



# Core Stability and Junior Performance

BY KJERSTEN MARLOW

Golf is a complex sport that requires all of the joints of the body to move through a full range of motion at a high rate of speed. The golf swing produces maximal rotational, compressive and shearing forces on the spine, as well as on the shoulders. When the swing is performed repeatedly over time, certain areas can collapse under pressure, namely the low back and shoulders. Medical and fitness professionals have found that golf performance and injury prevention are directly influenced by core stability.

Junior golfers generally have more than ample hip and upper spine mobility, but they often lack the ability to control their range of motion to maintain the correct swing path.

According to Jeff Robinson (Capital Golf Range Owner/Top 100 Golf Instructor), “The bodies of junior golfers are always changing... with growth spurts, maturation and hormones. A critical component of controlling their golf swing is to build a solid foundation to support these changes.”

Awareness of how to activate and use the core muscles properly, with correct timing and sequencing, is the key to influencing power and swing speed. When juniors use their core muscles to stabilize properly, performance has no limit.

The training of internationally-ranked junior golfer, Akshay Bhatia, 14, began with learning isolated activation of his core/stability muscles. We then progressed to combining multiple groups of muscles to maximize proper swing sequencing and control. By beginning a golf-specific fitness program with a clear understanding of how to activate his stabilizers, Akshay better controlled his swing, reduced his injury risk and improved his accuracy, consistency and distance – resulting in drives of more than 300 yards.

Physical training to enhance golf performance and prevent injury begins with proper awareness and utilization of those core muscles. Visualize the low back, pelvis and hips as being contained within a “box,” then consider that we train stability of all four sides of the box. Each side is made up of a specific stabilizer muscle(s):

- 1) **Diaphragm** (Top of the box – internal spine stability and general endurance),
- 2) **Transverse Abdominus** (Front of the box – bracing of the lower spine),
- 3) **Pelvic Floor** (Bottom of the box – supports the underside of the pelvis/hips) and
- 4) **Multifidus** (Back of the box – maintains a lengthened and stacked spine).

When the core “stabilizers” are properly activated, the “power-producing muscles” (especially the **gluteus maximus**) are positioned to maximize energy transfer to other joints and propel the hips and pelvis toward the target.

Discoveries in golf swing biomechanics show that improving control of your lower body will increase your ability to coil your spine into your backswing and allow for a more solid swing. Rotation in the golf swing should mostly occur in the hips and the upper spine. Stability, with active control of the pelvis and lower back, creates a stable base that harnesses speed and promotes proper energy transfer through the end of the golf club.

Juniors to seniors, amateurs to pros, can all maximize their golf swing with an organized program that begins with stability training and builds on a solid foundation.

*Kjersten Marlow, MPT, TPI Level 3 Certified Medical, SFMA, is an owner/physical therapist at TherExcel Sports Performance and Physical Therapy, in Raleigh, NC.*



The address is a vital component



Strive to control your lower body



Stability is key throughout the swing



Good rotation creates a stable base



Balancing all four elements of the “box”