

## Shin Splints

Shin splints are a common cause of lower leg pain, especially in athletes such as runners, tennis players, or soccer players. Shin splints are typically caused by overuse and are characterized by diffuse pain along the medial shin (or tibia). Shin pain is made worse by weight bearing activities such as running, jumping, walking, and standing for prolonged periods. Pain with shin splints may be worse at the beginning of exercise, get better while performing the activity, and return following its completion. Pain in the morning is worse due to tightening of the muscles overnight. Other symptoms may be tenderness along the shin and swelling of the lower leg.

Shin splints often occur when athletes increase the intensity of their workout too quickly, overworking the muscles, tendons, and bone tissue, and placing repetitive stress on the tibia. This causes a stress reaction and is also known as medial tibial stress syndrome (MTSS). This reaction may be the result of muscle inflammation, bone inflammation, small muscle tears or possibly a combination of these. MTSS can be caused by various factors including overpronation (flat feet), decreased flexibility of the calf, poor shoe support, or increased stress placed through one leg due to faulty biomechanics. These factors cause the leg muscles to pull on the bone causing pain, which typically occurs at the location where the soleus (part of the calf muscle) and the posterior tibialis (a posteromedial calf muscle) attach to the tibia.

Physical therapy is an effective treatment to decrease pain related to shin splints. Initially, the physical therapist will perform a thorough evaluation on the patient, assessing posture of the foot and lower extremities when walking/running, as well as strength and flexibility of the lower extremities. Treatment will begin by decreasing pain and minimizing symptoms.



Augmented Soft Tissue Mobilization (ASTYM) and Graston Techniques are two very effective treatments performed at Lakeshore Physical Therapy to reduce the pain caused by shin splints. ASTYM is a technique that aids in the breaking up of dysfunctional tissue, assists in the regeneration of collagen, and helps to stimulate healing. Graston Technique is a similar technique that assists in increasing soft tissue mobilization by breaking up scar tissue, fascial restrictions, and any adhesions within the muscle. Both techniques allow for quicker, improved outcomes and utilize exercise to further improve musculoskeletal function. Additional manual treatments are also performed to improve flexibility of the calf and anterior shin muscles for reduction of muscle pull on the tibia. Activity modification or cross training may be suggested to reduce aggravating activities. Modalities, such as electrical stimulation and ultrasound may also be used to decrease pain. Orthotics, inserts, or taping can help with hyperpronation and biomechanical errors must be addressed and eliminated to prevent the pain from reoccurring. Successful treatments also include gait training, strengthening for the muscles that help maintain the arch and control pronation, and flexibility exercises for the calf and anterior shin muscles.