



What is the Core? Am I Really Working It?

What is “the core” is a question that many people ask themselves. We hear lots about the benefits of working the core and people swear by it. Some people strengthen their core to prevent injuries, some people strengthen it while recovering from an injury and others just keep trying to make it stronger so they can perform better. But what is the core and are you using your core correctly?

The core is not a power house muscle. It consists of endurance muscles which are meant to stabilize the spine to allow the power muscles such as your glutes, hamstrings, lats, abdominal and adductors work more effectively.

The core consists of two units - an inner unit and an outer unit. Unfortunately, most people who think they are working their core are only working their outer unit as they have not been taught to contract their inner unit correctly. Working the outer unit without the inner unit only encourages a faulty movement pattern and strengthens the already over dominant outer unit.

Why train the core? When we use our inner and outer unit correctly it allows our other muscles to be much more efficient. The inner unit which lies closer to the spine can stabilize while our muscles further from the spine, the outer unit, can contract more efficiently and generate power. If we use our outer unit to stabilize, these muscles fatigue much more quickly and as a result we lose power which leads to further fatigue.

The inner unit is the most important part of the core and consists of the transversus abdominis, pelvic floor, diaphragm and multifidi. The transversus abdominis (TA) connects to the lower six ribs, the top of the pelvis (the iliac crest) and blends into the thoracolumbar and abdominal fascias.

The TA when contracted properly flattens the stomach. You can learn to contract the TA by lying flat on your back with your knees bent and feet flat on the floor. Place the finger tips of your right hand on the top of your pelvis and feel the boney ridge. Next, slide your fingers towards the center of your stomach approximately 2cms. This is where you will feel the TA tighten up when you contract it properly. Now you are ready to start working your core. In this position, contract your pelvic floor; you do this by contracting the muscles like you are trying to stop yourself mid flow while urinating. Or, use your stomach muscles to pull your belly button down towards the floor and up towards your nose in a “J” direction. It is important not to let your rib cage expand too much like a skinny kid trying to show off his ribs. If this happens, you are contracting your diaphragm too aggressively and you won't be able to breathe properly. Try to hold this contraction for 10 seconds and repeat gently 10 times; only once you can isolate the TA. Remember not to hold your breath.

Once you have mastered the TA contraction the next step is to recruit the multifidi. The multifidi run the entire length of your spine. These muscles are very important as they are part of the inner unit and control movement through stabilization. To recruit the multifidi stand up with your arms by your side. Place one hand on your back and with the finger tips of that hand locate your spine,



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the boney ridge running down your back. Slide your fingers approximately 2cms towards the side of your body this is the location that you will feel your multifidi contract. Now contract your pelvic floor and TA as instructed above and then try to lift your free arm out in front of your body while tightening the muscles under your fingers. Most of you will have difficulty with this at first. You will notice that the muscles will tighten with the movement of your arm. This is the opposite of what should happen. You want to be able to tighten your core first then move your extremities not move then tighten your core.

If you were trying to push something over you would anchor yourself first then push. When we push then contract our core it is like trying to push something over while standing on roller blades. By training ourselves to contract our inner unit first we are providing a strong stable support system for the larger muscles of our outer unit to pull on, therefore, allowing them to generate more power.

The final step is getting the pelvic floor, TA and multifidi all to contract simultaneously, therefore, providing an extremely stable base for our outer unit to pull on. Once you have mastered this, you are ready for all those ball exercises you see everyone doing but don't forget to recruit your core as you did above with every exercise you do on the ball.

The ball isn't the only place to work your core. Try contracting it while you're training. Start out by contracting your core just before you do your flip turn in the pool. Contract your core while you are out on the bike and on your run try to hold it until you reach the next tree or round the next bend. The more you think about using your core while training the more automatic it will become and before you know it, you will be using your core without even knowing it. Remember to keep breathing while you're holding your core tight, this takes practice.

Tri-athletes who use their core correctly find themselves feeling more streamlined in the water, have more energy on the bike when climbing hills and feel more relaxed when running. If you want to prevent injuries and improve your times you need to strengthen your core.

Go ahead and give it a try!