shoulder flexion), stretched across your back in the same setup as the AD's w/Motion above.





Core Statics –Rotations

Simple rotations against the tension of the band - as you move forward you are statically contracting to “prevent” hip hyperextension (ie. statics). Hit a 180 degree rotation with every step, and by the time you are at full band extension, you will be exceeding the lactic acid threshold (LAT) with extreme prejudice.



Core Statics –Forward Lunge –Uni-Lateral Rotation

Simple forward lunge with band uni-laterally positioned (loaded) overhead (180 degrees shoulder flexion), thumb pointing backwards. Drive off the back leg into a full lunge, and as you move into knee flexion, rotate across your body trying to touch the outside of the lead leg with the hand holding the band. Significant stabilization of all of the major joints; shoulder, hips, knee and ankles is required during this movement. And as always, with each lunge (and rotation) forward, the band tension increases.





Core Statics –Backward Lunge –Uni-Lateral Rotation

Same as above, but much more difficult with the backward lunge. If you cannot stabilize, you will fail.



Core Statics –Forward Lunge –Bi-Lateral Rotation

Band in each hand (90 degrees shoulder abduction) - forward lunge with a lateral (left and right) rotation.





Core Statics –The Crab w/Motion

Here is the Crab exercise described in [Core Statics Part I](#). But, in this variation, with each movement backward, the athlete will extend his hips into each of the 3 movements; laterally right, center (through) and laterally left. Then the athlete proceeds back with another step and repeat.





Core Statics –Side Shuffle w/Rotation

Exactly like the Side Shuffle (lateral lower body movement, upper torso fixed at 90 degrees shoulder flexion) discussed in the previous article, but with each step (as the band tension increases) the athlete will engage a full rotation. Loading of the ankles, knees, hips and shoulders – the athlete will move into double extension (knees, hips) and horizontal (transverse) abduction and external rotation of the shoulder. Great exercise!



Take a few steps and repeat the movement pattern under more tension(load.)



Core Statics –Backward w/Rotation

Driving backward (similar to sled dragging and great for knee rehabilitation) – with each step the athlete will stop and laterally rotate left and right with straight / fixed arms at 90 degrees of extension. The quads, hamstrings, gluteals crossing the erectors and loading of the lumbar and thoracic spine are very apparent with this exercise.



Well there it is, Core Statics. There are variations I didn't touch on, but be creative and you'll find them. Thanks for checking out this article series and I look forward to your feedback. Build your foundation and force balance and stabilization in all planes of motion in your training.

References:

1. Smith, Jim, *Core Statics*, www.DieselCrew.com, 2006.
2. Cook, Gray, *Functional Movement Screen (FMS™)*, www.FunctionalMovement.com, 2006.
3. Tate, Dave, *Having a Blackberry Doesn't Mean You're Mobile*, www.EliteFTS.com, 2006.
4. Degennaro, Alan, *Needs Analysis for Baseball*, NSCA PA State Clinic, 2001.