



## Medial Tibial Stress Syndrome (MTSS)

### What are shin splints?

Shin splints is a broad term for “Medial Tibial Stress Syndrome” (MTSS) which implies stress and forces throughout the shin bone during exercise. MTSS is most commonly due to *overuse* causing irritation of tendons, muscles and muscle attachments to bones. It is most commonly seen in people who *suddenly increase their duration or intensity of training*. We call this “volume overload.” MTSS represents a spectrum of severity, ranging from mild inflammation of the tibial bone and soft tissues of the area to a stress fracture. MTSS is commonly seen in T&F athletes, football, basketball, soccer and dance.

### What makes you at risk for getting shin splints?

- Sudden increase in exercise activity (intensity, duration) – most common cause
- Poor foot mechanics (flat feet or very high arches)
- Poor flexibility and weakness of lower legs (calf muscles) and hamstrings
- Worn out shoes or improper fitting shoes
- Recurrent MTSS may be associated with biomechanical or endocrine abnormalities: leg length inequality, abnormal pelvic mechanics, etc.

### How are shin splints treated?

- Acute Tx: Modified rest – most important step (often takes 2-6 weeks)
- NSAIDS (Ibuprofen, Advil, Aleve) 1 hr before exercise
- Ice after exercise
- Reduce exercise intensity and duration (by about 50%). Then, gradually advance your activity as you can tolerate without pain.
- Cross train w/ low-impact exercises (swimming, pool running, elliptical, stationary bike or cycling)
- Lacrosse ball exercises of lower leg and calf muscles
- Physical Therapy – flexibility and strength of core and lower extremity, pain control
- Orthotics – if you have foot arch abnormalities or poor foot mechanics
- Wear well-fitting shoes – change running shoes every 250-500 miles
- Compression sleeve or compression socks
- Orthobiologic injections – Prolotherapy or Platelet Rich Plasma (PRP) injections are controversial for chronic cases

### “Fredericson” classification system for MTSS & stress fractures on MRI:

