

Doctor's Corner

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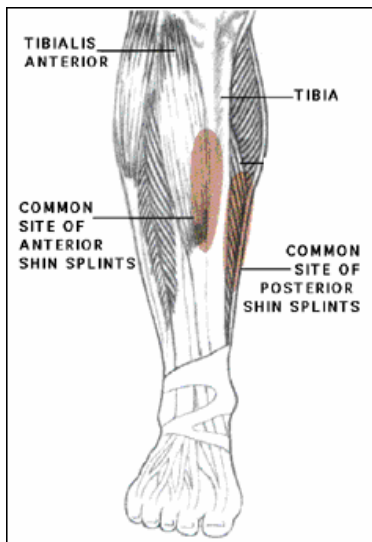
SHIN SPLINTS

Do you suffer from pain at the front (anterior) or back (posterior) of your lower leg?
Does the pain begin as a dull aching sensation after you run?
Does the ache become more intense at times, possibly during walking?
If you suffer from any of the above, then you might have a common problem occurring in most runners called shin splints.

What Is It?

There are generally two types of shin splints. The first is the anterior shin splints, which involves the tibialis anterior, extensor hallucis longus, and digitorum longus. These muscles are used for shock absorption. When these muscles are weak, or are placed under increased demand as in walking or running on hard surfaces, or when the shoe has no shock absorbing quality, the force is transmitted to the tibia and its attachments. Anterior shin splints are tender just lateral to the middle tibia.

The second is the posterior type, which includes the tibialis posterior, flexor hallucis longus, and flexor digitorum longus muscles. These muscles act as ankle stabilizers and appear to be overstrained when the patient is hyperpronated (inward rotation of the foot). Pain and tenderness for posterior shin splints is posteromedial to the middle or lower tibia ^{1, 2, 3, 4, 5}.



What To Do About It?

Ice, rest, and anti-inflammatories are the most commonly used treatments for shin splints. However, I've found that Active Release Technique® (ART®) is the choice treatment for shin splints. As expressed above, the anterior and posterior tibialis muscles are most often implicated. Fibers from these muscles tear away from the periosteal (outer surface of the bone) attachment surface. As these fibers heal, they often become fibrotic making it difficult for this muscle to lengthen normally. This makes the probability of future shin splints more likely ^{3, 6}.

What To Do About It? (cont'd)

With ART® treatments, adhesions are broken down allowing the muscle to lengthen, thereby reducing the probability of future injuries ^{3,6}. You would then incorporate icing the area, reducing mileage (for a short period of time), avoiding running on hills, correcting gait imbalances (i.e., pronation) and stretching as core components that will aid in correcting the problem.



Avoid Re-Occurrence

- 1) Conduct a biomechanical analysis (either by video or watching the runner in person), which finds the soft-tissue structures that are the primary cause of the biomechanical dysfunction as well as affected structures restricting your performance.
- 2) Incorporate a nutritional protocol:
 - a. Bromelain
 - b. Bioflavanoids
 - c. Vitamin C
 - d. Zinc
 - e. Manganese
 - f. MSM (methyl sulfonylmethane)
 - g. Silicon
 - h. Calcium
 - i. Magnesium
 - j. Valerian
 - k. Omega-3 fats (fish oils)

Active Release Technique (ART)®

ART® is a medically patented soft-tissue system - as the name implies, uses motion to fix the problem. Once the injury has been assessed, the provider uses hands-on treatment and patient motion to “free up” the problem areas ³.

STRETCH - to reduce tension along the shin.

Technique:	Warm up until you start to sweat, stretch to a gentle pull and hold, without bouncing, for 20 seconds.
Frequency:	Do 4-8 repetitions per day, 5-7 days per
	<p>Calf Stretch</p> <ul style="list-style-type: none"> •Stand with your feet pointed forward •Keep your heels down and back leg straight. •Slowly bend the front leg until you feel a gentle upper calf stretch in the back leg.
	<p>Heel Stretch</p> <ul style="list-style-type: none"> •Stand with your feet pointed forward and heels down. •Slowly bend the back leg until you feel a gentle lower calf or heel stretch along that leg.

STRENGTHEN - leg muscles to prevent re-injury.

Technique:

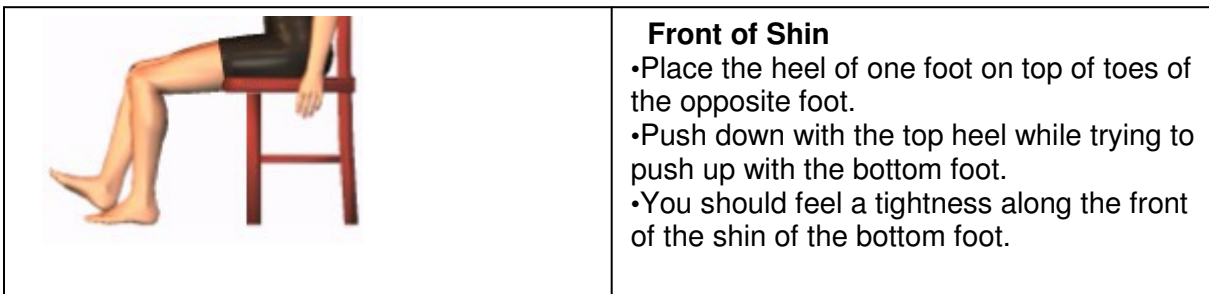
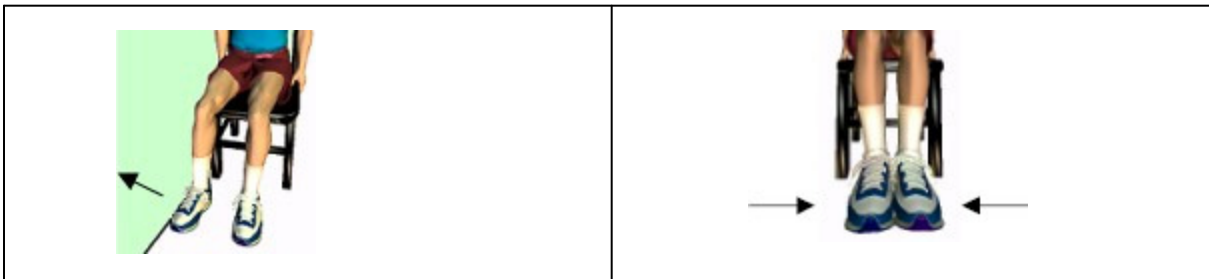
Sit with your foot flat on the floor and push it against a stationary object for a 3-5 count (the foot shouldn't move, but the lower leg muscles will tighten), then relax. Stop if this causes shin pain.

Frequency:

Do three sets of 10-15 repetitions, 3-4 days per week.

Outer Shin - Push your foot outward against an object.

Inner Shin - Push your feet in against each other.



Reference

- 1) Souza, T. *Differentiated Diagnosis and Management*, 2001. Pg. 343-44
- 2) Hammer, W. *Soft-Tissue Examination and Treatment Methods*. Pg. 324
- 3) P. Michael Leahy, DC, CCSP. *Active Release Technique, LLC. Lower Extremity Manual*. Copyright 2000
- 4) P. Michael Leahy, DC, CCSP. *Active Release Technique, LLC. Biomechanics*.
- 5) Reber, L., Perry J., Pink M. *Muscular Control of the Ankle in Running*. *Am. J. Sports Med.* 1993; 21: 805-810
- 6) Abelson, Brian. *Release Your Pain: Resolving Repetitive Strain Injuries with Active Release Technique*. 2003

Next Month - Nutrition for Optimal Running Performance

Robert G. Silverman is a Doctor of Chiropractic, Certified Nutrition Specialist, Certified Clinical Nutritionist, has a Masters of Science in Human Nutrition, is a Certified Strength and Conditioning Specialist, and is a Diplomate with the American Clinical Board of Nutrition. He has a full-time successful private practice in White Plains where he specializes in the diagnosis of joint pain and its treatments with an innovative, established and well-researched approach to non-surgical care while incorporating proper nutrition protocols. Dr. Silverman is one of the few practitioners in Westchester County who is certified in the highly acclaimed, medically patented, Active Release Non-Force Soft Tissue Technique (ART®), and also the cutting-edge Graston Technique®, which is an advanced form of instrument-assisted soft tissue mobilization technique that has FDA clearance. He served as a member of the medical team of New York City's Triathlons and Marathons, and the Westchester Triathlon. Periodically, Dr. Silverman gives seminars on injury-related preventions, treatments and nutrition for various organizations and corporations. He also serves as a chiropractor and sports injury consultant for basketball players, professional wrestling organizations, local and collegiate sports teams, professional triathletes, body-builders and martial artistes. In addition, Dr. Silverman has been chosen as the national spokesperson for the Vitamin Ester-C.