

# Core Control: The Heart of It All

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Running and control are two words that often go together. When running you control many things such as your pace, your heart rate, and your stride length. The foundation for a stable running foundation are the muscles that make up your abdomen, back, and hips, collectively called "the core." With the assistance of a strong core, controlling your form is easier and can make running more pleasurable and also assist in reducing injury risk.

As part of a comprehensive injury prevention program, core strengthening has received a lot of attention recently. Before beginning a well-rounded core strengthening program it is important to first know what exactly the core is. "Core" is the term used to refer to the muscles that attach to the spine and pelvis. This includes the abdominals (such as the rectus abdominis, internal and external obliques), muscles that run along the spine (such as the erector spinae), as well as muscles that cross the hip joint (such as gluteus maximus and gluteus medius) and muscles that cross into the shoulder complex (such as rhomboids and trapezius). As you can see, the core encompasses a wide range of muscles. It is the center of our bodies used as a base for all movements, especially running. Having a strong core improves your ability to run efficiently and helps keep your body in good alignment which aids in the prevention of injuries.

With so much involved in the core it can be intimidating to come up with a program targeted to strengthen all of those muscles. To simplify things, there are three main muscle groups runners should focus on: the rectus abdominis, gluteus maximus, and medius. These muscles are active throughout the running gait cycle and can be activated with many different exercises. Here are three of the basics to get you started:

**Forward Plank:** start by laying flat on your stomach. Lift your body up using your forearms/elbows and toes as points of contact with the ground. Make sure to keep your back flat. You don't want to feel like your low back is sagging towards the ground or like your bottom is sticking up in the air. Perform 10 sets for 20 seconds.

Muscles active with this exercise include: rectus abdominis, erector spinae, gluteus maximus, rhomboids, traps

**Side Plank:** start by laying on your side. Lift your body up using your bottom forearm/elbow and bottom foot as points of contact with the ground. Keep your top hip pointed towards the ceiling without leaning your body forwards or backwards. Perform 10 sets for 10 seconds.

Muscles active with this exercise include: gluteus medius, gluteus minimis, adductors, internal and external obliques.

**Single Leg Bridge:** start by laying flat on your back with one knee bent to 90 degrees/foot on the floor with the other leg extended out straight/foot 24-36 inches from the floor. Push through the foot on the floor lifting your hips up off the ground. Keep your hips even without allowing the extended leg's hip to drop. Hold for 5 seconds and lower slowly before repeating on the other side. Perform 10 sets for 5 seconds on each side.

Muscles active with this exercise include: gluteus maximus, erector spinae, hamstrings

It is important to remember that if you have pain with any of these exercises you should stop immediately.

Performing these exercises after you run will help to strengthen your core muscles and put you on the road towards a more controlled running form.

Happy Training!  
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