



Medial Tibial Stress Syndrome

Definition: Medial tibial stress syndrome (MTSS) is a condition that is caused by muscle or bone pain and inflammation of the front/middle part of the lower leg.

Common Terms: “Shin splints”; MTS; stress fracture; runner’s leg



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Typical Mechanism of Injury: MTSS usually occurs as a result of improper training. This may be due to improper footwear, increased training intensity or training time, or poor body mechanics such as flat feet or knock knees. MTSS may also be caused by a muscle imbalance between muscles in the front and back of the shin, as well as inflexibility of the calf muscles.

Common Signs and Symptoms: Pain and irritation along the front of the lower leg (shin); occasionally swelling is seen; the pain will often be worse after intense workouts. Discomfort increases during the first few steps in the morning, then may get a bit better as you warm up, and then worsen as the day goes on, especially with any increased activity.

Common Treatment: Rest and decreased activity are the only real treatments. Ice may assist with pain reduction, and physical therapy treatments such as electrical stimulation and ultrasound may provide some benefit. Taping or bracing may help some people and compression socks on the lower legs may also help with activity related symptoms.

Prevention: Paying attention to changes in activity levels and being sure to change shoes that are worn out may help avoid developing MTSS. Gradually increasing training intensity and time is very important. Consistent stretching of the muscles in the front and back of lower leg, proper fitting footwear, and consideration of shoe inserts to improve and correct any postural abnormalities are also helpful.

Expectations: MTSS can be a very painful and annoying condition, often lasting for months before weight bearing pain is resolved and strenuous activity can resume. This condition can progress to a stress fracture if symptoms are ignored.

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