

## Running Spikes and Throwing Shoes



### **Distance Spike:**

Distance spikes have a greater heel wedge/lift extended from the heel (rear foot) to the arch (forefoot). These are unlike the middle distance shoes that only have heel lifts under the heel or sprint shoes that have no heel lifts at all.

This extended heel wedge increases the shock absorption capability of the shoe. It elevates the heel, reducing stress through the heel bone (calcaneus) and reduces strain through the calf muscle, achilles tendon and foot muscles.

Distance spikes are composed of more mesh and less vinyl which give them the capability to breath, reducing the possibility of blisters and athletes' foot etc.

This type of spike, with the extended heel lift, is recommended for Little Athletics as it can be used for multiple events including sprints, middle distance, distance and jumps.

	<p><b><u>Middle Distance Spike:</u></b></p> <p>Middle distance spikes have a minor heel wedge/lift made of EVA (foam) that elevates the heel slightly. They are less rigid thru the midfoot when compared to a sprint spike allowing more forefoot flexion. There is also often less spikes positioned in the spike plate when compared to a sprint shoe.</p> <p>Having a heel wedge/lift is beneficial in growing feet and recommended for the Little Athletics age groups.</p>
---	--

	<p><b><u>Sprint Spike:</u></b></p> <p>Sprint spikes have no heel wedge/lift present due to the expected exclusive forefoot loading seen in sprinting. They have a thinned and rounded heel strike sole with often a ridged spike plate or spike-to-heel plate.</p> <p>Having no heel wedge in a shoe leads to the stretching /lengthening of the Achilles tendon and foot muscles. It also makes the calcaneus (heel bone) more pronounced. This is not favorable for young growing feet as it can increase stress though the heel bones. It also decreases the shock absorption the shoe provides, increasing impact forces going though the foot and leg at each step taken.</p>
---	--



### **Jump Spike:**

Jump spikes have the greatest EVA heel lift and cushioning. They have rubber midsoles to permit forefoot flexion, which also allows for good traction and reduces slipping at take off.

Some models of senior jump spikes will have both a forefoot and rear foot (heel) spike plate for added security with runway traction.

**Conical spikes are recommended for wooden take off boards used in the horizontal jumps.**



### **Throwing Shoe:**

Throwing shoes have a full flat rubber sole that secures good grip, but does not over grip, as the foot is required to move fast in the circle during spins.

When throwing, reasonably stiff uppers are required in the shoe to ensure the foot does not slip off the shoe's sole during spin. The less mesh and more leather/vinyl in the uppers will improve the shoes upper stability.



Left to Right: Conical, Christmas Tree (pyramid), Needle, Blank

### **Spike:**

The only acceptable spike for Little Athletics is either a pyramid or conical spike.

Athletes are not permitted to wear needle spikes in their shoes.

The maximum length is 7mm for all surfaces, except for High Jump & Javelin, where the heel spike must not exceed 9mm. All spike positions must be filled with a spike; however some of these can be a blank spike, ( not an empty hole ), to a max of 2 blanks.

**Conical spikes are recommended for wooden take off boards used in the horizontal jumps.**



## Selecting an Athletic Shoe

**1. Sport Specific Shoe.**

Plan to select a shoe specifically for the sport in which you will participate. The rule of thumb is, if you participate in a sport more than 3 hours per week, use a sport specific shoe.

**2. Specialty Shoe Store, such as Active Feet**

**3. Bring Useful information to the store.**

Bring past/present injury information and bring your old shoes into the store. Which shoes have been successfully used in the past and which ones caused problems?

**4. Have Your Feet Measured Each Time You Purchase Shoes.**

When the shoe is on your foot, you should be able to freely wiggle all of your toes.

**5. Wear Socks You Plan To Use And Don't Forget Your Orthotics.**

**6. You need a fingers width between your longest toe and the end of the shoe.**

A shoe that is too long is almost as detrimental as a shoe that is too short.

**7. Try on athletic shoes after a workout or run and at the end of the day.**

Your feet will be at their largest.

**8. The shoes should be comfortable as soon as you try them on.**

There is no break-in period.

**9. Select appropriate socks.**

Cotton socks are widely available, but are not often appropriate for your sports activity. The best sock is often one made of synthetic fibers that wick moisture away from your feet.



## The Footwear Checklist

1. Is the heel of the shoe less than 2.5cm (1 inch)?  
As heel height increases, the pressure under the ball of the foot becomes greater. This pressure can lead to callous and ulceration.
2. Does your shoe have Laces, Buckles or Elastic?  
If wearing slip-on shoes with no restraining mechanism, your toes must curl up to hold the shoes on. This can cause the tops of your toes to rub on your shoes leading to corns and calluses. Secondly, the muscles in your feet do not function as they should to help you walk. Instead, they are being used to hold your shoes on.
3. Do you have 1cm of space between your longest toe and the end of your shoe?  
This is the best guide for the length of your shoe, as different manufacturers create shoes which are different sizes. Your toes should not touch the end of the shoe as this is likely to cause injury to the toes and place pressure upon the toenails.
4. Do your shoes have a well padded Sole?  
Shoes should have a supportive, but cushioned sole to absorb shock and reduce pressure under the feet. Padded footwear, socks and some innersoles can significantly reduce pressure under your feet.
5. Are your shoes made from a material that breathes?  
A warm, moist environment can harbour organisms such as those which cause tinea. Moist skin is softer and more prone to injury.
6. Do your shoes protect your feet from injury?  
The main function of footwear is protection from the environment. Ensure your shoes are able to prevent entry of foreign objects which can injure the foot. If you have diabetes, a closed toe is essential to prevent injury to the foot.
7. Are your shoes the same shape as your feet?  
Many shoes have pointed toes and cause friction over the tops of the toes, which can lead to corns, callus and ulceration. If you can see the outline of your toes imprinted in your shoes, then the shoe is probably the wrong shape for your foot.
8. Is the heel counter of your shoe firm?  
Hold the sides of the heel of your shoe between your thumb and forefinger and try to push them together. If the heel compresses, it is too soft to give your foot support. The heel counter provides much of the support of the shoe and must be firm to press.



## Useful Foot Health Hits

- \* After you finish an event, i.e. the 100 meter sprint, change from your spikes into your runners. Walking around the track all day in spikes will not be beneficial to your lower limb foot and leg posture.
- \* Always take a spare pair of socks to the track and change them as necessary. Wearing moist soggy socks only increases your chance of developing blisters and fungal infections.
- \* Always wash your socks inside out. This allows for them to be thoroughly cleaned.
- \* Allow the inside of your shoes to dry out. When you are not wearing them open up the tongue and give the shoe a chance to breathe and dry.
- \* A running shoe is anticipated to last around 600-800km. But this is dependent on the surface it is used on, the weight of the wearer and how often it is worn. Wear signs to look for are compression/crinkles in the EVA (foam) sole, reduced grip and thinned mesh uppers.

## Further Podiatry Related Enquiries



### **LifeCare Ashwood Sports Medicine**

330 High Street  
Ashwood 3147  
Ph 9885 8961

### **LifeCare La Trobe University Sports Medicine**

Cnr of Kingsbury Drive and Plenty Rd  
Bundoora 3086  
Ph: 9473 8780

### **LifeCare Prahran Sports Medicine**

Victoria House  
Level 1, 316 Malvern Rd  
Prahran 3143  
Ph 9529 8899

### **Clinical Podiatry Services:**

Family Foot Care  
Sports Injuries  
Footwear Advice  
Orthotic Therapy  
Nail conditions including nail surgery  
Corns, callous and cracked heels  
Diabetic Assessments  
Foot and Leg Pain  
Bunions  
Heel Pain

**Email:** [ep500@bigpond.net.au](mailto:ep500@bigpond.net.au)