

## Article 2

### PHYSIOTHERAPY ADVICE ANKLE AND LOWER LIMB INJURIES IN ATHLETES

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*This is a common area of injuries to athletes both in the field and on the track. It is because the lower limb is the base for tremendous rotational and compressive forces and, consequentially both traumatic and chronic injuries to this region are frequent.*

*Below is an outline of what I feel are the most common lower limb injuries that can occur in athletics. Remember that this is not a definite and conclusive list and different signs and symptoms may occur as everyone has a different physiological and biomechanical setup. I have written them purely as a guide for informative purposes. If in doubt call me on 07979 504596.*

#### ACUTE INJURIES:

##### Heel bruise

This can be particularly problematic and normally results from landing hard on the heel during jumping activities or stepping on an uneven surface or stone. This can be very painful making it difficult to walk. Treatment is difficult with rest, RICE and using a soft heel pad to adsorb pressure can help, but this can last for a few weeks.

##### Lateral ankle sprains

Probably one of the most common injuries due to the biomechanical design of the ankle. A typical scenario would be a runner stepping off a kerb landing on the outside of the foot making the ankle turn in which causes immediate pain in the outside of the ankle and sometimes a “pop” may be heard. There are 3 ligaments on the lateral side of the ankle and normally the ATFL (Anterior Talo Fibular Ligament) is almost always involved and there will be lots of swelling and bruising.

Treatment should consist of RICE for the first 24-48hrs depending on the severity, and then seek medical advice for physiotherapy. This type of injury can take months to rehabilitate properly and is it important to make sure it has healed properly before returning to sport.

##### Medial ankle sprains

Much less common and only representing about 5% of all ankle sprains because of the thickness and strength of the deltoid ligament and biomechanical function of the foot. Treatment is the same as lateral ankle sprain.

##### Calf strains

Very common and results in a sharp pain behind the lower leg below the knee. Normally caused while running, jumping, throwing during an explosive movement, although sometimes muscle strains can occur when just walking!!!! Normally this will inhibit walking. Again treatment should be RICE followed by treatment within 2/3 days. Depending on the severity athletes should be able to return to sport between 2 – 6 weeks.

## **CHRONIC INJURIES:**

Caused by repetitive micro trauma due to overuse, poor technique or structural mechanics.

### Retrocalcaneal bursitis

Caused by repetitive running, direct pressure or friction from bad fitting footwear. Pain, tenderness, swelling and redness on the top of the calcaneus (heel bone) at the back of the foot where the Achilles tendon attaches.

Treatment includes rest and icing. Concluding what is causing the problem then appropriate treatment to relieve inflammation.

### Plantar Fasciitis

Caused by overuse, poor footwear or playing surface, or insufficient conditioning, and seen more often in individuals with abnormal foot alignment.

Pain is normally gradual and is felt under the foot at the base of the calcaneus (heel bone) that sometimes feels tight to the base of the toes.

This can be very painful and needs to be treated at an early stage to prevent "heel spurs" (A bony growth under the foot). Difficult to reduce symptoms if left too long.

### Achilles tendonitis

Caused by repetitive overuse, tight calf muscles, abnormal biomechanics or friction of the tendon. Pain is felt in the tendon that runs from the heel to the calf muscles.

Again this injury needs to be treated as soon as possible and if left untreated it can result in crepitus in the tendon, pain in the morning, and severe pain jogging. Difficult to reduce symptoms if left too long.

Treatment normally involves assessing foot function, loosening the calf, providing orthoses, undertaking rehabilitation including eccentric loading of the calf muscles and calf stretching.

### Stress Fractures

Normally in the shin (tibia) or metatarsals (footballers in the foot). Normally caused by an sharp onset of pain that initially occurs only during activity and subsides with rest. This can continue until pain occurs all through the day. There will be no history of trauma but a change in training intensity, or surfaces, or footwear. Other signs can be localised tenderness over the bone.

Treatment is normally rest.

### Shin Splints

Very common mainly occurs in runners and is caused by over repetition, bad biomechanics, or poor footwear, or a sudden change in training surfaces. Pain is normally on the inside of the shin bone (tibia) and occurs when running. If left untreated this can lead to micro stress fractures. Normally, loosening the calf muscles can relieve pain as the deep calf muscle (soleus) attaches onto the medial border of the tibia.

Treatment includes icing, assessing biomechanics when running, footwear/training advice, loosening the calf muscles.

Phil Sadler © (30/3/07)

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