



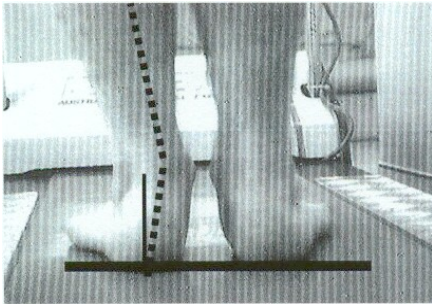
RUNNING SHOE SHOPPING

By Craig Osborne, Chiropractor © 2010

This is probably one of those topics that's almost impossible to have one answer for. But given the number of times poor footwear becomes an issue with back problems, it's important to at least attempt a guide based on what the majority of us need.

Who is this guide useful for?

I have written this primarily for the 70% of the population who over-pronate (usually called flat foot, or rolling in—pictured here)



The 10% who have functionally normal feet can relax some of the guidelines a little, and for the remainder who have high arches (or over-supinate), essentially the guidelines are the opposite.



In simple terms an over-pronated foot needs a firmer shoe, a supinated foot requires a more flexible one.

How much to spend?

Generally the more you spend the better quality of materials used in the shoe. The important part of a running shoe is the mid-sole (the bit sandwiched between the rubber sole and the main top bit of the shoe).

The mid-sole is usually composed of a product called EVA which comes in different densities. The cheaper shoes usually have a lot more air

pumped into the EVA which means they feel soft and supportive in the shop, but will compress quickly with use. Many manufacturers have developed their own marketing related mid-sole product;

- Nike air
- ASIC Gel
- Hexalite
- Kevelar
- Reebok Shox to name a few.

Once you have a better understanding of how to select a shoe, you may realise that some of these designs are only suitable for a small portion of the population.

Shop testing the shoe

For a heavy person with a bad case of pronation, you'd search out a shoe made by Brooks called "The Beast". It's worth trying this yourself when you are next shoe shopping. It's reasonable to say that this will give you a gold standard comparison when looking at all other shoes.

1. Shelf test

View the shoes from behind on the shelf. The back of the shoe should sit upright. A poorly made shoe may



slant inwards and should be avoided. Occasionally this may just be a batch problem, and not reflective of that brand or line.

2. Bend it



Grasp the shoe and try to bend it through the arch area, a good shoe should be quite stiff and difficult to bend. For a dramatic comparison—try doing all of these tests with one of your casual / fashion sneakers. It will fail miserably.

3. Twist it

This time try and twist the shoe. Because we're looking for a relatively stiff shoe, the mid section of the shoe should remain quite normal. The more it twists, the less supportive it will be.



3. Toe flex

Push gently from toe to heel. The shoe should buckle through the toe joint area—exactly where we want it to. Many shoes will bend half way down their length.



4. Heel cup rigidity

Squeeze the heel cup firmly—it should feel quite firm. The heel cup is not there to hold your foot in place, it's there to help stimulate the nerves



in your foot and ankle to know where it is in space. As your foot hits the

ground it will continue to move until it meets some resistance, the sooner this occurs the less chance there is of excessive ankle movement. A floppy heel cup will take a lot longer to provide this resistance, so can actually worsen an existing foot / ankle problem.

5. Mid-sole density

Your foot should hit the ground on the outside edge of the heel first, so the mid-sole should be a bit softer. As your weight bears down onto the ground, a firmer inside edge to the shoe will help slow the foot and prevent excessive rolling in of the ankle. So all you need to do is push



the heel and compare sides. Beware that some manufacturers simply use different colours in the sole to trick you, so don't rely on colour.

So at this stage you should feel more comfortable with what to look for, and at least be able to recognize a good salesperson when you're shopping next. Please note that there are many other factors contributing to shoe design and this doesn't cover them all. This is also primarily for the majority of us who pronate (or roll in) too much. If you have high arches your needs are essentially the opposite.

What do I recommend?

Please remember this is personal preference here... I've used ASICS for many years, the 1100 range is probably a little light for the regular jogger, but probably perfect for walkers. The 2100 range is pretty good while the Kayano is a higher end model for the more serious runner/jogger.

I've tried running in the Brooks Beast but it is quite a heavy shoe and I never really got used to the feel.

I avoid Nike as I don't believe they have a good running product. I'm not convinced that most of the fancy heel products in other brands

actually make a lot of sense for runners.

How long will the shoe last?

A study at the Tulane University Medical School in New Orleans found that all shoes tested of major manufacturers lost shock absorption as follows;

- 25% loss after 80km
- 33% loss after 160-240km
- 50% loss after 400km
- 70% loss after 800km

The 70% level appears to be the critical point at which time the shoes need to be retired.

This means that if you run just 40km a week, your shoes will only last about 5 months.

Remember also that a running shoe bought for walking will last a lot longer, but a shoe that gets wet regularly will lose shock absorption quickly. Keep an eye on the wear pattern on the sole of the shoe—if it's uneven, or is even wearing right through to the mid-sole, get advice on what might be causing the changes.

Buy specific shoes

Manufacturers put a lot of money into design specific to the sporting activity. So it is always worth the money to keep shoes specific to the sport. A huge portion of the market is the cross-trainer, but bear in mind that it is a trade off in most respects, and is probably best suited to gym workouts with weights and cardio equipment.

MBTs



These shoes have been designed to help improve posture and walking technique, including making the muscles work harder. I'm not sure that running in them is ideal. I've never tried them, but a Podiatrist

suggested that their intention is reasonable. So for walking, give them a go.

Toe Shoes



There has been a strong trend recently towards not wearing shoes,

or ones similar to in the picture. The argument is that a relaxed foot will function more normally. I would suggest that on natural surfaces this argument is quite reasonable, however if you're on concrete or pavement then you need shock absorption to limit the compressive forces passing through to your spine.

Rotating your shoes

This idea sounds expensive but it is only once. Given that as the shoe wears it's hard to know how well it's still working, one idea is to begin with 2 pairs of shoes. One pair should be worn 90% of the time, the other for 10%. Once the 90% pair no longer feel as supportive as the 10% pair it's probably time to go shopping. At this time the 10% pair become the 90% pair, and the new ones become the 10% pair.

Sale bin buying

Sale bins can be a good point to buy your shoes—they often have end of range sizes and styles, but often the technology is not that much better in



the replacements. So if you know what to look for—you can keep your footwear up to date and look after yourself

when you're hitting the pavement.

More Advice

Feel free to arrange a gait assessment in the clinic so that when you're shopping you know how your foot behaves while running. For more complex foot concerns ask us about reputable podiatrists.