# **Ergonomics of Running**



#### By Dr. Jon DeGorter, DC

Posture is not only important when you are standing or sitting, it is essential while running. Good running ergonomics reduces tension and strain, which helps prevent muscle fatigue. An important element of your running form, good posture allows you to move more efficiently, which not only increases performance, but also helps prevent injury. Running efficiency enables you to run longer distances at a greater intensity with less pain and discomfort.

#### Improve Your Running Form

One of the best ways to run more ergonomically and reinforce proper body mechanics is to Run Tall. Keep your spine straight and shoulders back with a slight forward lean. Run with your head up so the chin is parallel to the ground. Running tall increases lung capacity, which will give you more endurance. Good posture contributes to a better center of gravity and helps maintain proper alignment, which will prevent injuries.

To run tall, imagine your body hanging from a string attached to the top of your head. Do not bend your head forward, which can lead to fatigue and tightness in the neck, as well as the shoulders, back and even your hamstrings. Conversely, avoid a backward lean, which puts greater tension on your back and legs.

Focus your gaze in front of you. Looking down while running puts strain on the neck muscles and spine, which leads to fatigue, especially in the latter part of your run. Relax your jaw and neck. Too much tension in your face and neck can lead to tension in other parts of your body, making for an inefficient and tiring run. Keep your shoulders relaxed and parallel to the ground. If your shoulders rise toward your ears or tense up during your run, drop your arms and loosely shake them out occasionally. It is especially important to relax muscles not directly involved in the running motion, such as the facial muscles, jaw, neck, shoulders, and hands.

A general sense of relaxation has a positive psychological effect by promoting feelings of ease, comfort and control. It can also improve performance by saving the body's supply of oxygen for the muscles needed for the running motion. Less tension gives the joints increased range of motion and more fluid movements.

#### Exercises to Improve Your Form

Strengthening and elongating the muscles involved in running will help improve your form. Creating a strong base is central to maintaining proper running form. Working on core and leg strength will help keep the core engaged during each running movement. Exercises that help build a strong base include squats, lunges and abdominal planks.

Stay flexible. To run with good form means striding properly and engaging the hips and core. This makes flexibility incredibly important to maintaining proper running ergonomics. Good flexibility makes for a strong kinetic chain. And don't forget about consistent warm-up and cool-down routines.

### **Avoiding Injury**

Think about your posture during your next run. Be aware of built up tension in your shoulders and neck, especially when running long distances. With longer mileage comes greater fatigue, and you'll find yourself running sloppy. Avoid pounding your feet and land gently. To protect your knees, avoid overstriding and instead strike your foot directly under your knee instead of in front of it. This is particularly important when running downhill.

Reset your posture with a chiropractic adjustment. When your spine and posture are out of alignment the added strain and stress on your body limits your mobility and ability to run properly. If you have recurring or persistent muscle pain or soreness, take time to recover and cut back on your training. Before your pain becomes acute and you risk losing more training time, see a sports injury specialist to evaluate your pain, identify the cause, and make the necessary corrections to prevent it from recurring.

## Cold Spring Chiropractic

Our goal is helping every athlete reach their personal performance goals. We design athlete-specific treatment plans that take into consideration your individual training goals, using joint mobilization techniques with soft tissue repair in addition to the strengthening and coordination regimens offered by physical therapy. As athletes we understand the need to repair injury without losing valuable training time.

Active Release Technique® involves intense active movement-based massage treatments, which sets it apart from passive massage techniques of physical therapy. ART® promotes faster recovery, restoration of normal tissue function and helps prevents injury by reducing scar-tissue build-up and promoting ideal muscle length through the healing process. While other therapies can provide relief, ART® combined with specific stretching and exercise heals the tissue in the shortest time with the lowest incidence of re-injury.

Dr. Jon DeGorter specializes in treating runners and triathletes, and is well versed in injury prevention and rehabilitation — keeping athletes doing what they like to do!