CONSIDERATIONS FOR CHOOSING A SUITABLE RUNNING SHOE

Running is an extremely popular form of exercise, but before entering into a running program you should ensure you have the correct footwear. Identifying the most appropriate shoe requires a basic understanding of the footwear components and their function. The following information can help you identify appropriate shoes for your foot shape and running technique.

1. Determine your foot type

a. What is your foot width (broad / normal / narrow)?
b. What is your foot length?
c. What is your foot arch type (flat or no arch / normal / high)?

2. Identify your running technique characteristics

a. What foot function do you have (underpronator - ankle rolls outwards / neutral / over pronator - ankle rolls inwards / over pronator with splayed feet - feet turn outwards)?
b. What is your foot strike pattern (forefoot striker / midfoot striker / heel striker)?

1. WHAT IS YOUR FOOT TYPE?

Your foot type is determined by your foot width and arch shape; is your foot width broad, normal or narrow and do you have a high, normal or flat arch shape? This is important information for achieving overall footwear comfort. Footwear that is more comfortable and suitable for your feet allows you to perform at your best.

A professional measurement of your foot length and width will make it easier to determine your correct shoe size. If this service is unavailable, ensure the base of the inside of the shoe fits the base of your foot and you have a thumbnail's length of space from the end of your large toe to the shoe's edge.

For years it was thought that a particular footwear shape (curved, semi-curved, semi-straight, straight) would suit a certain foot arch shape, yet from an anatomical and functional perspective this is not entirely correct. In fact, particular arch types have a variety of different foot widths and running technique characteristics. Today, footwear comfort and function for different arch types can be influenced by technologies throughout the shoe (e.g., the material, type of stitching and construction of the upper and midsole, the lacing technique, the compound and shape of the sockliner, etc).

2. WHAT ARE YOUR RUNNING TECHNIQUE CHARACTERISTICS?

There are three categories to describe the way in which you make contact with the ground while running:

- Forefoot striker - contacts the ground with the balls of their feet first
- Midfoot striker - the whole foot contacts the ground at once
- Heel striker – the heel makes contact with the ground first.

In conjunction with each foot strike pattern there is a certain degree of rolling inwards or outwards of the ankle, as well as some inward or outward twisting of the foot.

Most heel strikers make contact with the ground too far in front of their body. This causes a braking affect and momentarily interrupts forward movement. The impact increases stress on the ankle, knee and hip joints, which can be affected by the ankle rolling in and foot twisting out excessively. Runners who heel strike can benefit from a sharper angle on the rear outsole of a shoe, as this can influence the foot angle during ground contact, and the amount of stress forced through the lower leg. In turn, this decreases the chance for lower limb injuries such as shin splints. Some high performance running shoes have a bevelled angle to assist with the heel strike.

The amount of stability and cushioning you require is predominantly determined by your foot function and foot strike pattern. Such technologies include spongy foam and silicone based compounds that absorb shock, improve shoe durability and enhance rebound energy. Look for silicone-based compounds with high resiliency as they are the most effective for rebound energy. This can help minimise energy exertion and improve over all running performance. Runners who are forefoot and midfoot strikers, and who have a foot placement close to their body, will tend to harness the rebound energy from these compounds quite naturally.

Excessive rigidity through the middle of a shoe can directly impact on the functioning of the foot. Runners who roll their ankle inwards excessively (after the foot contacts the ground) apply additional pressure to the shoe from around the rear arch position of the foot. These runners should select shoes with effective stabilising components such as high density foam compounds which are usually grey in colour. Thermoplastic devices are another effective stabilising component. These devices can further enhance responsiveness and the correct position of foot take off. These devices will also assist runners who splay their feet outwards.

This information is a brief guide for choosing appropriate running footwear. Unsuitable running footwear may impact on your running biomechanics and cause injuries. A biomechanical analysis of your running technique takes out the guess work of footwear selection and reduces the chances of you sustaining a running injury.

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