

RUNNING BETTER: A Basic Guide to Help You Run Faster and Stay Injury Free

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One of the topics that has held great interest for me over the years as I considered how best to help other runners improve is that of *running form and technique*. For as long as I have looked for ways to improve my running, I have seen that running form has been ignored by most runners (and many coaches) because it is believed that everyone is “born” with their own way of running and that ability cannot change or more importantly, improve.

It’s also believed (erroneously I might add) that running technique shouldn’t be changed, i.e. people will always find their optimum method and speed on their own through experimentation and repetition. After years of running and coaching involving lots of research and practical experience, I can confidently say that this is a myth.

In a nutshell many runners and coaches believe, “if it works, don’t fix it.” As the numbers of runners who are out of commission due to running related injury remains high, it is clear to me “it” isn’t working. All I can say is, fortunately this “if it works don’t fix it” mentality doesn’t permeate the auto industry or we’d all still be driving Model Ts!

It's my feeling that with a little knowledge and discipline, each one of us can make a variety of small but critical adjustments which can and will improve our running, helping to increase our efficiency and power, while also reducing our risk of injury.

The best and most direct approach to improving your running form is to attend one of my technique clinics! ☺ If you are unable to do that, or if you have attended the clinic and are looking for some follow up information, then read on.

Once you have an intellectual understanding of what "good" and "not so good" running form is, improving can be narrowed down to a basic two-step process. **Step one is to select one specific alteration to your stride that makes it more efficient, more stable, or more powerful. Step two is to consciously focus on a particular drill or skill during your runs in order to recreate a new neuromuscular pattern with every stride of every run, until it is second nature.** It's best to allow up to at least 3 weeks for each one of these skills to happen with any ease of movement, and then at least another 2-3 weeks before it becomes second nature. At that point, you are ready to make another change. Always take a long term perspective when trying to make real changes in your skill and technique. It takes time, as neural engrams are deep and not easily changed! You MUST be patient and persistent.

In my mind, there are 3 KEY concepts that must be considered as the most critical for good running form.

1. THE MOST FUNDAMENTAL CONCEPT IS A *PAWING BACK* MOVEMENT UPON TOUCHDOWN. Focusing on a *PAWBACK* MOVEMENT as the foot makes contact with the ground after the swing phase (recovery) makes landing MID-FOOT automatic. That's good! You want to land mid footed when running, as opposed to landing with the more common heel-first strike!

"Pawing Back" just before your foot lands and makes contact with the ground means that your leg is already thrusting backward (to make your body go forward!) when your foot makes contact with the ground.

As I stated, *pawing back* permits and actually facilitates a **midfoot landing**, as opposed to a less efficient and damaging heel-first landing. Landing with a heel strike *dramatically increases* impact forces and braking, reduces elastic recoil of muscle, and is essentially like driving with the emergency brake on.

Pawing back helps to reduce ground contact time, otherwise known as the "stance phase." *One of the key traits of the most efficient runners is the near total lack of any pause during the stance phase of the stride.* The stance phase is when the foot is flat or almost flat on the ground, between the foot strike and toe-off phases. The longer your stance phase is (foot in contact with the ground), the more your available energy is lost/dissipated, resulting in less power and forward propulsion.

2. DEVELOP YOUR PROPULSION FROM THE CORE & HIPS. The second key concept is that of developing propulsion from the swagger

or elliptical rotation of the core and hips. The push off (resulting from the hip rotation) should be passive and generally relaxed.

A great drill to practice to get the feeling of this is to interlock your fingers together (hand to hand) and **run with your hands on top of your head**. Though it may seem a little odd at first, doing this removes the arms from the running motion forcing you to create forward propulsion from the hips. Inserting 20-30 sec of "hands on head" running every 10 minutes or so in your daily runs should keep reminding you of the proper feeling you should have when you are running normally (hands/arms at your side).

Triathletes will likely find this difficult and as a result, will need to spend extra time stretching the hip flexor muscles (tight flexors often result from spending lots of time on a bike in the aero position, or driving, or even sitting at our computer writing! ☺), as tight flexors inhibit the ability to "open up" allowing the runner to use these muscles properly for rhythm and forward propulsion. (Ever seen a runner run as though he's sitting down? – that is a runner with very tight hips!) It's also important to consciously engage the glutes (butt muscles) in the rearward pivot movement, which helps to increase power and minimize stress on the already overworked quadriceps and hamstrings.

3. The last key concept is that of a FORWARD KNEE DRIVE.

After follow-through, focus on *driving the knee forward powerfully*, allowing the foot to lag well behind during leg-recovery. Use momentum, not muscular contractions, to raise the heel.

A forward knee drive adds power and stride length to your running and helps set up a powerful pawing back of the foot as it makes contact with the ground. Again, remember that the heel should only come up behind you in response to the momentum of the knee drive, not as a reaction or action initiated by a contraction of the quad!

This knee drive will always be more dynamic during faster running speeds, and less so at easier paces.

Here are some additional concepts and pointers that will help you improve the way you run. As I said at the beginning of this article, focus on one skill at a time and make it a permanent part of your running form before moving on to other skills. This is the most effective way to change the way you run! Be patient and persistent.

INCREASE YOUR STRIDE RATE: One very important way to begin the process of changing to a mid-foot strike with a pawback is to practice learning to run with a faster cadence. Your goal over time should be 85-95 stride “cycles” per minute (count the number of times your right foot hits the ground in one minute). (Coincidentally, this is also an excellent cadence range to shoot for, for most of your cycling.)

Remember, *ground contact time and cadence are an inverse relationship: stride rate goes up and ground contact time goes down – a good thing!*

RUN TALL – “LEAD” WITH THE HIPS. Many runners tend to “collapse” at the hips and pelvis when their foot comes in contact with the ground (they appear to be sitting when they run). This often

results from lack of functional strength, and above all it wastes energy and can lead to a variety of overuse injuries. To overcome this type of collapsing, concentrate on running more erectly. Imagine wires attached to your shoulders and pulling gently upward. Thrust your hips forward just a bit and gently engage the muscles of your lower abdomen to keep your pelvis neutral.

Engaging in some functional strength training to strengthen the entire kinetic chain will also help to prevent this collapsing.

RELAX. Most runners run with unnecessary tension in their arms, shoulders, neck, and even their faces, especially when running hard. All of this tension equals wasted energy. Practice running with loose fingers, forearms and upper arms, and with no hunch in your shoulders and a relaxed facial expression.

BEND THOSE ARMS, KEEPING YOUR HANDS CLOSE TO YOUR CHEST. A 90 degree bend is about right, keeping your hands fairly close to your chest. This shortens the levers that are your arms, reducing the energy cost associated with their movement. Think about ELBOW DRIVE, rather than hand drive!

BOUNCE LESS. Good running form is ALL ABOUT creating horizontal, not vertical propulsion. Many runners who land with a heel strike tend to push themselves upward slightly in order to float between foot strikes. By becoming airborne you can take longer strides than you do when you walk. In fact, faster runners do spend more time airborne and less time in contact with the ground than slower runners BUT their time in the air is spent going FORWARD, not UPWARD! As much as

possible you want forward, not upward movement, and, indeed, faster runners tend to keep the top of their head closer to the ground (relative to their height) than slower runners. Practice focusing on an object off in the distance, and see how much this object moves up/down when you run. Try to minimize this bouncing by practicing a more effective “pawback” during the phase where your foot comes into contact with the ground.

Here are 8 commandments for faster injury free running:

- Begin to pull the leg back *from the HIP (a PAWBACK)*, with a fairly constant knee angle, BEFORE foot-strike.
- After follow-through, *drive the knee forward powerfully*, allowing the foot to lag well behind during leg-recovery. Use momentum, not muscular contractions, to raise the heel.
- Develop your propulsion from the CORE & HIPS. Push off should be passive and relaxed. Incorporate the “swagger” of a rotating hip motion...
- Minimize contact time between the feet and the ground. Think of “flicking” the ground as your feet/legs move backward before foot strike...
- At any running speed, maintain approximately the same high turnover rate (cadence) - that is, about 180 steps per minute, or 90 stride “cycles.”
- Keep the heel *un-weighted* throughout footstrike, landing from mid-foot to fore-foot. *avoid the tendency to over-exaggerate this by landing on the toes!

- Maintain a straight line from the toes, through the hips, to the shoulders, leaning *slightly* forward from the hips and the ribcage.
 - Use quick light movements, not forceful ones, for propulsion, maintaining constant motion with the legs and feet.
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MORE TIPS TO HELP TAKE YOUR RUNNING PROGRAM TO A NEW LEVEL:

1. Schedule your runs FIRST!
 2. Start SLOWLY!
 3. Keep it individualized.
 4. Forget about being perfect.
 5. Half a workout is always better than none.
 6. Keep it enjoyable and fun, always!
 7. Set realistic goals.
 8. Say: "YES, I can!"
 9. Give it at least 6 –8 weeks.
 10. Just get started!
 11. VISUALIZE SUCCESS!
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To summarize, remember that *short periods of effective running* with proper technique create the muscle memory necessary for permanent improvement. Like many things worth achieving, this is a *gradual process*. Expect it to take time and that you will sometimes experience a plateau. Give yourself time to adapt. Focus on the long term. Don't give up. Enjoy it!