

## A Runner's Guide to Symptoms, Treatment, & Prevention of Common Running Injuries

### Common Running Injuries

- A. **Running injuries** are typically “overuse injuries”
- B. **Functional classification of overuse injuries** (based upon pain and level of function)  
*Type I:* pain after activity only  
*Type II:* pain during and after activity but not limiting activity  
*Type III:* pain during activity, restricts activity  
*Type IV:* chronic, unremitting pain
- C. **Plantar fasciitis** (inflammation of the plantar fascia attachment near the heel)  
♦ *Symptoms:* pain and local tenderness beginning at the heel and radiating to arch, heel pain with the first step of the day, sore at beginning of run but better during run.  
♦ *Causes:* high arches or flat feet.  
♦ *Treatment:* ice massage after running, have shoes evaluated, custom orthotics, stretching calf muscle, night splint in extreme cases.
- D. **“Shin Splints”** (inflammation of tibial periosteum from muscle attachments)  
♦ *Symptoms:* soreness along inside (or sometimes outside) of shin/tibia, pain at beginning of run, better during run, sore afterward.  
♦ *Causes:* overpronation, running in old shoes, running on concrete/asphalt.  
♦ *Treatment:* strengthening exercises for anterior lower leg muscles, correct overpronation, replace old shoes, run on softer surfaces.
- E. **Achilles tendonitis**  
(inflammation of the distal third of the Achilles tendon)  
♦ *Symptoms:* pain with possible swelling, heat and redness over the tendon, stiff and painful after running/activity, calf muscles may feel tight.  
♦ *Causes:* tight calf muscles, running steep hills, increasing mileage too quickly, improper shoe fit, general overuse.  
♦ *Treatment:* Ibuprofen, decrease mileage, heel lift in shoe, stretching, shoes with shock absorbing features.

- F. **Iliotibial Band Syndrome**  
(inflammation of the IT Band at the knee)  
♦ *Symptoms:* sharp or irritating pain along outside of knee, better at beginning of run but becomes progressively worse, often enough to make you stop running.  
♦ *Causes:* tight IT Band, bowed legs, overpronation, leg length discrepancy, hard downhill running, excessive speed work, running on banked surfaces.  
♦ *Treatment:* rest, stretching, ice, run on soft surfaces, shoes with ample heel support and rearfoot cushioning.
- G. **Patellofemoral Pain Syndrome**  
(pain in the anterior knee at or below the patella)  
♦ *Symptoms:* deep, dull ache under the patella, worse when ascending/descending stairs, worse with downhill running, stiffness after prolonged sitting with knee bent.  
♦ *Causes:* direct traumatic injury, imbalance of quadriceps muscle strength leading to improper tracking of patella in trochlear groove, repeated wear and tear.  
♦ *Treatment:* ice, correct muscle imbalance, taping of patella (knee caps) to restore proper tracking, stretching.

### Injury Prevention

- A. **Predisposing factors for injuries**
1. Previous history of injury
  2. Limited running experience
  3. Abrupt increase in weekly mileage
  4. Biomechanical malalignment
  5. Inflexibility
  6. Weakness
  7. Improper shoes
- B. **Flexibility**
1. Most overlooked component of fitness
  2. Proper stretch is at least 20 seconds-  
NO BOUNCING!

- C. **Strengthening**
1. Lower extremities, hip/pelvic muscles, abdominals, low back are most important
  2. Cross training: biking, swimming, circuit training, lifting
  3. Don't think that running alone is enough!
- D. **Shoe type and fit**
1. Which is the best shoe for you?
  2. Overpronator needs medical support, motion control
  3. Supinator needs cushioning, accommodation
  4. Replace shoes every 300-500 miles, or after one year, whichever comes first
- E. **Common Sense**
1. Listen to your body: PAIN is a message from your body to your brain-DON'T IGNORE!
  2. Follow a published running/training schedule by a respected/experienced runner
  3. Don't try to make up for missed runs
  4. Never increase speed or mileage by more than 10%

### Management of Pain and Injuries

- A. **Listen to your body:** Don't wait until you are at stage 3 or 4 to adjust or get help.
- B. **Ice:** Has an immediate effect on reducing pain and inflammation.
- C. **Relative rest:** Substitute with activities that do not cause symptoms.  
Reduce mileage and/or intensity to allow for healing time.
- D. **Restore flexibility:**  
Stretch involved muscle group.
- E. **Restore strength:**  
Strengthen weakened muscle group.
- F. **Correct biomechanical abnormalities:**  
Proper shoes, orthotics.
- G. **Correct training errors:** Increase mileage, speed, and frequency appropriately. Don't try to make up for lost time or missed runs.

### Tips To Remember-

- A. "An ounce of prevention beats a pound of cure!"
- B. Listen to your body!
- C. STRETCH. . . STRETCH. . .STRETCH!
- D. STRENGTHEN. . . STRENGTHEN. . . STRENGTHEN!
- E. Follow reputable training schedule
- F. ICE is your friend!
- G. Buy the right running shoes for YOU!

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### Hours

Monday- Thursday	7 a.m.- 8 p.m.
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