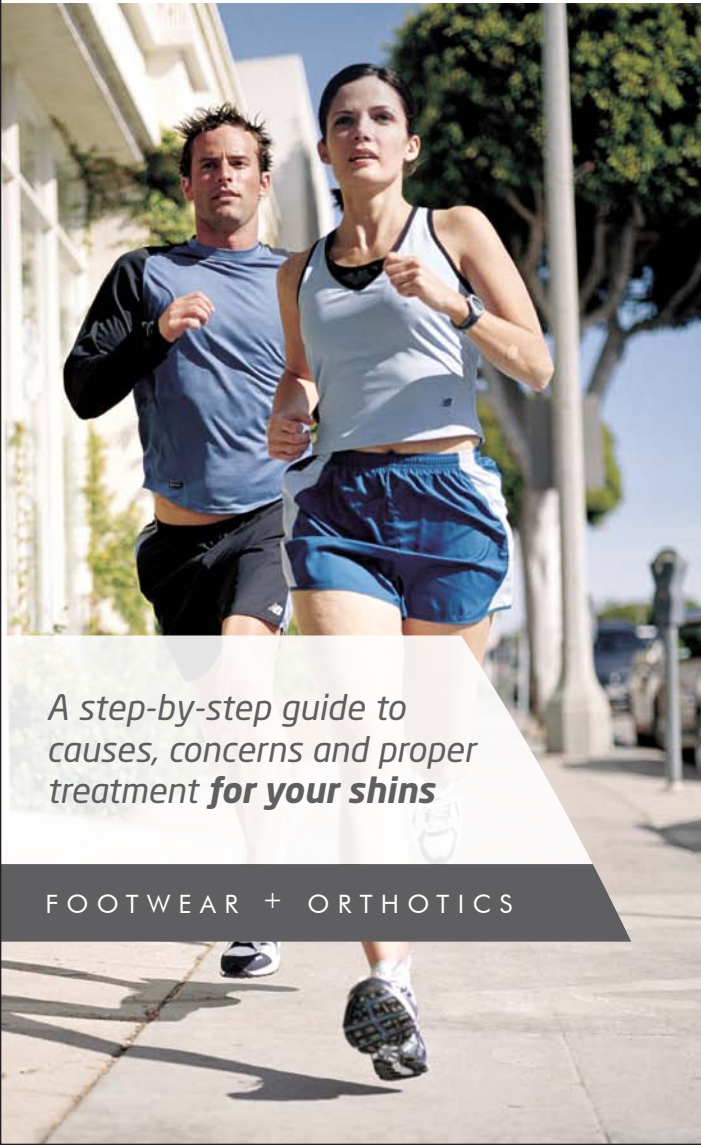




Shin Splints

How to avoid long term injury



A step-by-step guide to causes, concerns and proper treatment **for your shins**

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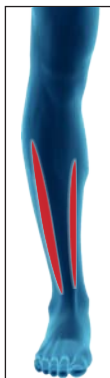
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Shin Splints

Shin Splints can generally be described as pain at the front of the lower leg. The most common cause for the pain is inflammation of the periosteum of the tibia (sheath surrounding the bone).

Symptoms

- Tenderness over the inside of the leg
- Lower leg pain or aching
- Possibly swelling
- Lumps and bumps over the bone
- Pain felt when toes pointed down
- Redness over the inside of shin



At first signs, it is a good idea to have your doctor take a look as more serious conditions, such as anterior compartment syndrome can be disguised as shin splints.

Causes

This condition is usually an overuse or overtraining injury. This can be from either increasing the amount of activity you have been doing, increasing intensity of the training, or increase the frequency of the activity. It is very common to runners, especially when hills are involved. Other factors can lead to shin splints:

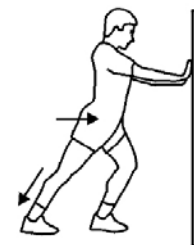
- ▶ **Foot Mechanics:** Flatter feet that tend to pronate, or roll inward, place more strain on adjoining muscles, while high arched feet may be very rigid and unable to absorb impact forces easily.
- ▶ **Muscular Factors:** Inflexible and tight calf muscles add extra strain on the shins.
- ▶ **Activities:** Although the forces involved in running cause it to be a popular source of shin splints, any high impact activity can lead to this condition.
- ▶ **Individual:** Running style, such as running on your tip-toes or flat footed, can increase your chances of developing shin splints.
- ▶ **Footwear:** Wearing old worn out shoes, shoes without good cushioning, or shoes with the wrong design for your foot mechanics make you more susceptible to shin splints.

Treatments Available

- ✓ **Rest:** Use pain as a guide, and add crosstraining activities, such as swimming or cycling to give shins a chance to rest while still maintaining your cardiovascular fitness.
- ✓ **Stretching and strengthening calf muscles:** Consider starting a weight training program, and stretching daily, especially after activity. (see pictures on the next panel)
- ✓ **Ice:** In the early stages, apply ice if very painful to area for 15-20 min allowing at least 45 min for the area to warm before icing again. Icing is most effective up to 48 hrs following an injury. Never ice before activity.
- ✓ **Heat:** Apply heat for 15—20 min after the initial acute period (after 48 hrs), especially before training.
- ✓ **Orthotics:** If inflammation and pain is caused by overpronation, custom made orthotics or arch supports can help correct your foot mechanics. Orthotics can also reduce shearing forces for a high rigid arched foot.
- ✓ **Footwear:** Making sure you are in well cushioned shoes, or adding a cushioned insole, will help absorb impact forces.
- ✓ **Taping:** Some sports taping methods are helpful for taking pressure off the shins.
- ✓ **Sports massage and/or Physio:** These methods can reduce recovery time, talk to your doctor before starting any rehabilitation program.
- ✓ **Anti-inflammatory drugs:** Combined with rest and ice, these can reduce inflammation but underlying causes (such as muscle tightness or foot mechanics) should be addressed to eliminate a recurrence.



Stretching For Shin Splints



Lean against a wall or chair. Keep your upper body vertical and your feet pointed forward, one staggered in front of the other. Keep your back knee straight and hold this stretch for 45 seconds to 1 min. Stretch until you feel tension, but not pain. Repeat for both legs.



Using a step of some type, hang onto a rail or wall for balance. While standing with the ball of one foot on the step, with the heel hanging off the edge, raise up onto the toes and back down ten times each foot. Repeat twice everyday to strengthen calf muscles.



Anchor one end of an exercise band to a heavy object, such as the leg of a couch or bed. Loop the other end around your foot. Move your foot up, down, and from side to side against the band's resistance to exercise different muscle groups.



On all fours, slowly bend back so your bum is moving in the direction of your heels. Stretch back this way as far as you can, feeling a stretch in the front of your shins. Hold for 45 seconds to 1 min.



Place a weight around the foot, and move your foot up and down from the ankle, with no movement in the rest of the leg. Or use a partner to grasp the foot and provide manual resistance. Perform three times with each leg.

**Always consult with a physiotherapist before starting any therapeutic strengthening and stretching exercise program.*