

# Shin Splints

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## ***What are Shin Splints?***

Shin splints are the development of pain down the front of the shin with running exercise. It is probably more correctly called "tibial periostitis". This condition is an inflammation of where one of the calf muscles joins on to the bone. This is commonly the tibialis posterior muscle, and sometimes the tibialis anterior muscle. It is believed that the cause of this is over activity of the involved muscle, with pulling of the attachment along the border of tibia bone.

## ***What are the Symptoms?***

The symptom of shin splints is pain. The pain is felt down the inner or outer border of the shinbone, and tends to come on with running. Often there is a pain free period of running followed by the development of pain, and if the athlete continues to run, then the pain will often reduce again. Unfortunately, if the athlete continues to run, then the pain will tend to get worse with each run into the future. Following rest, the person is able to walk and jog without pain and the pain of the shin splints tends to only come back again once the person starts running properly again.

## ***What Causes Shin Splints?***

The most likely cause is an abnormality in running style, shoes, or the surface that one runs on. Increased activity of one of the calf muscles trying to stabilise the ankle is the likely precipitator of this pain. So we know that running on the camber of a made road in the same direction will tend to result in shin splints in the uphill leg, and this can be avoided by running on the left and right hand side of the road. People who pronate or have flat feet will often develop shin splints, and also people who do a lot of running on hard surfaces or jumping on hard surfaces will also develop a similar syndrome.

## ***What are the Risks?***

It is believed that shin splints are the first part of the syndrome where people may go on and develop a stress fracture of the tibia bone. It is, therefore, advised not to continue to play sport or push through the pain of shin splints rather it is advised to find the cause and have this treated.

### ***Are Any Tests Needed?***

As a general rule, investigation for shin splints is unnecessary as the history of pain is typical and there is often tenderness along the edge of the bone. Where the tenderness seems to be very localised to one area, then an x-ray or bone scan may be required to be sure that a stress fracture does not exist at this region.

### ***What Can I Do To Treat This?***

The most important thing is not to produce repetitive injury to the bone through over-stressing this muscle. This means that you should pay strong attention to footwear and avoid any pronation problems that you have. Running on hard surfaces should be avoided and running in the same direction on a cambered road is also important.

### ***What treatments are available?***

In the first instance, a firm diagnosis needs to be made. This can be made by your physiotherapist, podiatrists or sports doctor.

Once the cause of the shin splints has been found then specific attention needs to be given to that. This usually involves referral to a podiatrist so that a proper foot assessment and the use of orthotics can be prescribed.

A number of physical therapies have been used including muscle stretches and strengthening as well as muscular massage. In general, no specific treatment is required other than a reduction in running; an avoidance of precipitating causes and slow build up in exercise again. Rarely, an injection of steroid along the tender area can be used to settle down the inflammation.

### ***What is the long-term outcome?***

The long-term outcome of properly treated shin splints is that the athletes should have a complete return to normal exercising ability. Untreated shin splints will, unfortunately, not resolve by itself. There is always the risk of development of a stress fracture of the Tibia and this should be avoided at all costs.