How to Prevent Foot Pain

By Ted Spiker
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You might be able to run through a tight hamstring or a sore quad, but an injured foot or ankle usually throws the brakes on a workout—sometimes an entire training season. Our feet and ankles, after all, are the foundation of our sport. When they are working well, they allow us to love every step. When they aren't, they send us to the bike shop.

Feet and ankles are built tough, capable of sustaining two or three times our body weight. But when they are abused (overworked, overtrained) or neglected (understretched, understrengthened), they'll speak up.

And the result can be some of the most chronic, hard-to-heal injuries a runner can face—namely, plantar fasciitis and Achilles tendinitis. To avoid the dreaded "itises," it helps to first have an appreciation for the role your feet and ankles play in your running.

There's a reason we spend hundreds of dollars a year encasing our feet in high- tech, cushiony, supportive materials. "If your feet hit the ground in a compromised manner, it throws everything else off," says Jay Dicharry, speed clinic director and gait lab coordinator of the department of physical medicine and rehabilitation at the University of Virginia. "Injuries affecting the ankle, knee, hip, even lower back can be traced to the point of impact."

The foot is active in both the landing and push-off phases of the running cycle, so it's involved in absorbing the shock of impact (upon landing), then controlling the forces generated by running (during push-off). Dicharry thinks that all running injuries can be attributed to an issue with either of these functions. If your foot is too stiff to bear the impact, a tibial stress fracture could result. And if your foot is too unstable to land in a controlled manner, you could develop runner's knee.

The most common foot complaint of runners is plantar fasciitis, an injury that tends to strike those who overtrain, neglect to stretch their calf muscles, or overdo hill work and speedwork. The plantar fascia is a thick band of tissue that stretches from the toes to the heel. "When your foot is overworked, the fascia becomes prone to tearing," says Marque Allen, a sports podiatrist with Sports Medicine Associates in San Antonio.

That tearing, which usually occurs at the point where the fascia attaches to the heel, results in inflammation. Because the fascia has a poor blood supply, it can be a slow-healing, chronic condition. In these cases, the injury can result in a heel spur, a tiny, soft calcium deposit that forms from the bone trying to heal itself. While the spur isn't painful, it can further irritate the fascia.

The Achilles tendon picks up where the plantar fascia leaves off. The largest, strongest tendon in the body, it runs from the heel to the calf. It propels you forward when you run and, similar to the plantar fascia, the tendon or its surrounding sheath can become inflamed when overworked, causing achilles tendinitis. "The Achilles tendon is extremely strong and thick," says Bryan Heiderscheit, Ph.D., P.T., an assistant professor of physical therapy at the University of Wisconsin. "To think that it can break down is pretty amazing. It's designed to handle a big load."

Still, sudden increases in mileage or excessive hill running or speedwork can lead to Achilles tendinitis. This tendon also has a low blood supply, making it slow to heal. If "acute" Achilles tendinitis isn't treated properly or rested sufficiently, it can lead to chronic Achilles tendinitis, which is very difficult to treat and can stay with an athlete for years.

Retrocalcaneal Bursitis is sometimes mistaken for Achilles tendinitis. Bursitis is the inflammation of a bursa sac, a fluid-filled cushion between bones and overlying muscles and tendons. This particular sac sits right where the Achilles attaches to the heel bone. Tight calf muscles, consistently running on hard surfaces, and jumps in mileage can all lead to bursitis.

Seeing a pattern? Yes, for these issues, the root is usually the same: too much, too soon. But if you've trained by the book and haven't broken any injury-prevention rules, it would be worth seeing a sports-medicine specialist. You could be wearing the wrong shoe for your foot type; you may have biomechanical problems that could be corrected with an insert or orthotic; you may have a weakness or imbalance that could be improved with specific strengthening and stretching exercises. In the meantime, icing the sore areas, cutting your mileage, and incorporating more cross-training into your routine will help you begin the road to recovery.