



## 'Shin Splints'

'Shin Splints' is a general name given to pain anywhere along the shin bone, from knee to ankle. Symptoms can be experienced at the front or inside of the shin bone and can vary from mild to quite severe for some people.

### Anatomy

The lower leg consists of two bones, the tibia and fibula. The larger weight bearing tibia bone is commonly what people refer to as their shin. The outside thinner bone is the fibula. These bones are joined together top and bottom in the form of joints, and along the full path there are ligaments and muscles anchoring off these bones that essentially help to move and control the ankle and foot. The muscles are bound to the tibia and fibula bones the bones in tight 'compartments' that bind the muscles to the so they work efficiently. Passing through the compartments of muscles are many nerves and blood vessels supplying the lower leg and foot.

Sports medicine health professionals such as physiotherapists primarily consider the cause of shin pain symptoms to be possibly arising from three possibilities;

- The bone structure
- The muscle compartment
- The interface between the muscle and bone referred to as the "periosteum"

In reality for people with long-standing shin pain, there is probably an element of all three contributing to symptoms. The location and type of symptoms you experience, and how they relate to exercise and sport can give some indication as to the more likely possibility.



### The Dividing Line – Outside vs Inside

In the world of sports medicine, we start by dividing your symptoms on where they are located – outside (anterolateral) or inside (antero-medial).

Pain located on the outside of the tibia is of particular concern, and may relate to a nasty type of injury called an 'anterior tibial cortex stress fracture'. These injuries need to be managed very carefully as the outside of the bone has tensile forces acting on it that can delay healing. Fortunately this is far less common than pain on the inside of the bone, however if you do have symptoms on the outside/front part of your shin that are getting worse with activity, you should have it assessed immediately.

Pain located on the inside of the tibia is far more common. In Sports Medicine, it is most commonly referred to as "Medial Tibial Stress Syndrome" – the name being a reflection of the fact that it has more than one specific anatomical cause as discussed above.

## Symptoms

Symptoms include pain over the inside lower half of the shin, felt before, during or after exercise. Pain often returns after activity and may be at its worse the next morning. Swelling is occasionally present. Lumps and bumps may be felt when feeling the inside of the shin bone. The overlying skin may be red and inflamed. In some cases, people may report neural symptoms of pins and needles and numbness in the shin or commonly into the foot if nerve structures are involved.

## Cause

Physiotherapists consider the problem from many angles in trying to determine why the symptoms have developed in the first place. Ultimately if the cause of the symptoms is not determined, it is difficult to eliminate. The things that may contribute to overload and shin pain may include:

- Training Errors
- Foot Structure
- Running shoes
- Running Technique
- Previous Injuries
- Diet
- Past Sporting History



## What can your Physiotherapist do for you?

Treatment options may include

- Manual Therapy: to address identified soft tissue and joint imbalances.
- Taping: various taping techniques can be used to offload pressure on the shin.
- Exercise Rehabilitation: to address muscle imbalances and joint stiffness.
- Orthotic/Shoe Prescription: depending on your foot structure, a change in shoe type, or the addition of orthotics maybe recommended.
- Advice: regarding training type, intensity and volume.
- Surgery: in rare cases, surgery may be required to 'release' the soft tissue compartments.

If you suffer from shin pain, contact us on (02) 4647 3373 to make an appointment with one of our Physiotherapists.

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