

about the
AUTHOR

Kyle Brown is a health and fitness expert whose portfolio includes everything from leading workshops for Fortune 500 companies and publishing nutrition articles in top-ranked fitness journals, to training celebrity clientele—from pro athletes to CEOs to multiplatinum recording artists. Kyle's unique approach to health and fitness emphasizes nutrition and supplementation as the foundation for optimal wellness. After playing water polo for Indiana University, as well as in London, Kyle became involved in bodybuilding and fitness for sport-specific training. Kyle is the creator and Chief Operating Officer for FIT 365—Complete Nutritional Shake (www.fit365.com).

Touch Your Core With Light Load/High Velocity Resistance Training

One of the hottest fitness trends in the last decade has been core stability training. Unfortunately, this trend has led many athletes, as well as personal trainers, to move away from training major muscle groups and instead design entire workout programs around core training. Yet, as new research suggests, core strength does not significantly contribute to overall strength and power and shouldn't be the main focus of a workout program (1). Many bodybuilders do not even do isolation movements for their core as they are aware of the fact that in nearly every standing resistance training exercise, the core must stabilize. Yet, while developing a strong core is important for increasing athletic performance, reducing likelihood of injury, and reducing existing pain levels, a strong core can be developed by stabilizing while simultaneously training your major muscle groups. A unique way to torch your core is with light load/high velocity resistance training, as you are able to train with high intensity at a sprinter's pace.

A core stability exercise can be defined as “any exercise that channels motor patterns to ensure a stable spine through repetition” (2). Therefore, for example, squats, pull-ups, and standing overhead presses are all core stability exercises as they all require the core to stabilize. If your goal is to develop core strength and power while training major muscle groups, training at a high velocity can challenge your core. These explosive movements are very fast-paced, intense, high-energy, anaerobic movements that require a lot of muscle groups to fire simultaneously. This type of training allows the athlete to rapidly accelerate and achieve maximum velocity on every repetition. Moreover, the power output in a short amount of time is astounding. For example, if an athlete is able to do 25 repetitions with 40lbs cable presses in each hand (80 pounds total) in 20 seconds, that is 2,000lbs of power output in 20 seconds.

Rather than focus on how many repetitions to perform, instead focus on completing the maximum number of repetitions within a given time frame with high intensity and proper form. I cannot stress enough the importance of maintaining proper biomechanics while training at high velocity, as it will not only prevent injury, it will also effectively engage the proper muscles and lead to a more challenging workout. Too many times athletes, as well as trainers, sacrifice proper form for speed.

To increase core activation, perform these exercises in a less stable environment. Marshall and Murphy compared muscle activity in the rectus abdominis, transversus/internal oblique abdominis, external oblique abdominis, and erector spinae when push-ups were performed on a Swiss ball versus a stable floor. The results demonstrated that at the top portion of the push-up, with the hands positioned on a Swiss ball, there was significantly greater activity in the rectus abdominis (35% vs. 9% of maximal activity) and transversus/internal oblique abdominis (33% vs. 13% of maximal activity) (3). ■

References

1. Nesser TW, Lee WL. The relationship between core strength and performance in Division I female soccer players. *JEPonline* 2009; 12(2):21 – 28.
2. Verstegen, M, and Williams, P. Physioball routine. In: *Core Performance*. New York, NY: Rodale, Inc., 2004. pp. 73 – 88.
3. Marshall, PW, and Murphy, BA. Core stability exercises on and off a Swiss ball. *Arch Phys Med Rehabil*. 86: 242 – 249. 2005

Table 1. Sample Low Resistance/High Velocity Workout

Movement	Sets	Time
Alternating Power lunges into cable standing chest fly	3	30 seconds
Squat Rows	3	30 seconds
Medicine Ball Squat Presses	3	30 seconds
Cable Standing Punches Staggered stance	3	30 seconds
Cable Squats into Curls	3	30 seconds
Medicine Ball Overhead Throws	3	30 seconds
Resistance Ball Cable Chest Press	3	30 seconds

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