

Shin Pain

Medial Tibial Stress Syndrome

Majority of people have probably heard of this injury referred to as “*shin splints*.” However, the term *shin splint* is used to describe various overuse injuries affecting both the soft tissue and bone. One specific type of *shin splint* (**MTSS**) is limited to the lower third of the inside of the tibia (lower leg). The highest incidence of MTSS occurs in runners. It typically occurs either late in the season after prolonged activity or during the initial rigors of pre-season training.

It typically presents with pain (recurring dull ache) and palpable tenderness along the inside of the lower leg. Early on, you may experience pain at the beginning of a run, which is relieved with continued activity, only to recur at the end of the session. Pain with MTSS is usually relieved with rest. However, as this syndrome progresses pain may be present throughout activity and rest, which makes it very important for this type of injury to be evaluated by a health professional in order to rule out a tibial stress reaction/fracture.

Historically, constant pulling of the tibialis posterior tendon on the tibia has been the pathology most suspected in development of MTSS. Recent research however, has implicated fascial (the envelope around a group of muscles) traction from eccentrically contracting flexors of the leg during the mid-stance of running as the most likely cause. These muscles contract to counteract the pronatory (foot drop) motion of the foot and to damp the vibrations imposed on the body. This repetitive traction is what most likely causes the injury.

Some factors contributing to MTSS are mechanical faults and muscle imbalance such as weakness in the pelvic stabilizers (glute med) which allows the hip to drop and the knee to drift inward during stance. This position causes the foot/ankle to pronate. Mechanical faults are often far removed from the site of injury and require evaluation of the entire kinetic chain. Research has shown simple exercises directed at pelvic stability can help correct common mechanical faults which may lead to injury. Avoidable factors include training errors (too much, too soon, too often), and improper footwear and training surfaces. Surprisingly, once symptoms develop, softer running surfaces often aggravate symptoms of MTSS.

Once the injury has been evaluated and the possibility of stress fracture is ruled out, Dr. Macintyre recommends a session of Active Release (ART) to reduce the tension and restore tissue integrity in the affected structures. Medical acupuncture and electric modalities can be used to help reduce the pain and promote healing. A biomechanical running analysis can be performed to identify functional weakness in the chain which may be predisposing you to injury and to help prescribe appropriate exercise. Footwear (shoe type and orthotics) and training program should also be assessed and tailored to your needs. If all these areas are addressed, recovery time and recurrence rates can be drastically reduced.

For more information about pain occurring in the lower leg or help with one of your other injuries contact SPC - Sports Performance Centres.

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