*NOTE: It is important to understand how your body responds to the amount of running you do. During the past 15 years, marathons have increased in popularity and overuse injuries related to running have also increased. Reports have shown yearly incident rates for running injuries have been as high as 90% in those training for marathons. It is important to gradually increase running load or intensity during training, as there is a particularly high risk for injury once a threshold of 40 miles/week is crossed. Whether you are training for a race or running for pure enjoyment, these are some common injuries related to the sport.

PIRIFORMIS SYNDROME

The piriformis muscle lies within the buttocks and primarily works to turn the thigh/hip outward. The muscle also aids in bringing the leg out sideways and back behind the body. Piriformis tightness or contracture may produce a deep pain in the buttocks or back of the thigh. The area may be tender to deep pressure and could progress to pain numbness and/or tingling down the leg and even into the foot, due to pinching of a nerve. Prolonged sitting or activity may aggravate the area further. Pain in the piriformis area may also be associated with pain or tightness in the low back, so back issues may need to be addressed as well. Primary treatment consists of stretching the hamstring and buttock muscles regularly, and icing. If numbness or radiating pain is present, consult a physician immediately.

ILIOTIBIAL BAND FRICTION SYNDROME

The iliotibial band, more commonly known as the IT band, is a large piece of tissue on the outside of your leg. It originates at the tensor fascia latae (a muscle on the outside of your hip) and continues down your leg until it attaches onto the tibia (the lower leg bone), just below the knee. When an athlete does a lot of activity that involves knee flexion and extension (i.e. running), the iliotibial band may “rub” over the lateral femoral condyle, which is a bony prominence just above your knee joint. When this rubbing occurs, it is painful, and the pain increases with more activity. Treatment consists of rest, ice, stretching, correcting any postural abnormalities, activity modification and strengthening. Massage is also very useful to loosen up the soft tissue. For more information, refer to the handout titled “Iliotibial Band Overuse Injuries” on the McKinley website.

*Athletic Training Tip: Use a foam roller or frozen water bottle (wrapped in a towel) to massage the IT band from your hip to your knee.

PATELLOFEMORAL PAIN SYNDROME

The patella (knee cap) glides in a groove on the femur during knee movement. Sometimes this tracking is altered due to foot mechanics, decreased flexibility, muscle weakness or an excessive angle between your hip and knee. When the patella does not track correctly, extra stress is placed on the under side of it, causing pain and swelling in the knee. Runners with this type of injury will present with pain after increased activity. They also may have pain after prolonged sitting with knees bent, squatting, kneeling, or going up and down stairs. Treatment generally includes a series of strengthening and stretching exercises to improve patellar tracking, possible change in footwear, and avoidance of painful activities. Taping and bracing may also be used during activity, when directed by a physical therapist or athletic trainer. For more information, refer to the handout titled “Patellofemoral Pain Syndrome” on the McKinley website.

*Athletic Training Tip: A patellar sleeve (with a hole surrounding the patella) helps to limit maltracking during activity.

PATELLAR TENDONITIS

The patellar tendon is a very superficial and prominent tendon that attaches your patella to your tibia. This tendon carries the load from your quadriceps. Patellar tendonitis or inflammation can be caused by an acute injury or by repetitive training. The patient will most likely notice pain on the lower portion of the patella or just below it. Pain may also be felt on the upper part of the patella or on the tibia at the tendon’s attachment site. Treatment includes rest, activity modification, ice, anti-inflammatory medication, patellar mobilization, stretching and strengthening exercises once pain free.

*Athletic Training Tip: A patellar strap (which is placed directly below the patella) may decrease some pain and discomfort during activity.
SHIN SPLINTS

This term is commonly used to describe shin pain on the inner and/or outer aspects of the shin. "Shin splints" itself is not an injury, but the term is used loosely to describe a variety of shin pains. Caused by repetitive, forceful pounding while running, the shin muscles are generally stretched and pull on the bone, causing inflammation and pain. Pain is usually located along the inside or outside border of the tibia in the lower leg. Sometimes a stress fracture may result from these forces, in which the pain is more point-specific over the tibia. Treatment for shin splint conditions includes rest, ice, stretching and strengthening. Treatment may also involve a change in footwear or running mechanics. For more information, refer to the handout titled “Shin Splints” on the McKinley website.

*Athletic Training Tip: Freeze water in a paper cup. Tear away the top portion of paper and rub the block of ice directly over the sore spot on your shins for 5 minutes.

ACHILLES TENDONITIS

The Achilles tendon attaches the calf muscles to the heel bone. The tendon itself has poor blood supply. However, it is surrounded by a layer of tissue with adequate blood supply. Signs of Achilles tendonitis involve inflammation around the tendon, pain with pushing off the toes, and limited range of motion. Patients may also describe a burning pain along the length of the tendon. This may occur in individuals who have been doing repetitive training, who have poor foot mechanics, muscle tightness, or who have improperly fitted footwear. Treatment for Achilles tendonitis includes: rest, ice, anti-inflammatory medication and stretching. For more information, refer to the handout titled “Achilles Tendonitis” on the McKinley website.

*Athletic Training Tip: Heel cups/lifts may be worn inside your shoes to lift your heels and place the Achilles tendons in a less-forceful position during activity.

PERONEAL TENDONITIS

The peroneal tendons are located on the outer aspect of the lower leg and ankle, and when injured, can cause outer ankle and foot pain or swelling. Peroneal tendonitis can be classified as an overuse injury caused by repetitive activities and pain may worsen particularly after a period of inactivity. Tendonitis may also be caused by trauma or anatomical pathologies. Early treatment is recommended and consists of rest, ice, compression, elevation, anti-inflammatories and activity modification. Chronic tendonitis pain may require a period of immobilization in a boot and/or surgery.

*Athletic Training Tip: Freeze water in a paper cup. Tear away the top portion of paper and rub the block of ice directly over the sore spot on your lower leg or ankle for 5 minutes.

PLANTAR FASCIITIS

The plantar fascia is a layer of tissue that provides support along the bottom of the foot. This fascia can become irritated and inflamed if not properly stretched or if subjected to prolonged weight-bearing activities without proper shoe support. The patient usually has limited flexibility in the calf muscles. Pain occurs when first standing after a period of sitting and with taking the first few steps, and/or when stepping out of bed in the morning. As plantar fasciitis progresses, pain may be noticed during activity. In later stages pain may be constant. Bone spurs may develop or the plantar fascia may begin to pull away from the heel at the attachment site. Treatment includes stretching, proper footwear, icing and massage. Patients may also benefit from orthotics or heel cups. Splints keeping your feet in a neutral position at night may also be recommended. For more information, refer to the handout titled “Plantar Fasciitis” on the McKinley website.

*Athletic Training Tip: Freeze a water bottle, then roll bottom of foot along the bottle bottom of your foot for 5-10 minutes. This provides ice and massage at the same time.

Reference


Steensma MR, Anderson JG; and Bohay DR. “Update on diseases and treatment of the peroneal tendon, including peroneal tendon tear, subluxing peroneal tendon, and tendinosis.” Current Opinion in Orthopaedics 16.2 (2005): 60-64.


If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: Dial-A-Nurse at 333-2700

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: http://www.mckinley.illinois.edu