



Peak Performance Therapy, LLC

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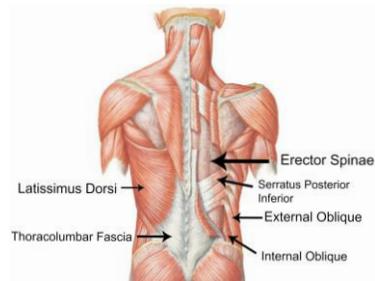
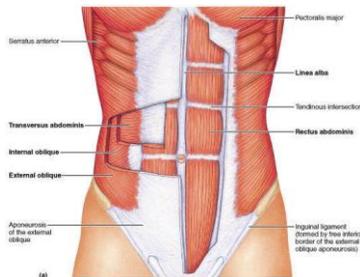
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What is my core anyway?

As a Physical Therapist, it's great to hear how many of my patients refer to working on their "core". My next question is usually, "what specifically do you do for your core ". The usual response is, "well, I do planks, sit ups, and that back extension machine."

Don't get me wrong, I am so glad my patients spend any time on their core. Ten to 15 years ago, very rarely did any of my patients include any core exercises in their work-out routines. It has become much more mainstream. But I sense a lack of true understanding of what is, in my opinion, the most important and complex muscle system in the body.

The core can be divided into two basic systems, the inner or deep core and the outer or superficial core. First let's start with what is most familiar, the outer core. The function of this more superficial system is to provide movement of our trunk and stiffness. It is what we call a phasic system meaning it activates when we need it and turns off when we do not. Muscles included in this system are the rectus abdominis, internal and external obliques, the latissimus dorsi, and the paraspinals (iliocostalis, longissimus, semi-spinalis). These are the muscles we can palpate or feel with our fingers.



When we change the position of our body, this superficial system produces the actual movement of our trunk or torso. It tends to activate quickly and can produce high amounts of force. When we push, pull, or lift something heavy, our body uses this system to stiffen our trunk so our body has a stable base.

Now let's transition to the lesser known core system. The inner or deep core functions quite differently than the superficial system. This system is designed for stabilization, endurance, and low intensity contractions. It includes the multifidus, transversus abdominis, the pelvic floor, the diaphragm, and a portion of the iliopsoas.

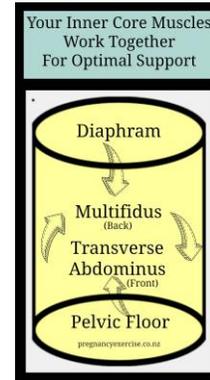
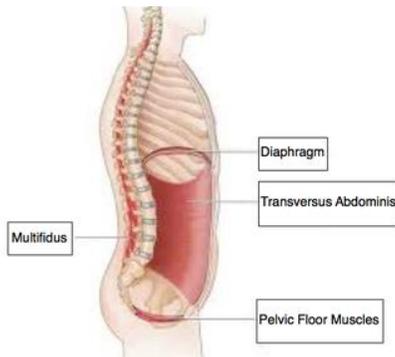


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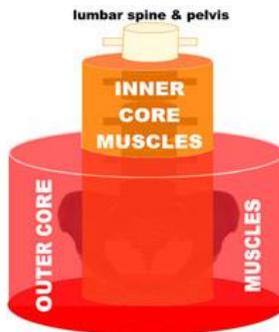
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This deeper system surrounds the spine and forms an inner cylinder that produces stability when we sit, reach, walk, or really during any movement of our body. It is an anticipatory system and contracts very gently just prior to us moving our arms, legs, or trunk. It tends to stay on throughout completion of movement and then relaxes slowly when we become still.

These two muscle systems work together, subconsciously, to allow the very complex movements we need to function. To move optimally, we need stability and power. For example, when we swing a golf club, our inner system must activate prior to movement to provide spinal stability. The outer muscles then activate to move the trunk into rotation. Both together provide a stable base so we can move our arms from backswing to follow through with control.



Stay tuned for my next few posts that will discuss what common core movement dysfunctions I see in the clinic and how to fix them.