

***Core Strengthening: The Sports Specific Exercise Program for Any Athlete***  
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The athlete's "core" is the group of structures that surround the spine and pelvis to provide a stable base from which the legs and arms work. The core muscles are the muscles of the abdomen, hips and spine. It is sometimes referred to as the body's *powerhouse* or *engine*. All power is generated in the core and then transferred into the extremities. It is where the power of a golf or baseball swing originates, how a swimmer is propelled through the water, how a football player maintains his center of gravity while tackling, how a soccer player kicks a ball accurately and how a pitcher generates velocity. It is often overlooked in athletics as conditioning and rehabilitation often focuses on the extremities.

The reason core strengthening is so vital to an athlete is that it improves their balance and functional strength. Evaluation of the core should include assessment of posture, flexibility, strength, endurance, and stabilization because it goes hand in hand with athletic performance. A strong core also decreases the likelihood of injury by providing a stable base from which to tackle, jump, throw and kick. Inadequate lower extremity stabilization may cause a pitcher to rush through the delivery and place increased loads on the shoulder or elbow or a gymnast to land inappropriately and tear a knee ligament. 30% of football players will miss at least one game due to low back pain. Therefore a core program should be incorporated into any low back conditioning or rehabilitation program as it strengthens and provides stability to the spine.

Athletes must display appropriate core strength, stability, and movement control of the core in order to produce athletic movements. A thorough evaluation of the core should take place to determine possible weak links along the chain. The Big Country has many great trainers, therapists and sports medicine physicians that can help the athlete identify these "weak links". Many local gyms now have classes such as swiss ball, pilates, and yoga classes that focus on the core. An athlete with a strong, stable core will be able to transfer energy efficiently, with more power, and with less stress on the arms and legs. This makes for a productive, successful athlete.

For more information on specific exercises please visit my physician bio at [txsportspine.com](http://txsportspine.com) to read my Core Strengthening textbook chapter.