



# Track and Field Sports

by Tom Austen, Podplus

## How the sport impacts on the foot

### High Jump

High jump typically involves a curved run up leading to a transition into a vertical jump to achieve the famous position for a Fosbury flop style of jumping that has been adopted by all high jumpers. The foot is the main point of contact, allowing the transition from forward momentum to vertical jumping. At this 'take off' phase, the foot is pushed into the ground as well as forwards to allow the athlete to jump, as well as twist, to achieve the upturned movement of the jump.

The foot and ankle pronate (roll in) to act as a spring to allow this transition of movement. The arch of the foot, ankle and knee joints take a high amount of stress during this small amount of time. This could lead to injury of the foot, ankle or knee. It is vital to plant the take off foot well, ideally aligned with the final direction of the run-up.

### Triple/Long Jump

Long jump consists of a sprint to the 'take off' board and jump as far as possible. The triple jump event, consists of an approach run, a hop (take off and land on the same

foot), a step (take off and land on different foot) and a jump (take off on one foot and land on both feet in the sand pit).

The foot facilitates these movements and allows for the transition from sprint to jump to occur. The foot and lower leg has to take these impact forces and it is vital they are controlled and stable for that to occur. An athlete's ability to control the impact on the body is vital and their strength and core stability (strength around the pelvis) does this.

### Shot/Discus/Hammer

These events require a very explosive movement from power generated in a twisting motion. The foot is used to rotate in shoes that are specialised with rubber around the outside of the shoe. The foot can be squashed and cramped due to the external pressure of the twisting within the small turning circle used.

Please turn over...



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## Common problems and injuries that may occur

### Jumping, High Jump, Triple Jump, Long Jump

- **Achilles and Patella tendinopathy.** Pain in the front of the knee or in the Achilles tendon can occur as they load and 'spring' back to provide the transition into the jump.
- **Fractures of the tibia** (shin) can occur due to the impact of landing and jumping with so much force.
- **Knee and ankle ligament sprain** can occur with high jump. The ligaments that stabilise the joint can be over stressed and be damaged.

### Throwing

Less injuries occur in the lower limb with throwing; however, callus or hard skin can be a cause for pain due to the pressures on the foot.

## How podiatry can help

A podiatrist can help with minor problems such as removing hard skin (callus) or corns and help with treatment of athlete's foot (fungal infection of the skin).

A podiatrist can also assess the strength and flexibility of the lower limb to aid the performance and prevent injuries occurring. Orthoses (special insoles) can be used to stabilise the foot during these demanding sports.

A podiatrist can also work with athletes and their coaches to advise on appropriate footwear for competitions and training, different exercises for strengthening the lower limb and foot, as well as aiding with appropriate preventative exercises such as a stretching routine.

## Tom's Top Tips

- Sports specific spikes are a must to give as much of an advantage to the athlete for traction, support and confidence.
- Warm up in your trainers, which will provide more support and protection for feet. Change to sport specific footwear when doing the specific sports training.

## Tom Austen

Tom Austen owns Podplus Sports Shop & Injury Clinic in Ashford, Kent, at the Julie Rose Athletics Stadium. Tom works regularly with Kent County Cricket Club and has worked with Gillingham Football Club. He has volunteered at the 2008 commonwealth games and numerous London Marathons. Tom's Podplus Podiatry team provide all podiatry services at the Brighton Marathon. Tom is a clinical lecturer at the University of Brighton and also works alongside Dr Nick Webborn at the Sportswise clinic, Eastbourne.

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