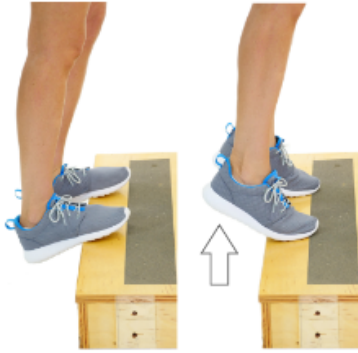


## Shin Splints/MTSS Prevention Program

*Prevention programs is another tool to help reduce the chances of injuries but does not completely rule out the injury.*

***Disclaimer: PLEASE stop exercises if you experience any pain or any discomfort at all. If pain and discomfort still persist, please contact the Athletic Trainer for further assistance or if it is an emergency, call 911.***

- ❖ There is no one single prevention program or method that can consistently prevent shin splints or MTSS<sup>1</sup>.
- ❖ Some useful prevention methods would be<sup>1</sup>:
  - Shock-absorbent insoles
    - Due to muscle fatigue, they are not able to absorb shock well and will transmit to the bones increasing the risk of injury<sup>1</sup>.
    - Running shoes should be replaced between 300-600 miles.
    - [Link](#) provided are some shock-absorbent insoles that can help prevent injury.
  - Graduated running programs
    - Preseason conditioning are great to prevent many injuries<sup>1</sup>.
      - Try not to abruptly increase intensity, duration, or frequency of training<sup>1</sup>.
      - Hill training and change of running surfaces (hard to tilted)<sup>1</sup>.
      - **Overall a reduction in distance, frequency, and duration of running bouts have shown some evidence in preventing shin splints/MTSS<sup>1</sup>.**
      - **Cross training such as pool work can help reduce stress on the tibia and allow for the bone to heal.**
  - Pronation-control insoles (controlling navicular drop) with stretches and strengthening
    - Exercises below:



### HEEL RAISES - CALF RAISES - STEP - BILATERAL

While standing on the edge of a step with your heels off the back end of the step, raise up on your toes as you raise your heels and body upward as shown.

Video # VV8Z5GJPG

**Repeat** 15 Times  
**Hold** 3 Seconds  
**Complete** 3 Sets  
**Perform** 3 Times a Week



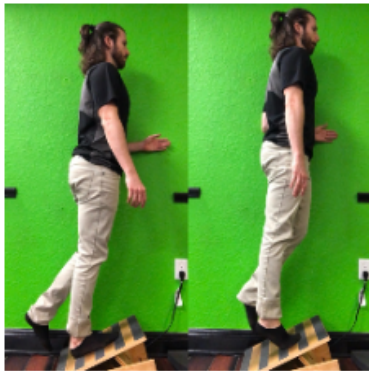
### Soleus Heel Raise

Start in a lunge position, slowly raise heel of front foot off the ground, then return to start position.

Keep the weight over the ball of your foot throughout the activity.

Vary the difficulty by putting less weight or more on the front leg.

**Repeat** 15 Times  
**Hold** 3 Seconds  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### Slant Board Single Leg Stance Calf Raises

Balancing on one foot, stand on a slant board with the PLANTED FOOT. Use the PLANTED FOOT to press the ball of the foot into the board, raising the heel off of the board. Once at EROM, pause briefly and contract calf muscle of PLANTED FOOT. Lower the heel back down to the board slow and controlled.

**Repeat** 12 Times  
**Hold** 3 Seconds  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### Dense Slant Soleus Raise ATG

Seated, knees translated over toes, heel down on slant to start. Place dumbbells on quadriceps. Elevate heels, pause at top, control lowering down.

**Repeat** 12 Times  
**Hold** 3 Seconds  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### Tibialis Anterior Band Exercise

Sitting on the floor place a band around the ankle securing the free end on a sturdy surface.

With a good amount of tension on the band bring your toes toward your face. Relax and repeat.

**Repeat** 12 Times  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### TIBIALIS ANTERIOR WALL RAISES

Stand with your back and shoulders flat against the wall, hands by your sides and feet placed out and away from the wall (as shown). Keep the heels down and lift the toes up (ankle Dorsiflexion) and hold for 2 seconds. Slowly lower back down and repeat. The goal is to strengthen and activate the Tibialis Anterior muscle (lateral shin) and increase ankle Dorsiflexion.

Video # VV58WCLT8

**Repeat** 20 Times  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### Tibialis anterior walk

1. Walk a short distance on the heels of your feet
2. Do not allow your toes to touch the ground

Video # VVF55YCF6

**Repeat** 10 Times  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### 3 WAY ISOMETRIC ARCHES

1. Start with your foot on the floor. Raise up the arch of your foot while maintaining your big toe, ball of your foot and heel on the floor the entire time.
2. Next, raise the arch of your foot and lift your big toe off the floor, maintaining the ball of your foot and heel on the floor the entire time.
3. Lastly, raise the arch of your foot and lift your other 4 toes off the floor, maintaining your big toe and heel on the floor the entire time.

**Repeat** 10 Times  
**Hold** 10 Seconds  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### Arch Activation and Isometric Loading

1. Start in a standing neutral position.
2. Activate the arch stabilizers, 'doming' the arch into the air.
3. Come into a single leg stance with the arch maintained, loading the forefoot evenly from side to side and firmly pressing the first 'knuckle' into the floor.

-rest, repeat

**Repeat** 10 Times  
**Hold** 5 Seconds  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### Towel Crunch

While seated or standing put heel of foot on one end of a towel that is spread out on the floor. While keeping your heel stationary on the end of the towel, pull your toes backwards to crunch towel underneath your foot. Flatten foot out and repeat. Once you have reached the end of the towel or there's two big of a bunch under your foot you cannot continue, spread towel back out and do it again.

**Repeat** 10 Times  
**Complete** 3 Sets  
**Perform** 3 Times a Week



### STANDING CALF STRETCH - GASTROCNEMIUS

Start by standing in front of a wall or other sturdy object. Step forward with one foot and maintain your toes on both feet to be pointed straight forward. Keep the leg behind you with a straight knee during the stretch.

Lean forward towards the wall and support yourself with your arms as you allow your front knee to bend until a gentle stretch is felt along the back of your leg that is most behind you.

Move closer or further away from the wall to control the stretch of the back leg. Also you can adjust the bend of the front knee to control the stretch as well.

**Repeat** 3 Times  
**Hold** 30 Seconds  
**Perform** 3 Times a Week

Video # VVNCZDYYG



### STANDING CALF STRETCH - SOLEUS

Start by standing in front of a wall or other sturdy object. Step forward with one foot and maintain your toes on both feet to be pointed straight forward. Keep the leg behind you with a bent knee during the stretch.

Lean forward towards the wall and support yourself with your arms as you allow your front knee to bend until a gentle stretch is felt along the back of your leg that is most behind you.

Move closer or further away from the wall to control the stretch of the back leg. Also you can adjust the bend of the front knee to control the stretch as well.

Video # VVGUVSTYG

**Repeat** 3 Times  
**Hold** 30 Seconds  
**Perform** 3 Times a Week



### Ankle mobility

Keeping your heel on the ground or bench - drive your knee over the toes as far as you can.

Hold for 2-4 counts and then move back out of it, and repeat.

Video # VVNQG9MFW

**Repeat** 15 Times  
**Hold** 5 Seconds  
**Complete** 3 Sets  
**Perform** 3 Times a Week

**Bibliography:**

1. Craig DI. Medial Tibial Stress Syndrome: Evidence-Based Prevention. *J Athl Train*. 2008;43(3):316-318.