



## CAPE COD SPORTS MEDICINE INC.

*ORTHOPEDIC SURGEON*

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### Running & Jogging Injuries (Part 2)

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Several types of injuries can affect different parts of the body. Overuse, poor running technique or inherent anatomical variances may cause these injuries from one runner to the other. The arch of the foot, whether too high (pes cavus) or too flat (pes planus) can cause problems. Poor stretching with excessive muscle tightness will lead to stretch injuries (sprains) to the musculotendinous unit. Approximately 10% of the U.S. population have a leg length discrepancy, with one leg longer than the other. Over time this can lead to problems in the runner. Idiopathic scoliosis (curvature of the spine) occurs in 1 of every 10 females and can lead to back or hip problems when running. Ligamentous laxity (double-jointed) occurs in families, and makes certain injuries like Anterior Cruciate Ligament (ACL) injury more likely. These are not sport ending type anatomic abnormalities, nor is surgery likely. Most anatomic variances when properly recognized and clinically correlated with a running problem can be treated conservatively. Shoe modifications with arch supports, heel lifts or orthotic shoe inserts can correct many lower extremity problems. Flexible back braces, knee braces or taping programs can assist other type of problems. A good stretching regimen, conditioning and strengthening exercises is just as important to any assistive device above. A few of the more common running injuries are discussed below.

The knee is the most common area injured in running. Gait analysis has show that approximately 4 times body weight goes across the knee joint with running. Tendonitis from poor stretching, overuse or over distancing is frequently seen. The medial hamstrings or Pes Anserine (goose's foot) bursa get inflamed as the tendon slides over the bone on the inside of the knee joint. This can develop into a chronic condition if not treated properly. Patellofemoral Syndrome (PFS) is also another common problem in runners. The hallmark of this syndrome is pain over and around the kneecap (patellar). It usually comes on as a result of some change; running shoes, terrain or distance. Once the disequilibrium in the knee kinematics takes place it is difficult to eradicate. Treatment often takes 6 months to subside, and consists of RICE treatment or rest, ice, compression and elevation. Ice massage, braces and a strengthening program are often helpful.

Next to the knee the foot & ankle is a close second for runner injuries. Achilles tendonitis is pain in the posterior ankle like someone just kicked you there. The pain is very sharp and can interfere with even your normal gait pattern while walking. Improper stretching and overuse cause it. This responds nicely to shoe lifts and anti-inflammatory medications. Plantar fasciitis produces pain on the instep of the heel. Pain worse with first getting up and walking on it after prolonged (2-hrs) rest off the foot is a characteristic symptom (start-up pain). Heel cups, anti-inflammatory medications, ice massage and stretching exercises may be helpful. Metatarsalgia is pain along the ball of the foot and can be caused by a number of factors including improper shoe wear or gait pattern when running. Orthotics will usually be required to relieve this type of pain. Stress fractures in the foot of runners are not uncommon, especially in the early spring when runners hit the streets after a winter layoff, trying to do the same as what they finished last season at. This involves a crack or hairline fracture or break in the bone. From a bone physiology viewpoint, these are all the same thing: a weakened area of the bone has failed. Like any other broken bone in the body, it will take 6 weeks for the bone to heal itself. Rest and immobilization with a good calcium intake is helpful. Trying to return too early can result in a non-displaced stress fracture becoming a displaced fracture requiring surgery.

Treatment of injuries in runners is very specific for the diagnosis. The best treatment is establishing the correct diagnosis early. Professional help should be sought from Physical Therapists, Athletic Trainers, Podiatrist or Doctors.