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## The benefits of gait analysis for runners

### How understanding your gait can benefit your running

Running is a simple sport that doesn't have to involve a lot of expensive equipment, just a pair of running shoes and away you go. It is therefore important to make sure that those shoes you are going to be wearing, logging hundreds of miles in, are the right ones for you. Spending that little bit extra to get a good pair of running is a wise decision and money well spent.



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There are hundreds of running shoe options out there, and finding the right ones may seem like looking for a needle in a haystack. If you have been running in a pair previously and you have not had any problems with them then it is often a good idea to stick with them. That age-old adage, 'if it's not broke, don't fix it' applies here. If however you have been running in a pair and been having a few aches and pains then it might be sensible to get a professional to take a look at your feet and tell you exactly what running shoes you need to be wearing.



### Tailored to you

These professionals can be found at specialist running stores and can provide you with a service that will tell you what kind of runner you are. More often than not they will use a machine whereby you run across a mat and it will analyze your gait. There are three main types of foot strike and shoes to match each of these - your foot strike is commonly known as your running gait.

Most runners (especially when they are tired) will strike the ground with their heel first. It is what happens after this heel strike that is important in terms of selecting the correct pair of running shoes. In the milliseconds, once your heel has hit the floor, your foot will do one of three things...

- 1) Your foot will continue to roll along the outside of your foot and then eventually come across onto the ball of your foot and toe off to complete the foot plant. This is normally the case for people with high arches in their foot.
- 2) Your foot will remain in a 'neutral' position and will slowly pronate to the ball of your foot before again, before toeing off.
- 3) Your heel will strike the floor and then almost immediately start to roll inwards, known as pronation. It is this inward rotation that can cause runner's problems. This type of gait is the most common, and is nothing to worry about.

If you have an old pair of shoes you can normally see the areas where the shoes are more worn down and this will give you an indication as to what level of support you would need from your running trainers. Running shoes will offer different levels of cushioning also - normally the more expensive the shoe the more cushioning you are going to get, at the top end you will have both heel and forefoot cushioning and they should, in theory, be very comfortable.

### **Added support**

There will also be different levels of support in the shoes, not to be confused with cushioning. The support will always be on the inside of the shoe and is a harder material designed to slow down your foot's natural pronation. If you try to place the inside of your foot on the ground you should find that your knee will also move inwards. This gives you an idea of what happens when you run.

If your foot is collapsing inwards without the support to slow it down it can cause issues further up your leg, mainly in the knees and hips. Ideally when you are running you want everything in a straight line moving forward, the less side to side movement and deviation the better and the less likely you are going to get injured.

### **Picking a brand**

Having a gait analysis is the best way to ensure you are running in a pair of shoes that suit your running style. Once you have it done you will know exactly what kind of shoes you should be looking for and will be able to try on a range across all the brands. Picking the most comfortable ones is the best way to select if you are torn between a couple of pairs. Picking the ones that look the prettiest isn't always the smartest move.

The more mileage you do, and the longer races you compete in the more important the running shoes become, so make sure you get it right early on and then enjoy worry free miles. Good luck!