



How's Your Running These Days? An Overview of Proper Running Technique

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This month's column is based on my own unfortunate experience, like most of my treatment techniques that are also based on treating my own injuries! And this will force me to refute right away a popular belief: I am **not** a wicked runner; I am in fact a terrible runner. But here is how it all started...

In 1994, Orienteering Quebec organized a training camp for juniors and newcomers, with well-known coaches like Mark Adams. Mark shadowed me in one of the afternoon exercises. At the end of the day he tactfully asked me why I was only walking, and not running. I did not really know. I guess part of it was that I had never really ran (I had emerged into orienteering almost by mistake, coming from a volley-ball and downhill skiing background!). The other reason was that I was probably scared I would go too fast and make a mistake (I was a little uncomfortable by myself in the forest).

But anyhow, his great wisdom must have convinced me because the following year I started a running program. It made a huge difference, and I quickly became a much faster orienteer. Unfortunately, I also discovered that I was a rather lousy runner!

So just like Forest Gump, I kept running and running until another person made a big impression on me and changed my life once again. That was in 1996, at an orienteering meet in New York State. Mark Dominic was the person at the start. Mark, not mincing his words (as usual), told me I was running like a girl. I was not exactly sure what it meant at the time, but coming from Mark, it could not have been good. So, I started investigating and was told that my hips were rotating too much, making my legs flare out, and making me look like a little girl running.

Well, I did not care so much about the look, but it was apparently not a very efficient technique. I worked on it, and Mark stopped saying I ran like a girl (it did not of course stop him from insulting me for other reasons, but that would be

the topic of another column) – so it must had worked.

Years went by and I kept training for running, quite religiously. Unfortunately, I did not improve as quickly as I thought I should have, although my fitness in other sports, like cross-country skiing, was sky rocketing. One thing I knew for sure that was keeping me from improving was that I kept getting injured. I was afflicted with the chronic hamstring tendonitis, the low back pain and the sciatica – what a great concoction for a runner (or a *wanna-be* anyway). Little did I know at the time that all of these problems were because of bad technique...

Importance of good running technique

Good running technique is too often overlooked, thinking that it should be natural. Unfortunately, running is a lot more complicated than just a fast walk. It is, in fact, a totally different technique, and having a good technique will help you to:

- ▲ Be more efficient: correct technique can maximize the economy of running by eliminating unnecessary movement, thus transferring all of your energy into propelling you forward, as opposed to side-to-side and up-and-down motions.
- ▲ Minimize the chance of injury: during running the foot strikes the ground with a force greater than three times our bodyweight (in walking, that force is only about half our bodyweight). A combination of correct running technique and using appropriate running equipment can help reduce these landing forces and therefore the stress on our bones and muscles, minimizing the chance of injury.

The correct running technique

The first concept that I will introduce is called running tall. Running tall means running light, running on the ball of your foot and toes (not your heels) with full back extension, hips and legs extended

(do not sit down). Picture yourself barely touching the ground, or running while suspended from space by an invisible string. Check out the Running Form Assessment chart to assess your form. To develop a correct and economical running technique, you can have friends observe you and describe what they see. You can also use technique drills. Such drills imitate the correct running form, or parts of it and help your body assimilate the proper technique. The more you practice them, the better you become and the more you will be able to incorporate them in your normal running, therefore making you a more efficient and injury-free runner.

I will describe one running drill, called the *Marching Drill*. It was first described by Mark Holroyd, an exercise physiologist from the Bristol Wellness Center.

Marching Drill

This drill is performed slowly at first, but progresses in speed as your balance and stability improve. This drill should help you to focus on remaining in an upright posture, coordinating the movement of your arms with your legs and stabilizing your movement. It also emphasizes driving with the knee as opposed to the foot, all essential components of proper running technique.




1. Begin by walking slowly forward on the balls of your feet, making sure your heels do not touch the ground. Use small steps, approximately 30-45cm in length.
2. Raise your right knee (or left if you are left dominant) to hip level so that your thigh is parallel to the ground on each stride. Your right ankle should be directly under (or slightly behind) your right





RUNNING FORM ASSESSMENT

Area of your body Correct position for running

Head	Your head should be erect, with your eyes focusing far ahead. (notice figures 1-3 where there is almost no movement of the head)			
Shoulders	Your shoulders should be low, square and pulled back. Do not round your back.	Figure 1	Figure 2	Figure 3
Arms	Your elbows should be bent at about 90 degrees, your forearms being almost parallel to the ground. The motion of your arms should be forwards-backwards, but not in a circular nor linear motion, but in a very tight figure of eight motion. They should swing freely. (see figure 3)			
Hands	Your hands should be fairly relaxed, but in a fist position (thumb on top of fingers). Imagine yourself carrying potato chips between your fingers and not wanting to break them, nor drop them.			
Torso	Like I mentioned before, you want to stay tall, keeping your back nice and straight. Keeping your spine erect will allow for better movement of the diaphragm and rib cage, allowing maximal breathing capacity. Do not lean forward by bending at the waist as this increase the tension on the low back and may cause injury. (notice how straight the back remains throughout the sequence of figures 1 to 3)			
Hips	Your hips should be square and level with almost no sideways movement. Make sure they stay level throughout the entire swing of the leg.			
Legs	Your legs should be relaxed and move easily under the body like a wheel rolling smoothly along. Focus on lifting the leg off the ground as opposed to pushing off. Allow your knees rather than your feet to lead you forward. If you try to increase your stride length by reaching forward with your foot (called <i>overstriding</i>) you will cause a braking action, which both slows you down and sends important shock waves up through your entire leg with every stride – eventually causing all sorts of damage like chronic hamstring tendonitis...			
Feet	Your feet should be pointed straight ahead and land directly under the hip. Focus on landing on your midfoot (ball) as opposed to your heel. (notice that in figure 2 the runner still is not touching the ground. He will only touch the ground once the foot is under the hip, as in figure 3)			

knee, and your toes should point upwards.
3. As your body passes over the left foot during the stride, rise on the toes of the left foot and extend the left knee. Hold your chin and trunk upright (remember running tall?) and swing your arms slowly in rhythm with the marching stride.

4. Repeat this action, raising the right knee to hip level with the left leg moving through a normal walking stride for about 50 meters. Repeat the drill now with the left leg, right going through a normal stride.

5. Remember that this is a technique drill, so focus on proper posture and movement. Perform the drill in a slow and controlled way, focusing on quality.

6. Combine now the marching action to incorporate both legs.

Other important points: Technique drills

are to be performed before your workout and not at the end, because this is when your concentration and energy levels are at their highest. Also it will help you incorporate the proper technique in your upcoming workout. Performing drills when you are fatigued can lead to a lack of concentration and result in poor technique. Low intensity drills like the *Marching Drill* can be used as part of the warm up because it will both warm up your muscles and focus your mind on proper technique before you run.

When practicing proper technique and drills, perform them on a relatively flat terrain because it will allow you to concentrate on running form more than if you were exercising at a higher intensity running up or down hill or if you had to watch your footing.

Your ankles, knees and hips undergo considerable flexion and extension during the marching drill so it is important that the muscles surrounding these joints are supple, allowing the joints to have a wide and painfree range of motion. So before performing drills, make sure you perform your stretching exercises.

I now wish I had discovered all of this information years ago when I was just starting to run. I wish somebody had emphasized how important good running technique was and told me how poor mine was...

So, let me just hope now that I will save some of you with this article!

Special thanks to Martin Pardoe for his precious advice – someday Martin I will be a great runner!