



INJURY DESCRIPTION:

Shin splints is a generalised term referring to pain down the front of the lower leg. Shin splints often is used interchangeably to describe the following conditions:

1. Medial tibial stress syndrome (MTSS)
2. Tibial stress fractures
3. Compartment syndrome

The most accurate classification of shin splints is MTSS.



ANATOMY:

To understand MTSS a sound anatomical understanding is needed. The Tibia and Fibula are two bones in the lower leg. The tibia is situated on the medial, or inside of the lower leg. While the fibula is situated on the lateral, or outside of the lower leg. There are also a number of muscles that attach to the tibia and fibula. These muscles, when overworked, pull on the tibia and fibula and cause the pain associated with shin splints.

DIAGNOSIS:

To accurately diagnose MTSS the examiner and patient will need a good understanding of tibial stress fractures and compartment syndrome to help with differential diagnosis.

Compartment Syndrome: Pain occurring at the front and outside of the lower limb. This is characterised by a swelling of the muscles within the compartment creating increased pressure, resulting in pain, altered nerve sensation and weakness. Diagnosis is completed through pressure testing of the area completed by a specialist and often requires decompression surgery.

Tibial stress fracture: Constant stress to the tibia usually with running can result in a cracking of the bone. A stress fracture is more serious than MTSS and if not detected can cause long lasting problems. Stress fractures often have a more localised soreness and improve with rest.

MTSS: Is the name that's often given to exercise (running) induced pain in the front of the lower leg, toward the medial part of the shin.

SIGNS AND SYMPTOMS:

- Pain on the front of the shin bone, towards the middle
- Calf tightness
- Early morning pain
- Pain with running or with active dorsiflexion (bringing the foot towards the shin)
- Tender to touch shinbone
- Sometimes the area may be red and inflamed



PHYSIOTHERAPY TREATMENT OPTIONS:

- Cryotherapy
- Deep tissue massage
- Dry Needling
- Kinesio Taping
- GaitScan assessments
- Strengthening programs
- Footwear analysis
- Active release techniques
- Stretching
- Fascial scrapping
- Biomechanical analysis
- Education
- Electrotherapy
- Cross training programs

COMMON CAUSE OF MTSS:

- Over pronation or flattening of the feet during
- Poor footwear
- Overtraining
- Poor running or gait technique
- Muscle imbalances and tightness of the lower leg muscles
- Sudden changes in training load or intensity e.g. increase in hill running
- Hip weakness
- Body asymmetries
- Hormonal changes
- Low bone mineral density

