

## Are You a Pronator?

If you are a runner or an exerciser you have probably asked yourself this question:

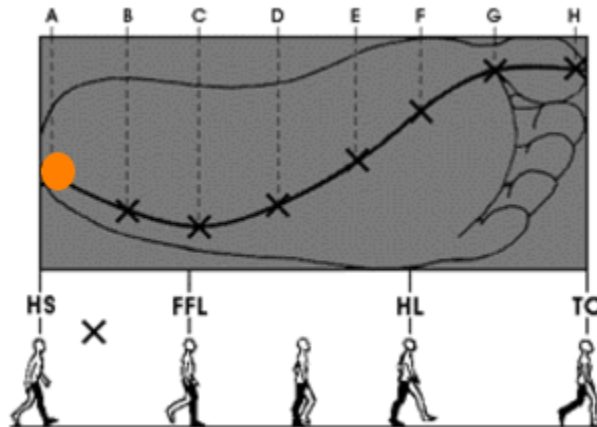
“Am I a pronator?”

“Does the arch of my foot flatten excessively when I strike the ground?”

If you suffer from foot knee or leg pain you may try to ascribe the pain to the alleged flattening of your feet. You may have asked yourself the following.

“Could flat aches cause foot, knee, leg or lower back pain?”

To see if your foot pronates *excessively* examine the wear pattern on the bottom of both of your shoes. The wear pattern should begin at heelstrike. The wear pattern should then progress smoothly from the outside heel to the inside big toe.



HS – heelstrike

FFL – flat foot landing

HL – heel lift

TO – toe off

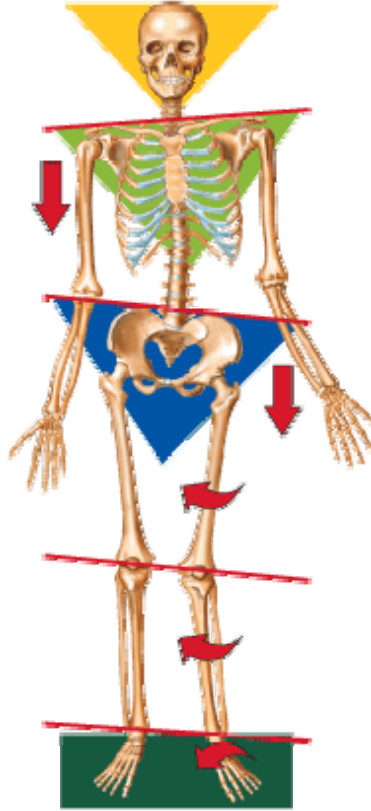
Your wear pattern may not exactly match this diagram but it should be close.

Pronators strike on the inside of the heel and stay to the inside at ‘toe off’. This creates excessive loading on the inside of the foot and too much pressure on the arch of the foot. Prolonged and excessive pronation may eventually lead to ‘flat feet’.

Proper footwear may help correct the symptoms of over-pronation. The expert salesmen, coaches and runners at [On A Shoestring](#) can fit your foot with the appropriate shoe for you.

If a properly fitted running shoe doesn’t cure the problem you may need shoe inserts known as *orthotics*. Try an inexpensive, over-the-counter insert first. You can buy them at [On A Shoestring](#). If the inexpensive insert helps then you may also want to try custom-made orthotics. Careful, these can cost up to \$400 so be sure they work, first.

Surprisingly, there may be other causes of excessive foot pronation.



Note the **first arrow** (left foot pronation) can cause the **second arrow** (left leg internal rotation) which can cause the **third arrow** (left thigh internal rotation) and the **fourth arrow** (pelvis drop to the left). The dysfunction can work both ways and is known as the *lower extremity kinetic chain*.

A physical therapist can examine your lower extremity (ankle, knee, hip and pelvis) to check for dysfunction. The physical therapist exam should look for impairments in range-of-motion and strength of all of these joints and muscles.

Symptoms from the first arrow (left foot pronation) may feel like the following:

- Plantar fasciitis

Symptoms from the second arrow (left leg internal rotation) may feel like the following:

- ‘shin splits’
- anterior knee pain
- patella-femoral pain

Symptoms from the third arrow (left thigh internal rotation) may feel like the following:

- ilio-tibial band syndrome
- trochanteric bursitis
- groin pain

Symptoms from the fourth arrow (pelvis drop to the left) may feel like the following:

- lower back pain
- sciatica
- chronic hamstring tear
- bulging or herniated discs

The physical therapist should look at your *Q-angle* and your *Leg Length*. Descriptions of both techniques as well as physical therapist examination and treatment videos can be found at the [Medical Arts Rehabilitation, Inc. website](#).

Finally, have someone watch you run. Get on a treadmill or go down to the track.

Dedicate 15 minutes running at various speeds over short distances.

A physical therapist or a coach can perform a visual or a video running analysis but sometimes another runner can spot obvious running errors.

Tim Richardson is a physical therapist in Palmetto, Florida.

He can be reached at [TimRichPT@MedicalArtsRehab.com](mailto:TimRichPT@MedicalArtsRehab.com)