

Running: over-striding



Efficient running technique involves skillfully transitioning from one foot to the other, with the foot landing close to under the hips for optimal acceleration. Skillful runners utilise natural forces to their advantage, resulting in a smoother, more efficient stride. In contrast, poor technique often leads to over-striding, where the foot lands too far in front of the body, wasting energy and increasing injury risk by stressing the joints

By working on improving running technique, runners can achieve a more efficient and effortless stride, resulting in better performance and reduced risk of injury.

Why is over-striding so bad?

Over-striding puts your foot strike far in front of your centre of mass, transferring excessive force through a straight leg and tense ankle. This causes momentum to break upon landing, and your body, acting like a rigid lever, has to work against gravity until your hips can leverage over your foot on the ground

In addition to slowing your momentum, over-striding reduces your cadence, preventing you from taking advantage of the benefits of muscle elasticity. Muscles and tendons function like elastic bands, storing energy when stretched and releasing it quickly to aid muscle contractions. A slow cadence allows this stored energy to dissipate into the ground unutilised.

How do I know if I do it?

Many runners who over-stride are unaware of it due to poor perception, habitual movement patterns, and cushioned shoes that mask the impact of foot-strikes

So, here are three ways to check if *you* over-stride:

1. Cadence

Counting the number of times your feet hit the ground in one minute of running can help identify if you have a low cadence. A cadence below 180

can indicate that you're spending too much time on the ground, even at slower paces, which is often a result of over-striding.

2. Shoes

Check the soles of your running shoes for the main area of wear. If it's on the heels, it could indicate over-striding because landing on the heels is unnatural when your foot lands under your hips.

3. Video

Have someone film you side on running past the camera and watch it back in slow motion. Pause it at foot strike. As they say, the camera never lies!

If I over-stride, how do I stop?

First, prove to yourself that reaching your leg forward is unnecessary. Try this exercise: run in place by lifting your feet off the ground quickly and lightly. Now, as you continue, let your hips fall forward (imagine someone pulling your belt buckle). You see, you're now starting to run without reaching!

Second, understand that reaching does not increase your stride length, rather, it increases your range of motion. And this slows the transition into your next stride.

Third, focus on lifting your foot **off** the ground rather than landing **on** it. Why? Because it's the support foot leaving the ground that triggers the airborne foot to drop down for the next support phase. Doing this timely prevents reaching and enables an under the hips landing.

Fourth, straighten up! Bending at the waist encourages over-striding by allowing too much body weight in front of you as your hips pass over your support foot. This triggers an instinctive reaction to reach and apply the brakes to prevent stumbling.

Lastly, try running barefoot where it's safe to do so. Running barefoot tends to eliminate over-striding almost immediately, simply because landing on a bare heel really hurts! Notice your quicker cadence, softer knees and ball of foot landing.