

The Fundamentals of Core Stability

First Principle: Core Stability is based on our ability to maintain a locked ribcage on pelvis.

This is accomplished with the muscles and connective tissue of the middle core—the transverse abdominals, the external obliques, the internal obliques, the lumbar multifidi, and the thoracolumbar fascia. Viewed as a singular functional unit, these structures attach anteriorly along the ribcage and pelvis, wrap around the waist, and insert posteriorly onto the spine. In effect, they secure our ribcage to our pelvis.

Exercise Objective: Increase submaximal endurance of middle core muscles.

Second Principle: Core Stability is dependent on proper neuromotor communication. This is accomplished with the small, single-level muscles intrinsic to the spine—the rotators, the multifidi, the interspinalis muscles. These muscles act as position sensors and must relay information to the brain constantly to communicate stresses on the body so we can respond properly to these stresses.

Exercise Objective: Improve reaction time of inner core muscles.

Third Principle: Proper hip mobility greatly affects our ability to maintain a stable core.

Our hips are the power plants of the body. When our hip muscles are tight and inflexible, we tend to shift power demands from the hips to the back. Our spines are designed for endurance and reaction time, not power.

Exercise Objective: Improve hip mobility to decrease power demands on spine.