



## EXPERT TRAINING TIPS: A Four Part Series

Hit the Ground, Running or Walking: A Ground-Up Approach to Maximizing your Running and Walking Programs

### Part 4: The Thoracic Spine

*Getting “Back” Into the Swing of Things: What Runners and Walkers Should Know About Spine Function for Optimizing Their Stride*

Maximizing stride efficiency is a common goal of many runners and walkers. While the feet, ankles, knees, hips and “core” get all the attention, enhancing the function of your mid-back can help further your performance.

The human body is a true wonder of nature that requires many working parts to synchronize their function to optimize human movement. As many runners and walkers have learned through this article series, having a mobile ankle, a stable knee, hips that rotate and good core muscle functionality is part of the recipe for success for health and performance. As it turns out, there is yet another body segment that plays into this equation, and it’s one you metaphorically can’t turn your back on: your thoracic spine. The thoracic spine is the middle portion of your back and stretches from the base of your neck just above your shoulder blades all the way down to the top of your low back. These 12 vertebrae have a diverse capability of movement to allow you to flex forward, extend back, and even rotate your spine. Because of the wide spectrum of function in the thoracic spine, it can serve multiple purposes in human movement depending on the task. Mobility, stabilization, rotation, and body projection all come into play when viewing the thoracic spine during movement.

What does this mean for runners and walkers? With so many other factors impacting running and walking via the aforementioned joints and areas, is adding focus on the thoracic spine the straw that will break the camel’s back? In reality, giving attention to the mid-back can help positively influence movement and performance during running and walking. The low back and pelvic areas are critical for helping provide stability during your stride, but when the thoracic spine cannot function fully it places an even greater strain on the low back and pelvis to perform that task. When restrictions from your mid-back put more stress on your low-back and pelvis, functionality of your hips can be potentially limited during walking and running strides.

Additionally, when your mid-back is not mobile and able to stay upright as you walk or run, areas above it overcompensate. Since your hip action is being limited as well, your body will use your arms to help create momentum to move forward. This can lead to excessive arm action from the shoulders by swinging your arms further forward and towards your midline. The excessive action from your arms can push your trajectory off track leaving your body working against itself. In both circumstances, your mid-back can become the limiting factor to unlocking movement potential.

As a surprise to no one, our mid-back health tends to suffer as a result of our modern lives. Excessive sitting, cell phone viewing, computer work, stress and generalized poor posture impacts our thoracic spine. We flex ourselves forward and lock our mid-back into positions where it cannot optimally operate. While the mid-back can help support functionality and performance throughout the body, it serves an important purpose by itself as well. Being able to sit tall, to breathe through our diaphragm and to rotate through our spine during movement are all essential to health and performance.

Regardless of which body area is needing work, adding in elements to boost health and function of your mid-back can go a long way towards improving your overall mechanics. To help combat posture related issues, give attention to your workspace set up and make frequent standing and stretching breaks part of your daily routine. Even a quick standing and moving break every 30 minutes can help. Additionally, make sure you are working to improve your thoracic spine function by adding a simple rotation variation to bodyweight lunges in your resistance training or dynamic warm up.

Remember that your stride depends on many joints moving and working together. Giving your ankles, knees, hips, pelvis, and thoracic spine the movement they need will keep your running and walking programs moving forward!

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