



FACT SHEET

Strength & Conditioning



Julia Mancuso, US Women's Alpine Team

CORE TRAINING

Every athlete loves training the core. Sure, hammering the core allows for a confident day at the beach, especially after lubing up with suntan oil. Additionally, a strong, balanced core can improve performance while preventing injury.

Defining the Core

Many people, including athletes and coaches, commonly assume that the core consists of the abdominals and obliques. On the contrary, all the muscles acting on the pelvis make up the entire core. Among the most active muscles in the body, the core musculature initiates movement, while stabilizing the body during these movements. As one launches out of the pipe, bounces down the moguls, or shreds around a gate, the core muscles remain active. They control the movements of the hips and trunk while working together to provide coordinated and efficient movement of the entire body. Overall, proper core function allows for optimal force and power generation while minimizing injury risk.

Training the Core

Without a doubt, nothing activates and develops the core musculature more than heavy resistance training with free weights. However, relying on this type of training to develop the core has one major limitation. If the body already has existing imbalances, or, if improper exercise technique causes these imbalances, then the heavy exercises can exacerbate these deficiencies. Imbalances between the core muscles can stimulate neuromuscular compensations which can in fact lead to possible injuries at other places in the body such as the knee, hip, low back, and even the shoulder. Therefore, it is important to supplement the training program with a well rounded core program. Remember, training the core doesn't only involve abdominals and obliques. Training the core should evenly address every muscle acting on the pelvis. Ray et al (1992) state that "you can do side bends or sit ups, but please don't lose that butt!" This is good advice because training the core should include balanced development of the abdominals, obliques, spinal erectors, hamstrings, glutes, hip flexors, hip abductors, hip adductors, and hip rotators. Many movements synergistically activate these muscle groups, but all of them should be considered when training the core.

Basic Core Routine:

Front Stabilization: 1 min.
Side Stabilization: 1 min. ea.
Isometric Hip Extension: 1 min.
Side Lying Hip Rotation: 20 ea.
Quadrapped Diagonal Arm/Leg Raise:
20 ea.

Advanced Core Routine:

Hanging Bar Kicks: 15
Side Bridge w/Hip Adduction: 20 ea.
Weighted Glute-Ham Raise: 15
Hanging Wipers: 8 ea.
Stading Rotational MB Throws:10 ea.

References

1. Ray, Anthony. 1992. *Baby Got Back*. American Recordings. Los Angeles