

Medial tibial stress syndrome

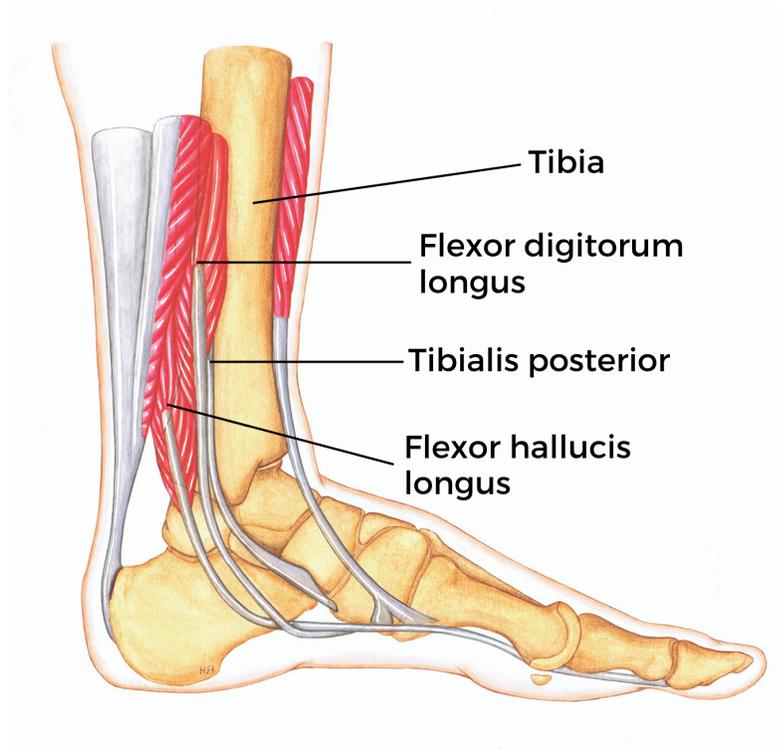
Medial tibial stress syndrome is an injury caused by repetitive stress applied on the tibia, or by excessive traction of the fascia, which is the muscle envelope, on the surface of the bone. This condition is often called shin splints.

This condition affects mainly people that are involved in activities such as walking, running or jumping, where the tibia and lower leg muscles must absorb the body weight.

Generally, this injury happens when training intensity and/or volume is increased too quickly with inadequate recovery. Starting a new activity, modifying the training surface and quickly transitioning to a new type of inadequate training shoes are among the risk factors.

Structures involved

The periosteum, a dense layer of vascular connective tissue enveloping the bone, is often the main structure involved, along with the **tibia**. Excessive muscle tension in the **tibialis posterior**, **flexor digitorum longus** and **flexor hallucis longus** can exacerbate symptoms.



Signs & Symptoms that you may experience

Everyone will react differently after an injury and recovery will depend on the severity. Medial tibial stress syndrome can cause but is not limited to, pain during high-impact activities, difficulty in weight-bearing activities and localized swelling. Initially, pain will appear during the warm-up and after cool-down but can progress to an incapacitating pain that limits running.

Recovery

Your rehabilitation plan, your health status, your fitness level and your nutrition affect recovery time. Generally, you can expect to fully recover from a medial tibial stress syndrome. Generally, complete recovery from this condition can take a few months.

▶ WHAT TO DO

Early-stage

Relative rest is a good way to protect your tibia against further damage, but it is important to avoid overprotecting your injury. A few days rest with a reduction of pain-inducing activities might be necessary. A quick but progressive return to weight-bearing during your activities of daily living, non-painful light cardiovascular exercises and therapeutic exercises will allow better recovery.

Rehabilitation

Follow your practitioner's advice. It will help you manage the different phases of the recovery process and will increase the likelihood of successful rehabilitation. Your practitioner will assist you during the progressive return to your activities or training and during your rehabilitation program in order to regain your normal range of motion, strength and endurance, balance and functional status. Improvement in your running technique can improve the outcomes.

As per the principles of rehabilitation for medial tibial stress syndrome, reducing impacts is one of the main elements of functional recovery. In most cases, temporarily modifying training to focus on low-impact activities such as biking can help maintain your training level while allowing optimal bone recovery. The use of taping or pre-made orthosis can help reduce symptoms in the short term.

▶ WHAT TO AVOID

Avoid returning too quickly to running or activities that caused the condition. A medial tibial stress syndrome can lead to a stress fracture if pain signals are ignored. People that reduce the volume of high-impact activities typically recover faster.
