

# Injury Prevention

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- 1) **Introduction:** During a marathon an average runner will make over 69,000 foot strikes!
- 2) **Common Running Myths** (These are all warning signs!)
  - a) “Running with pain is normal.”
  - b) “I should take aspirin before running to stop the pain before it starts.”
  - c) “If I have pain while running, I need to run through it.”
  - d) “Everyone gets foot and heel pain.”
  - e) “Knee pain is just part of running.”
- 3) **Warning Signs of Possible Injury**
  - a) **Pain:** your body telling you to stop and take notice that this area is under strain or being injured
  - b) **Swelling:** a build up of fluid in a tissue due to irritation or injury; helps prevent injuries by decreasing function
  - c) **Loss of Function:** the body isn’t working properly & doesn’t “feel right”, stride & gate may feel off, not able to run as usual
  - d) **Muscle Cramping:** caused due to dehydration, loss of electrolytes, poor calcium intake, improper stretching
- 4) **Common Running Injuries**
  - a) **Achilles Tendonitis:** inflammation of the tendon on the narrow part of the posterior ankle
    - **Common Causes:** over pronation of foot, loss of normal ankle function, poor fitting shoes, over tightening/spasm of calf muscle
    - **Prevention:** proper stretching of calf muscle, checking shoes for proper fit and pronation correction, nutrition (calcium & electrolytes), ice sore areas after running (**Ice protocol:** 15 min on and 45 min off per hour), proper recovery time between runs
  - b) **Plantar Fasciitis:** inflammation of the muscles on the bottom of the foot, usually painful getting out of bed in the morning
    - **Common Causes:** over pronation of foot, poor arch support, over training, running on hard surfaces, loss of proper biomechanics of foot and ankle
    - **Prevention:** stretching, ice, massage, use of shoe inserts, correct ankle biomechanics
  - c) **Heel Pain:** localized pain on the bottom of the foot commonly associated with plantar fasciitis, can also be the start of a bone spur.
    - **Common Causes:** same as plantar fasciitis
    - **Prevention:** stretching, ice, massage, shoe inserts, and heel cups
  - d) **Knee Pain**
    - **Common Causes:** over training, running on hard surfaces, poor biomechanics (if the upper leg and lower meet at too much or too little an angle, “Q angle”), ankle problems – over pronation.
    - **Prevention:** determine cause (most important!), decrease mileage, use of ice, possible need of bracing
  - e) **Shin Splints:** leg pain below the knee on the front outside or inside of the leg.
    - **Common Causes:** increasing mileage too quickly, over pronation, heavy hill workouts
    - **Prevention:** decrease level of running, ice, stretching, massage, possible shoe inserts
  - f) **Iliotibial Band Syndrome:** pain and swelling on the outside of the knee
    - **Common Causes:** running on banked surfaces or running on a track in the same direction, running too many miles
    - **Prevention:** decrease mileage, check shoes for improper wear, run on the middle of the road, change directions on track, do side stretches, massage and ice
- 5) **How to Avoid Injuries**
  - a) Don’t ignore warning signs
  - b) Seek professional advice
  - c) Stretch
  - d) Strengthening
  - e) Proper foot ware
  - f) Stay on the training program
  - g) Proper nutrition