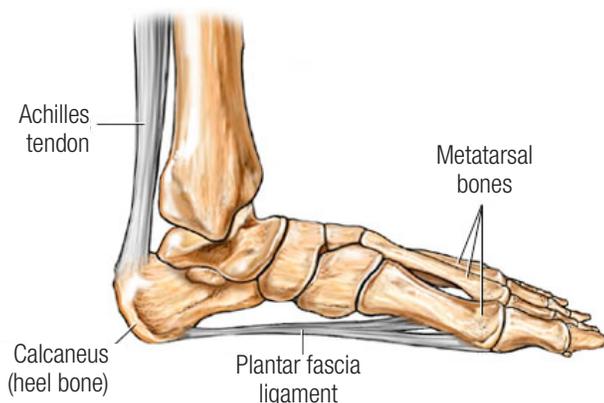


## INFORMATION GUIDE

# Heel Pain & Plantar Fasciitis



## WHAT YOU MAY EXPERIENCE

- Pain is typically most intense in the morning with first steps or after sitting for long periods of time.

## POSSIBLE SOURCES

- **TIGHT ACHILLES TENDON AND CALF MUSCLES:** When the calf muscles are tight, they pull on the calcaneus (heel bone) which causes its position to change. This change causes the plantar fascia to become over-stretched and micro tears may occur.
- **BEING ON YOUR FEET:** Foot fatigue occurs when individuals are on their feet for extended periods of time, especially on a hard surfaces. This can put more of a load/stress on the plantar fascia.
- **EXCESSIVE PHYSICAL LOAD:** Extra weight that is added by pregnancy, too heavy of a back pack, or weight gain places extra strain on the plantar fascia. A dramatic increase in activity can cause this as well. Improper footwear and conditioning could exacerbate this.
- **INCREASE IN ACTIVITY:** increasing the amount or intensity of training too quickly – uphill, running, or stair climbing.

## CONTRIBUTING FACTORS

- **HEEL SPUR:** Pain is caused by re-injury to the plantar fascia. Without proper support and/or preparation, this can occur and reverse any healing that has taken place. If not properly treated, can lead to heel spur.

## EXCESSIVE PRONATION

- Pronation is a normal movement of the foot allowing the arch to flatten to a degree, which helps the body to absorb shock and adapt to different ground surfaces.
- If the foot is weak or tired and/or the footwear is not supportive, then the arch can flatten more than normal, which is excessive pronation.
- Flattening of the arch (excessive pronation) increase stresses on the foot, which can further contribute to ankle, knee, hip and low back problems (a chain reaction).

## QUICK FIX

The **3 S's - Stretching, Strengthening, and Supporting**, along with ICE and REST have been found to be the simplest and most effective for these injuries:

1. **Stretching** of the calf (both gastroc and soleus) muscles and achilles tendon can help eliminate or prevent many problems with the achilles tendon. (*see reverse side*).
2. **Strengthening** of the calf muscles once the inflammation is gone can help prevent further injury (*see reverse side*).
3. **Supporting** the foot with proper shoes and insoles can prevent or help to eliminate the vast majority of lower extremity problems due to faulty biomechanics. You may consult with your Sports Medicine Physician or Sports Medicine Physical Therapist for guidelines about this. They can guide you to an appropriate local running store.

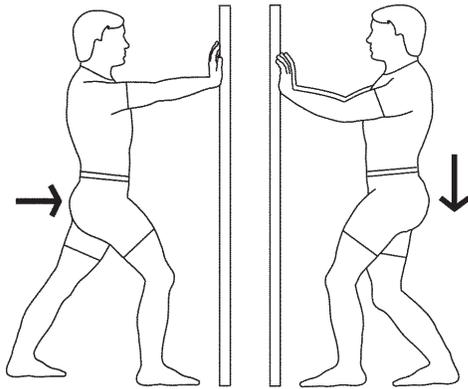
## FOLLOW-UP

If these quick fixes do not help resolve your problem:

1. Consult with your medical practitioner: Primary Care or Sports Medicine Physician.
2. Referral to Physical Therapist where a combination of manual therapy & specific exercises may help resolve your problem.
3. If damage is significant, you may be referred to an Orthopedic Surgeon.

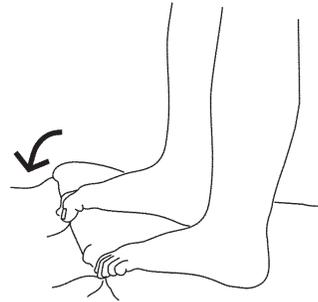
# Heel Pain & Plantar Fasciitis Exercises

## 1. GASTROC & SOLEUS STRETCH



1. Stand with involved foot back, and leg straight. Keeping heel on floor and turned slightly outward, gently lean into wall until stretch is felt in calf.
  2. Then bend both knees until a stretch is felt in lower calf.
- Hold for 30 seconds x 3-5 repetitions on both sides.

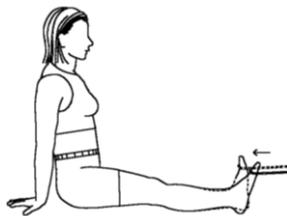
## 2. SINGLE LEG TOE CURLING



With foot resting on towel, slowly bunch up towel by curling toes.

## 3. ANKLE STABILIZATION

Repeat 10 times per set.  
Perform 3 sets per session.



Pull foot toward face. Return slowly to starting position.



Press foot downward.



Involved foot closest to door, slowly turn foot inward.



Uninvolved foot closest to door, slowly turn foot outward.

1. Use a frozen water bottle to roll foot over for 10 minutes or until numbness is felt.
2. May use tennis ball to help massage calf muscles.
3. Write the alphabet out with your ankle.
  - a. Foot elevated.
  - b. Create large letters with your ankle working from A to Z.
  - c. Try to not allow knee and leg to move.

Sports Medicine is available for questions. Please call 616.252.7778 to speak with a member of our care team or to schedule an appointment.