

## Core Power II

“Practice doesn’t make perfect, it makes permanent in motor control circles.” Stuart McGill

In my previous article on Core Power, certain sub-topics were covered: What is the core; core function; the difference between local and global muscles; core injury - ending with Dr. Rob’s 3 favorite exercises for core activation.

In this article, I will take you through some advanced progressions and ideas on achieving core power.

**Front Plank** – once you are able to hold the plank steady for 1 minute, you are ready for this challenge.



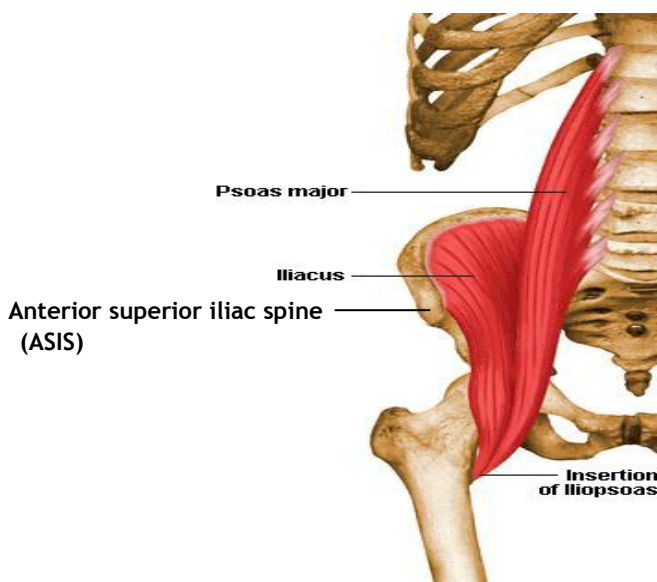
Front plank on elbows



Front plank on hands

- Start with arms bent, forearms resting on the floor
- Use the core-bracing technique as discussed in previous article
- Raise 1 hand onto palm, and then raise the other so that you’re now in plank position
- Go back down onto forearms – beginning position
- Repeat

Note: you are now activating a higher level of resistance (switching from slow-twitch endurance fiber to fast-twitch fibers)



Let’s now look at some global muscle (responsible for controlling your body movements). The psoas major (a hip flexor and lateral spine stabilizer). The psoas muscle is a key player where it is usually chronically tight, which causes the hip to be externally rotated with the foot to be everted. Other problems with this structure may manifest biomechanically as poor posture with the pelvis tilted forward and low-back pain. Additionally, a shortened or fibrotic psoas can impact the biomechanics of a broad range of physical activities, including walking, running, and cycling.

Here are my most effective ways to stretch the full hip-flexor complex.

## Psoas stretch



**Fig. 1**

- ½ kneeling psoas stretch.
- Stretching the back leg
- Palpate ASIS (see illus.) not allowing the trunk/pelvis to twist



**Fig. 2**

- Standing in lunge position
- Stretch the iliacus and hip portion of the psoas muscle (iliacus crosses the hip joint; psoas crosses the hip and all lumbar joint)
- Palpate the psoas tendon



**Fig. 3**

- The isolated psoas stretch is different from a typical “hip flexor” stretch , which requires not only hip extension, but also torso lateral bending and slight twisting to isolate its tension from iliacus.



This Janda sit-up provides resistance to the posterior ankle/heel area so that the participant can contract the

hamstrings while attempting to curl the trunk/abdominal region.

- Janda sit-up builds abs with less stress on the hip flexors
- Contracting the glutes/hamstring inhibit the hip flexors from contracting. No load on the spine

### Glute Activation

Glute activation, or more importantly, lack of glute activation may be the root of many of our evils.

The inability to activate the glute max and medius stands out as the root cause in the following syndromes.

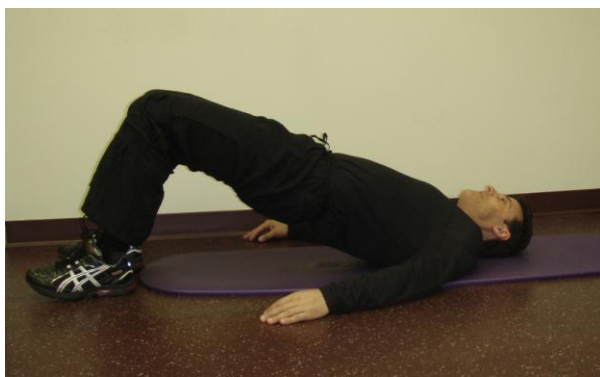
- 1) Low-back pain related strongly to poor glute max activation (poor glute function will cause excessive lumbar compensation along with tight hip flexors)
- 2) Hamstring strains relate strongly to poor glute max activation (think about synergistic dominance)
- 3) Anterior hip pain relates strongly to poor glute max activation (this relates to poor biomechanics of the hamstrings as a hip extensor)
- 4) Anterior knee pain relates strongly to poor glute medius strength or activation



### Quadrupedal hip extension over bench

The rigid bench attempts to eliminate any lumbar movement by blocking pelvic movement with the bench in helping the participant understand glute isolation, therefore, glute firing.

- Begin with hip bones in contact with the bench
- Brace abdomen
- Extend hip with a bent leg
- The bending of the leg shortens the hamstring making it a less effective hip extensor and placing more emphasis on the glute



### Glute bridge

- Lie on back with knees bent
- Dig heels into floor

- Squeeze glutes at the bottom
- Press your hips upwards off the floor into extension by contracting the glutes
- You should be making a 90 degree angle between your lower and upper leg



### Glute march

- Same as the glute bridge
- Extend one leg straight out one at a time
- Hold for 2 counts
- Switch legs

### External Oblique

The external oblique does not have a thoraco-lumbar insertion, as a result, is typically neglected in most stabilization programs. One of the primary functions of this muscle is creating a posterior tilt of the pelvis. If we look at lower-limb posture, we will most commonly see an anterior pelvic tilt (tight psoas and de-activated glutes, etc...) therefore, the strength of the external oblique is a key ingredient in lower back and lower limb function.



### Foam-roller alternate crunch

- Lie on foam roller
- Brace abs
- Bring opposite side knee to elbow (e.g. left knee to right elbow)

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