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## SPINE & SPORTS: Help for achilles pain

Tendons are connective tissue cords formed both at the beginnings and ends of muscles, attaching muscles to bones. Like ropes, they are fairly taught, but they will slightly lengthen and shorten under tension. The achilles tendon is a large tendon that forms off of the grand posterior calf muscle, the gastrocnemius. The gastrocnemiusachilles unit connects the knee to the heel bone, or calcaneus, and it leverages the foot such that you can walk on your toes or perform calf raising exercises. When the achilles becomes inflamed or irritated, simple tasks such as walking or descending stairs can be a challenge. This condition is commonly known as achilles tendinitis.

While tendinitis, or inflammation of the tendon, may occur at some point with this condition, there ultimately is no inflammation with most tendon problems. Tendinosis or tendinopathy are the correct medical terms to describe the combination of microscopic tears and a breakdown of collagen within the tendon, the dying off of the little cells living within the tendon that make collagen (fibroblasts), a buildup of waste products and debris around the tendon and a sprouting and hypersensitivity of the nerves that attach to it.

Achilles tendinopathy may develop from accumulated strains or sudden overuse. Many sufferers are not runners, though it is common in the running population. Abrupt alterations in the amount of tendon loading may be to blame such as a ramping up of exercise training, uphill or sprint training or changing from standard running shoes to racing flats without an adequate warm up.



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Tight calf muscles are often blamed, but many with tight calves do not develop achilles tendinosis and many with achilles tendinosis do not have tight calf muscles. Overpronation of the ankle, which is an inward collapse of the arch and outward bowing of the heel, puts a sudden strain on the achilles tendon, is sometimes considered to be a factor. Forceful loading such as landing from a high jump or the initial burst of a sprint can strain the tendon and initiate the development of achilles tendinopathy.

While swelling is rare, the notable signs of achilles tendinosis include tendon thickening or hypertrophy and remarkable tenderness and pain when stretching the tendon or walking tiptoe. Achilles tendinopathy does not lead to complete rupture of the tendon. In fact, normal, healthy tendons can suddenly rupture when there is a rapid, abrupt load that jolts the tendon, typically experienced as a sharp snap or pop with immediate inability to walk.

When symptoms arise, don't bother with ice packs, elevating the limb, taking medicines, using electric stimulation devices or holding the calf in a static stretch — these strategies may offer temporary relief, but do not heal the tendon. Additionally, the use of nonsteroidal anti inflammatory medicines such as ibuprofen might possibly slow down or impair healing of the tendon or cause adverse side effects such as gastrointestinal bleeding.

Research clearly shows that tendons will heal effectively when they are vigorously rubbed and exercised in a controlled fashion, specifically with slow, heavy resistance range of motion reps. Handson tendon mobilization and mechanically-assisted mobilization such as Graston technique or functional and kinetic treatment with rehab (FAKTR) utilized by a chiropractor are the best treatment methods to break down tendon debris and promote healing.

Also, while recovering from this condition, change your routine in ways that reduce irritation to the achilles tendon. Instead of running, for example, swim, cycle or weight train while periodically performing the tendon-specific exercises and obtaining manual therapy.

If you overpronate, consider high quality foot orthotics to keep your ankle and foot in better alignment. Also, for temporary alleviation, consider kinesiology tape application.

Achilles tendinosis is a common condition that can be debilitating and very stubborn to treat, but a doctor of chiropractic or physical therapist can usually provide guidance and treatment to resolve your symptoms. However, if treatment does not result in steady improvement, then change to a different provider. Most people get better provided the right measures are taken.

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