

SHIN SPLINTS

Shin splints describes a variety of generalized pain that occurs in the [front of the lower leg along the tibia \(shin bone\)](#). Shin Splints are considered a cumulative stress injury because they often occur after repeated stress or jarring of the bones, muscles and joints without proper conditioning or recovery between workouts. The pain of shin splints is typically located on the outer front portion of the lower leg (anterior shin splints) or pain on the back inside of the lower leg (posterior medial shin splints).

Causes

The pain of shin splints is caused by trauma to either the muscles or bones of the lower leg. Muscle trauma (exertional compartment syndrome) is often related to [overtraining](#) or excessive running on hard surfaces. Repeated use makes the muscles swell and puts pressure on the fascia that covers the muscles in the lower leg leading to pressure and pain.

Bone trauma to the lower leg can result in [stress fractures](#). Constant pounding the leg bones may cause microscopic cracks and fractures in the tibia and fibula (lower leg bones). Rest is needed to repair these cracks, but without adequate recover, these cracks continue to grow and become a fracture. The result is acute pain and a long recovery.

Beginning runners are at increased risk of shin splints and stress fractures because they are not used to the high impact running has on the muscles and joints of the lower leg and foot. Running on hard surfaces (especially with worn, poorly cushioned footwear) increases stress on the muscles, joints and bones and is another cause of shin splints. Excessive [pronation](#) or other biomechanical problems can increase the risk of developing shin splints.

Other causes of shin splints include:

- Improper stretching
- Lack of [warm-up](#)
- Training too hard
- [Increasing mileage too quickly](#)
- Running or jumping on hard surfaces
- Muscle imbalance between the posterior and anterior leg
- [Worn out shoes](#) that do not have enough support
- Running on a tilted or slanted surface
- Other biomechanical issues (poor alignment between the feet & legs)

Symptoms

- Pain located on the [medial \(inside\) part of the lower leg](#)
- Pain is often worse with running or other weight bearing exercise
- Pain increases after running on hard surfaces
- An aching pain may linger after stopping activity
- Pain increases with activity
- Pain increases with running, jumping, hill climbing, or downhill running
- Calf muscles may be tight and inflexible

Treating Shin Splints

Rest is the best treatment for shin splints. For immediate relief use the [R.I.C.E. treatment method](#) for controlling pain and inflammation. Returning to activity must be done gradually with non-weight bearing activity (cycling, swimming) to your workouts until pain-free.

- Physical Therapy is imperative, this reduces the inflammation and speeds up the healing process. Recovery is the 1st phase and strengthening would be the 2nd phase.
- Strengthening and stretching exercises are helpful. Mainly strengthening the anterior (front) leg (resistance moving the foot in an upward direction).
- Taping your shins will reduce stress and maintain stability
- Wearing the right athletic shoes for your foot type
- Custom Molded Orthotics (insoles) which reduces stress on the kinetic chain from the feet up to the lower back. This is accomplished by improving the alignment between the feet and legs and would help to prevent future issues with shin splints. Another plus with orthotics is they are also a performance enhancer allowing you to move faster and quicker.

Returning to activity must be done gradually or you risk re-injury. Change your routine and cut your exercise time and intensity so that you have no discomfort before, during or after exercise.

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