RUNNING TIPS

By : Barry McVeigh

FOREFOOT OR HEEL RUNNING ?

Introduction

Forefoot running is becoming more and more popular. It is portrayed by many as the holy grail of running. Lots of coaches and running magazines are now advocating this technique. Many of the big shoe manufacturers have brought out their version of barefoot running shoes which they claim to encourage forefoot running. Proponents of this style of running claim that it is more natural and efficient, leading to better run times and a lower risk of injury.

For many runners this information is confusing, because for years we have been told that if you're a distance runner, then heel striking is the correct method. Many of my patients ask me: "Should I heel strike or forefoot run?"

What is forefoot running?

The term forefoot running refers to the part of the foot that first strikes the ground as the lead leg comes in contact with the ground during the running gait. Traditionally, distance runners have been taught to land on their heel.

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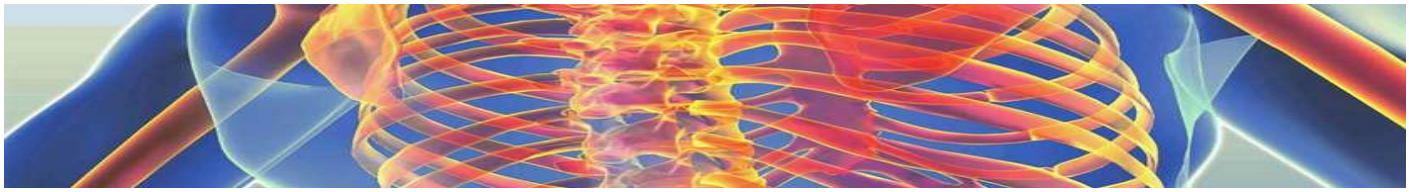

This is known as heel strike running. Forefoot running tends to cause a shorter stride length along with a higher cadence and places less impact on the knee but more on the calf and ankle.

How should I run?

There is very little scientific evidence either for or against forefoot running. One study compared the number of runners that were heel strikers with the number of midfoot and forefoot runners during the 2004 Sapporro International Half Marathon in Japan.1 They found that 75% of the elite runners were heel strikers, 24% midfoot and only 1% land on their forefoot. The percentage of forefoot strikers did increase in the fastest runner group but even then there was a far greater percentage of heel strikers compared to midfoot runners. This study would suggest that for some people, midfoot running may be the more efficient style but forefoot running is very unlikely to result in good run tmes.

There is no evidence of heel strikers being more or less prone to injury.

However, one study did demonstrate that less force is placed on the knee during forefoot running, while greater force is placed on the foot and ankle.1

In my view you have to find out what works of you. People are all different. Some have long legs and short bodies. Som e have short lower legs and long thighs and others vice versa. For this reason some people may be better suited to forefoot running whilst others may be better suited to heel striking. If you are an experienced runner, I like the motto “if it’s not broken, don’t fix it”. If you are running injury-free and you change your running style, you may be increasing the risk of injury. If you are new to running, do what feels right for you.

Here are some tips that apply to all runners:

• Your feet should make minimal noise when you run

• You should not hear a skidding sound as your foot strikes the ground

• Try not to bounce too high when you are running; most of your energy should be used to propel you forward not upward.

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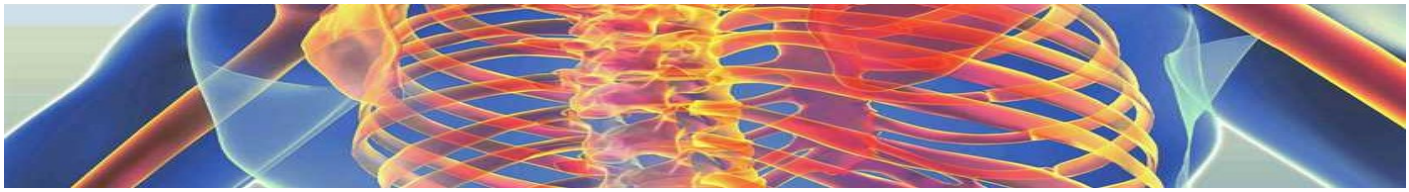
GETTY IMAGES

Li Zhongfei



Possible benefits of forefoot running

Forefoot running would normally decrease the load placed on the knees during running. If you suffer from a long history of knee pain due to running and you are a heel striker, then forefoot running may be the solution for you. On the other hand, you may just be shifting a problem from one part of the body to another. My advice would be to try other solutions first, such as osteopathic treatment and if these don't work, then try changing your running technique to forefoot running as a last resort.

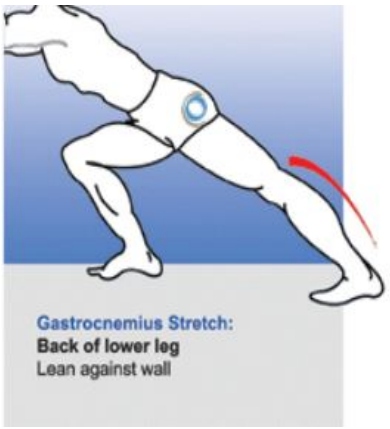
Advice for people taking up forefoot running

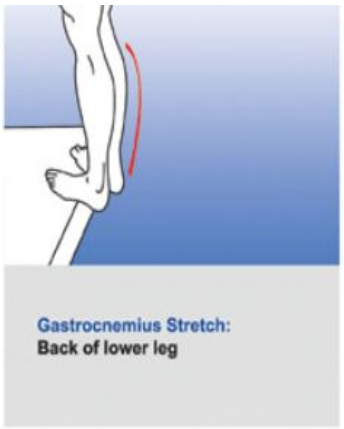
If you have decided that you would like to give forefoot running a go, remember these two words: gradual and stretch. To minimise the risk of foot or Achilles tendon injury, you need to change your running style slowly over time. This will give the structures in the foot and ankle time to become stronger and better able to withstand the new greater forces placed on them. Do too much too soon and your tissues may become strained resulting in injury. The same advice applies to the use of barefoot running shoes. If you do wish to run in such shoes, try a maximum of two short runs a week initially. Gradually lengthen these runs; in time you should be able to wear your new shoes even for your longer runs.

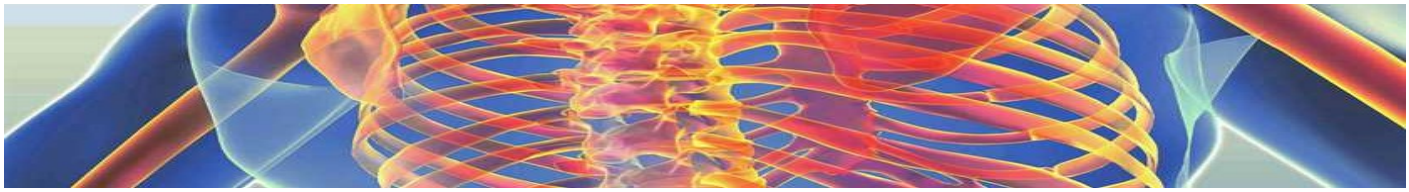
Forefoot running increases the work done by your calf muscles. As a result they may stiffen up and lose their elasticity. This can result in higher loads absorbed by the Achilles tendon and the bones of the feet, leading to a higher risk of Achilles tendonitis and stress fractures of the shin bone and smaller bones in the feet.

Particularly in the early stages of forefoot running, it is strongly advisable to perform extra stretching of the calf muscles. See stretches examples.

I would suggest that you stretch these muscles even on days that you are not training.







Conclusion

There is no one gold standard in running. What may be right for your friend may or may not be right for you. For most of us it would appear that heel striking is most likely to be the optimal method of running long distance. For some, midfoot running may be better but forefoot running is very unlikely to be the answer. From a scientific standpoint we just don't know for sure what the best method of running is. Much more research is needed before this question can be answered with confidence. If you do decide to switch from heel strike running to forefoot or midfoot running, do so cautiously and gradually. Whatever style of running you do, it is important to stretch regularly and make increases in training gradually over time.

References

1 Hasegawa, H. et al, "Foot Strike Patterns of Runners At the 15-Km Point During An Elite-Level Half Marathon", Journal of Strength & Conditioning Research, Vol 21(3), 2007, pp. 888-893.

1 Arendse, R. et al, "Reduced Eccentric Loading of the Knee with the Pose Running Method", Medicine & Science in Sports & Exercise, Vol 36(2), 2004, pp. 272-27

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