

# what is by Dr. John Spoto core strength?

Core strength is a difficult concept to define but easy to recognize. The explosive power of a Michael Jordan dunk, the distance of a Tiger Woods drive, the balance and control of Wayne Gretzky, or an awesome header by Abby Wambach are all examples of athletes demonstrating core strength.

We all have core muscles. They are your strongest and largest muscles which produce movement around your center of gravity. They connect your upper and lower body movements when running, jumping, pushing, pulling, climbing, or throwing. They also constitute your "power zone" which radiates outward in concentric circles during power movements in sport, work, or everyday activities

Why is core strength important? Because the ability to move with power is a distinct advantage to an athlete, laborer, or homemaker. To optimize an individual's ability to move and act with power, movements must be coordinated and performed with balance. Your muscles must be flexible to move through a full range of motion. Power enhances the ability to accelerate through a movement or change of direction

Whether you are a basketball player attempting an ankle-breaking cross over, an "industrial athlete" pushing a lawnmower, or a homemaker mopping a floor, core strength is essential to accomplish your task efficiently with less chance of injury.

But don't confuse power with strength. Exercises such as the bench press, seated arm curls, or sit ups tend to increase strength, but do little to improve core strength and therefore power. These tend to isolate individual muscle groups and are not ground-based, so there is no transfer of power from the lower extremities through the core to the upper extremities. They may be important, but they do not increase power production significantly. By contrast, systems like Pilates, yoga, tai chi, or step aerobics do include most or all of the components necessary to improve power.

The training programs of many college and pro athletes may utilize some of the above systems, but the emphasis will be on ground-based activities requiring full body movements against resistance. This type of "sports performance" training includes plyometrics, ballistics (medicine balls), and free weights. It also emphasizes Olympic and accessory lifts. This approach to training stimulates power production and enhances coordination, balance, flexibility, and agility. And the good news is that the training concepts these elite athletes utilize are now available to the general public.

WANT TO IMPROVE YOUR OWN CORE STRENGTH? Stand about a foot from a wall with your spine flat against the surface and your feet shoulder-width apart. Tighten your abdominal muscles to flatten your spine to the wall. Slowly slide down until your knees are bent to 90 degrees keeping your head, spine and pelvis against the wall. Hold for 10 seconds and return to standing by pushing off your heels. Relax and repeat.



ABOUT THE AUTHOR Dr. John Spoto graduated from SUNY Cortland with a BS in Physical Education and Athletic Training. While there he played football and lacrosse. He obtained a Doctor of Chiropractic degree in 1982 and is now the CEO of Star Physical Therapy and Sports Performance. He is married to Dr. Marcia Miller and they have six children. Dr. Spoto can be contacted at [starsportperformance@hotmail.com](mailto:starsportperformance@hotmail.com).

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