

# Plantar Fasciitis

## Signs and Symptoms

- Tenderness at plantar fascia attachment on the heel
- Stiffness and pain in the morning or after resting that gets better after a few steps but gets worse as the day progresses
- Pain that gets worse when you climb stairs or stand on your toes Pain after you stand for long periods
- Pain at the beginning of exercise that gets better or goes away as exercise continues but returns when exercise is completed

## Potential Causes

- Overpronation of the foot (foot rolls inward causing the arch to flatten out)
- Athletes with high arches or low arches are at a higher risk
- Decreased calf flexibility
- Repetitive activities on hard or irregular surfaces
- Wearing worn-out shoes

## Treatment

- Arch support/taping
- Foam rolling/self-myofascial release
- Ice or rolling foot on frozen water bottle after activity
- Decrease mileage and avoid painful activities
- Night splints
- Foot and calf stretches

## Prevention

- Maintain healthy body weight
- Proper warm up and cool down before/after activity
- Proper shoe fit/orthotics
- Replace worn out shoes (every 350-400 Miles)
- Gradual increases in training (no more than 10% per week)

## What is Plantar Fasciitis?

Plantar Fasciitis is inflammation of the connective tissue along the bottom of the foot and is typically the most common cause of heel pain. The plantar fascia is a flat band of tissue that connects the heel to the toes and helps to support the arch of the foot.



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# Patellofemoral Syndrome

## Signs and Symptoms

- Pain along the front of the knee
- Pain with activity, stair climbing (especially going down stairs) sitting for long periods, kneeling, or squatting
- Pain in one or both knees
- Pain that begins after starting a new activity or increasing intensity of an activity

## Potential Causes

- Tightness of the quadriceps, hamstrings, and/or IT band
- Weakness of the quadriceps muscle
- Genu valgum (knock knees), genu recurvatum (hyperextended knee) and excessive foot pronation (flat feet)

## Treatment

- Warm-up before running
- Foam rolling/self-myofascial release
- Ice or ice massage after activity
- Decrease mileage and avoid painful activities
- Change running pace
- Strengthening and stretching exercises for the hip and thigh

## Prevention

- Maintain healthy body weight
- Proper warm up and cool down before/after activity
- Proper shoe fit/orthotics
- Replace worn out shoes (every 350-400 Miles)
- Gradual increases in training (no more than 10% per week)

## What is Patellofemoral Syndrome?

Patellofemoral syndrome, commonly referred to as **Runner's Knee**, is a very common injury among athletes. Patellofemoral syndrome is related to an imbalance in the hip and quadriceps musculature. This imbalance leads to improper tracking of the patella (knee cap) through the groove at the end of the femur (thigh bone) with resulting pain and inflammation along the front of the knee.



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# Sever's Disease

## Signs and Symptoms

- Heel pain in one or both heels
- Difficulty walking - possible "toe-walking" to avoid stretching the Achilles tendon
- Back of the heel may appear red and swollen
- Pain and/or stiffness in the feet after walking in the morning
- Pain when the heel is squeezed on both sides

## Potential Causes

Sever's Disease most commonly occurs in skeletally immature patients during growth spurts that occur during adolescence. For girls, growth spurts typically occur between the ages of 8-13. For boys, growth spurts typically occur between the ages of 10-15. During growth spurts, muscle lengthening typically lags behind in bone lengthening. Therefore, with repetitive activities such as running and jumping, chronic stress and tension is placed on the already tight Achilles tendon at the site of the attachment on the growth plate causing Inflammation and pain.

## If Sever's Disease is suspected, how should it be treated?

It is recommended to follow up with a medical professional for proper diagnosis. Once a diagnosis is made, the most common form of treatment is rest from the activity that causes pain which relieves the pressure on the heel bone. The following may be used in the treatment of Sever's Disease: (all treatments should be guided by a medical professional)

- Gentle stretching and strengthening exercises of the lower leg in a pain free range of motion
- Ice or ice massage to the back of the heel
- Wear comfortable, supportive shoes. Even though direct contact on the back of the heel may be painful, it is important that the feet and arches are supported - not wearing supportive shoes may actually exacerbate the condition
- Wearing gel heel cups
- Elastic wrap or compression stockings
- Walking boot

## What is Sever's Disease?

Sever's Disease (also known as calcaneal apophysitis) is a type of bone injury in which the growth plate in the lower back of the heel, where the Achilles tendon attaches, becomes inflamed and causes pain. Sever's Disease is the most common cause of heel pain in children, especially those who exercise or play sports on a regular basis. It tends to occur particularly with those sports that involve running and jumping on hard surfaces such as soccer, basketball, and gymnastics.



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# Medial Tibial Stress Syndrome

## Signs and Symptoms

- Pain along the front (anterior)/inside (medial) shin
- Pain with first steps in the morning
- Pain with activity
- Pain that begins after starting a new activity or increasing intensity of an activity

## Potential Causes

- Tightness of the calves
- Overpronation or underpronation of the foot
- Athletes with high arches or low arches are at higher risk
- Wearing worn-out shoes
- Sudden change in training surface
- Training errors (increasing volume or intensity too fast)

## Treatment

- Decrease mileage and avoid painful activities, cross-train (bike, swim, AlterG running)
- Foam rolling/self-myofascial release
- Ice or ice massage after activity
- Compression socks or sleeves
- Strengthening and stretching exercises for the foot and ankle

## Prevention

- Maintain healthy body weight
- Proper shoe fit/orthotics
- Replace worn out shoes (every 350-400 Miles)
- Gradual increases in training (no more than 10% per week)
- Avoid concrete surfaces/sidewalks

## What is Medial Tibial Stress Syndrome?

Medial tibial stress syndrome, commonly known as **Shin Splints**, is a term used to describe pain along the front (anterior) and inside (medial) aspect of the shin. Shin splints affect beginner runners and seasoned runners alike. The condition results from irritation of the leg muscles where they attach to the tibia (shin bone).



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# Lateral Epicondylitis

## Signs and Symptoms

- Symptoms develop gradually over time
- Burning and aching pain over the outside of the elbow
- Pain with gripping or lifting objects with palm down
- Pain with using your muscles to bend the wrist backwards
- Pain may also be present with activities like turning a screwdriver or playing racquet sports

## Potential Causes

- Overuse of wrist extensor muscles
- Increasing volume or intensity of racquet sport or gripping activities at too fast a rate
  - Tennis
  - Racquetball
  - Squash
  - Fencing
  - Weight lifting

## Treatment

- Young athletes should see a sports medicine physician before beginning a self-guided exercise program, as the pain may be indicative of more serious problems
- Avoid painful activities
- Ice or ice massage after activity
- Self-myofascial release of the forearm muscles
- Strengthening and stretching exercises for the shoulder, elbow, and wrist
- Compression sleeves or elbow brace

## Prevention

- Gradual increases in training (no more than 10% per week)
- Using a racquet of an appropriate size and weight

## What is Lateral Epicondylitis?

Commonly known as **Tennis Elbow**, Lateral Epicondylitis is inflammation of the muscles and tendons that attach on the lateral epicondyle (outside) of the elbow. These muscles are known as the wrist extensors. In people with weak arm muscles (shoulder and elbow) this occurs when the tendons in your elbow are overloaded, usually with repetitive motions of the wrist and arm.



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# Strength Training Tips

## from OhioHealth Sports Medicine Runner's Clinic

Strength training can improve running performance and help prevent injury. Runners should include total body strengthening exercises, focus on core stability, hip strength, and single sided exercises. These five exercises will get you to the finish line.

- 1. Single Leg Russian Dead Lift.** Knees should be straight but not locked. Keep your back straight, bend at hips. Slowly lean forward, until you can no longer maintain form or your knees start to bend. Keep your shoulders and torso square. Repeat. 2 sets of 10-15. To make it more challenging, hold a light dumbbell in your hand.
- 2. Plank.** Get into a push up position; body straight with hips turned under and belly button pulled in toward spine. Keep hips and shoulders square. Hold this position until you start to lose form. Repeat 2-3 times. Work up to holding position for 30-60 seconds.
- 3. Side Plank.** Start in a side lying position with your body in a straight line. Push up so that your elbow is directly under your shoulder. Keep your shoulders square and your body straight. Don't let your hips sag or your torso to rotate forward or back. Hold until you start to lose form. Repeat 2-3 times.
- 4. Bridge with Knee Extension.** Start lying on your back. Lift your hips to make a straight line from your knees to your shoulders. Shoulder blades stay on the ground. Hold this position. Slowly straighten one leg at a time and hold until you start to lose form. Repeat 2-3 times on each side.
- 5. Straight Leg Raise in Abduction.** Start in a side lying position. Tighten your quad and push your knee straight. Lift the top leg toward the ceiling slowly, with control. Avoid rotating your body forward or back. Keep your toes in line with your leg; don't let your toe to turn out.



# STRENGTHENING & STRETCHING TECHNIQUES



1 Single Leg Raise-Abduction



2 Steamboats: Front, Back & Side



3 Hip Hikers



4 Step Downs



5 Vector Reaches: Front & Side



6 Bridge with Knee Extension

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For more information visit  
[OhioHealth.com/SportsMed-runnerstretches](http://OhioHealth.com/SportsMed-runnerstretches)

# Gearing up for Winter Weather

## Base Layer

Your base layer should cover as much skin as possible without adding bulk. You will sweat when you start running, so choose fabrics that keep you dry by wicking sweat from your body. Synthetic fabrics like polyester and polypropylene help pull moisture away from the skin better than cotton. Wool keeps moisture near your skin but adds warmth.

## Thermal Layer

Your thermal (middle) layer should provide warmth and insulation to the body. Choose fabrics that trap body heat and continue wicking moisture. Fabrics like polyester, micro fleece and merino wool are great choices. Thermal layers can vary from vests to full shirts, depending on the temperature.

## Outer Layer

Your outer layer should be water resistant or waterproof to help protect against wind and moisture. Look for a lightweight jacket that won't cause you to overheat mid-run. Consider jackets with vents that allow excess body heat to escape and zippers that allow you to regulate airflow in and out of the jacket. This will keep you comfortable, in spite of changing temperatures and wind conditions throughout your run.

## Hats, Gloves and Mittens

Wearing a hat and gloves will protect your skin from frostbite and keep you warm. Nearly a quarter of your body heat is lost through your head, so wearing a hat is a simple way to stay warm. Hats and gloves can easily be removed or added to control your body temperature. In extreme temperatures, choose mittens instead of gloves, because keeping your fingers together will keep them warmer. Wearing a facemask is recommended anytime the temperature drops below zero degrees.

## Shoe Traction

When the roads are icy, consider taking it off road or moving to the trails or track. Crampons or YakTrax can be worn on the shoes for added traction.

## Why should I dress for the cold?

Winter weather comes with dropping temperatures, wind, sleet, and snow. Finding motivation to run in winter weather can be a challenge, but proper preparation will keep you running strong as the temperature drops.

Many runners overdress for winter weather, causing them to overheat and sweat. Perspiration can freeze and make you feel even colder. Try to dress as if the weather was 20 degrees warmer than it actually is. You should be a little chilled at the start of exercise. You will warm up quickly once you start moving.



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# The Importance of Good Hygiene

Practicing good hygiene is an important part of athletic endeavors. Without taking proper care of yourself and your equipment, you run the risk of contracting a skin infection. Skin infections can range from viral to fungal to bacterial infections. All of them require medical attention and will cost you time away from athletic participation.

The most common form of viral skin infection is herpes gladiatorum. This is one of the most infectious of the herpes-caused diseases and is mostly contracted through skin to skin contact.

**Herpes gladiatorum** is caused by the herpes simplex virus and is often characterized by a cluster of fluid filled blisters that can appear up to a few weeks after initial contraction. Herpes viruses should be treated by oral antiviral medications prescribed by a physician that can be taken once a day while the infection is present or prophylactically every day to suppress future outbreaks.



**Impetigo** is the most common form of a bacterial skin infection among contact athletes. Impetigo is classified by a sore that is sometimes fluid filled and forms a yellow colored scab. The sores may not be painful but are often itchy. Touching or scratching sores may easily spread the infection. This skin infection can be treated by either topical ointments or oral antibiotics that need to be prescribed by a physician.



**Ringworm** (tinea lesions) is a common fungal skin infection that is often seen in athletics. Ringworm is characterized by raised red bumps that are usually in circular form. This fungal infection thrives mostly in environments that are warm, dark, and moist. Ringworm can be treated by an over the counter steroidal cream and in severe cases, may need a prescription from a physician.



Each of these skin infections can be prevented with just a few easy steps.

- Always remember to shower with soap and water after activity
- Never share items such as soap, towels, and razors. Remember to wash towel regularly
- Wash hands regularly with soap and water
- Wear clean clothes each day for practice
- Practice and competition gear should be cleaned daily with bleach wipe or any other cleaning material
- Make sure to trim your nails to avoid cutting yourself and others
- Never pick or squeeze skin sores as the drainage can be very infectious

All athletes with skin sores or lesions should be referred to a physician for evaluation and possible treatment. These individuals should not participate in practice or competition until the lesions have healed or are no longer infectious and can be properly covered for athletic participation. Remember to err on the side of caution, if you are unsure about how something looks, get it checked out!

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