



OPTIMA
SPORTS
MEDICINE

Lumbar (lower back) disc injuries

What are shin splints?

'Shin splints' is actually an umbrella term that is used colloquially to refer to three separate conditions that cause pain in the lower, inner part of your shin. These conditions are medial tibial stress syndrome (MTSS), tibial stress fracture and exertional compartment syndrome. MTSS is by far the most common cause of shin pain. Rarely, MTSS can develop into a tibial stress fracture. The last condition is exertional compartment syndrome, which is very rare.

What is MTSS?

The muscles that control the arch of your foot attach to the lower, inner part of your shin. MTSS is when these muscles and the lining of the shin bone they attach to become injured. The most common cause of MTSS is when these muscles are forced to work too hard to control your arch. Common causes of this are over-pronating when walking or running and having a stiff ankle. Other important factors can be change in training volume or intensity, poor or old footwear, nutrition and quality of recovery from exercise.

How is MTSS managed?

In most cases MTSS is managed by correcting what caused the muscles to work too hard. This may involve prescription of orthotics, gait re-education, ankle mobilisation, re-evaluation of training programs, lengthening calf muscles and strengthening of the hip, knee, ankle and arch. Ice and anti-inflammatory medication may be appropriately prescribed to relieve pain and decrease inflammation. While these factors are being addressed, you will likely have to decrease activity levels to allow the injured structures to heal. It is important to recognise and treat MTSS early because it can lead to tibial stress fracture.

What is tibial stress fracture?

Tibial stress fracture occurs when the shin bone is unable to cope with the stress caused by MTSS. Bone is a living tissue that is constantly being resorbed and laid down again. When the stress of MTSS becomes too great for the renewal process to keep up with, tiny cracks in the shin bone can develop.

How is a tibial stress fracture managed?

A tibial stress fracture is a serious condition that can require more than six weeks of not bearing weight through that leg by using crutches for mobility. Your physiotherapist will devise a cross training exercise program for you during this period to maintain muscle strength, joint range of motion and cardiovascular fitness. During this time factors that predispose to MTSS will be addressed as above. Return to weight-bearing sport will be gradual to ensure the bone is not overloaded and stress fractures do not occur.

