

AT BRIARCLIFF & JEFFERSON VALLEY, P.C.

The Treatment and Prevention of Running Injuries



Today millions of Americans are running and up to 70% will sustain a running related injury. Many of these are minor sprains and strains, while some are major. Even these minor injuries can become chronic if left untreated. It is a physical therapist's role not just to identify and treat the injuries but to play an active role in education and prevention of injuries. The most common site of injury is the knee which accounts for 40% of the injuries, followed by the heel cord 15%, shin 15%, hip 15%, groin 15%, foot/ankle 10% and back 5%. As popular as running is, it is not appropriate for everyone and pre-existing problems such as arthritis and a cardiac history may preclude it.

The most frequent cause of injuries is training errors. Examples of training errors are attempts at excessive mileage, running on inclines and a rapid increase in mileage. Poor or inadequate stretching and not allotting time for cardiovascular warm-up can also predispose the body. These factors can overwhelm the body's ability to adapt to new levels of stress and injuries are likely to occur.

Selection of an appropriate running surface is an important decision in order to avoid injury. The ideal running surface is a soft, level dirt path. Running on concrete or uneven surfaces exaggerates the shock

transmitted to feet, legs and back. Asphalt roads provide more cushioning than concrete but grass and sand are potentially irregular and unstable. A sloping or banked surface such as a beach or shoulder of a road forces the higher foot to flatten excessively which puts additional stress on the muscles and tendons of the leg. Uphill running increases strain on the Achilles' tendon and on the low back muscles.

Inappropriate shoes, poorly constructed, worn or mismatched to the wearer's feet can also contribute to injury because of the inability of the shoes to provide necessary cushioning and stability. A good shoe is one which matches the need for rigidity or flexibility and excessive pronation and supination. It is important for runners to know whether they are candidates for orthotics. Orthotics are custom-made foot supports and can be designed to eliminate dysfunctional foot positions and therefore reduce or eliminate many painful disorders.

Good posture is important to runners. Ideally, a runner should maintain an upright posture with the trunk perpendicular to the running surface. The upper body and arms should be relaxed, the elbows bent from 90 to 100 degrees and the hands should be loosely held.

The most common problem for runners is **Patellofemoral syndrome or chondromalacia**. This is also known as runner's knee. This condition describes a tracking abnormality of the patella or knee cap. The normal gliding is disrupted so that

it glides too far laterally and pain develops due to increased pressure and wearing of the undersurface of the knee cap.

Treatment includes avoiding excessive running, kneeling, and stairs. The use of ice is important to decrease pain and inflammation. A physical therapist will advise exercise to increase the medial quadriceps strength to help align tracking and orthotics in the case of excessive pronation.

There are several other common running injuries which deserve to be mentioned:

Plantar Fascitis - also known as heel

spur syndrome. This is an inflammatory response of the arch of the foot to excessive pulling on the tissues known as fascia. In severe cases an x-ray may reveal a heel spur at the attachment. Treatment includes ice, ultrasound, orthotics and flexibility exercises:

Achilles Tendonitis - refers to an inflammation of the tendon which attaches the calf muscle to the heel. It is prevalent in runners who have run extensively uphill and those with highly arched feet. Treatment includes ice, ultrasound, flexibility exercises and perhaps a heel pad to relax the Achilles tendon.

There are many other injuries which go beyond the scope of this article. For further information call the offices for a free consultation: The Physical Therapy Center at Jefferson Valley Monday, 1-2 p.m. at 245-8807, and The Physical Therapy Center at Briarcliff Wednesday, 2-3 p.m. at 762-2222.