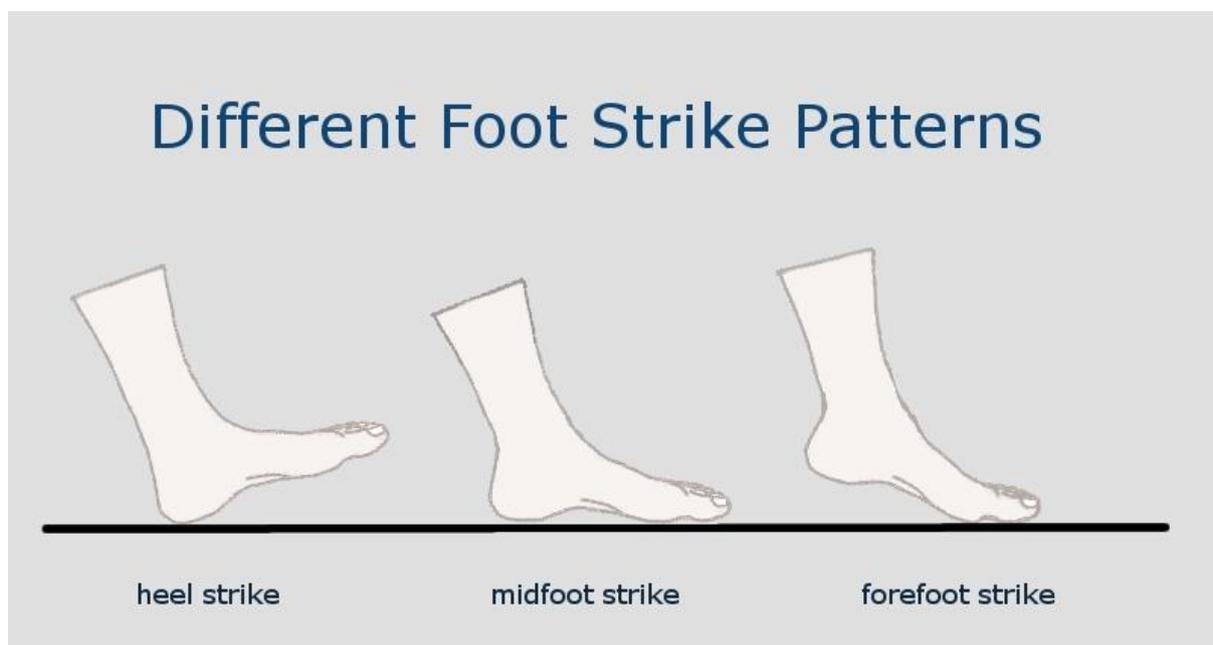


What is heel striking and could it be the cause of my running injuries?

If you're a runner that's done any sort of reading on the subject of running form or "natural running" or have talked running with your running buddies, you'll have been sure to come across the terms "heel striking". But what is it and why is it important?

What is it?

Heel striking refers to how your foot lands on the ground when running. There are 3 main types: heel strike, midfoot strike and forefoot strike.



Running is basically "jumping" from one foot to the other and landing with 2.5 times your body weight going up through your leg with each step. Your joints and muscles need to effectively absorb this force in order for you to feel comfortable and avoid injury. With each step, your foot contacts the ground first and is therefore the first shock absorber. How your foot comes into contact with the ground can affect how efficient your leg it is at absorbing the impact of landing. The more impact is absorbed the less stress there is on your joints and the risk of injury is reduced.

Try this

Hop up and down on one spot with both feet. Where do you land on your foot? On your mid to forefoot? Can you feel how your feet and ankles absorb the impact of landing? Now hop up and down with both feet but land on your heels. Ouch! You can feel the impact travelling up your shins, through your knees and even up to your hips and lower back?

Injuries that may be related to heel striking

- Shin splints
- ITB
- Foot pain
- Lower back pain with running
- Gluteal pain
- Hip pain

So why do we heel strike?

Heel striking makes for uncomfortable running and can lead to injuries. So why would we ever run with a heel strike. The answer is lazy running form and arguably your type of running shoes. Let's for the sake of this article presume footwear is equal and focus on running form.



In heel strike running form:

- Your body position is very upright
- Your leading leg is outstretched far in front of you
- You strike with your heel and your toes are pointing up
- Your leading leg acts as a brake slowing you down.

In midfoot strike running form:

- Your body position is leaning forwards (don't bend too much at the waist)
- Your leading leg lands close to your body or underneath your centre of mass
- Your strike with your midfoot with no toe lift
- Your trailing leg pushes backwards behind you

In order to hold the forward lean form of the midfoot strike you need to have the core strength and leg stability to maintain this position. The flexibility around your pelvis and especially hip flexors needs to allow your pelvis to rotate and your leg to push behind you and make you move forwards.

How do I become a midfoot striker?

1. **Drills:** Like all movements that have been repeated many times our bodies have a certain muscle memory, even for bad form. It will take many repetitions of the correct movement

pattern for our bodies to override the incorrect movement pattern and create the correct one. Drills are repeated over and over to help teach your legs how they should be moving and cement the correct running form.

Try this one: start by hopping on both legs landing on your midfoot. Make sure your knees are bent and springy when you land. Your heel can touch momentarily as your weight comes down. Now hop on one leg at a time with the same technique, alternating feet. Now try a slow run forward with the correct foot strike. Remember to lean slightly forward when you run.

2. **Strengthen your core:** You may be able to hold this newly found running form round the block but would you be able to hold it for your next 10km? Your core is where you will get the endurance to help maintain the correct form and posture for the distance you're running.
3. **Stretch:** Stretching the right muscles to allow for free and correct leg movement. For example: if your hip flexors are tight they may inhibit the backwards push phase that is needed in midfoot strike running form and you will need to stretch them.

The heel strike is a common running form among both the serious and social runner. Next time you're at a club time trial, spend some time looking around to see if you can spot these runners, chances are you're one of them.

Please feel free contact me if you have any questions about this topic or running in general.

Yours in health,
Jeanne

**this article was written by Jeanne Matthis Biokineticist 2014*