

Achilles Tendonitis or Tendinosis?

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What's the difference?

Achilles tendonitis is an acute, inflammatory, repetitive stress injury of the Achilles tendon, commonly affecting athletes and active individuals. When tendons (*tendons attach muscles to bones*) are inflamed they may become painful. Research, however, indicates that when there is *ongoing* or *chronic* pain from a tendon such as the Achilles, the tendon is not persistently inflamed but actually *degenerative*, with thickening, scar tissue, and sometimes partial tearing. This degenerative condition of the tendon is referred to as *tendinosis*. Understanding the difference is changing how tendon “overuse” injuries are treated and is crucial to effective management of these conditions.

What you should know

Achilles tendinosis is a persistent or even chronic condition which lasts more than a few weeks and involves pain at the back of the ankle along the Achilles tendon. The pain may be higher (near the bottom of the calf muscle), spread along the length of the tendon, or isolated lower at the back of the heel bone, the calcaneus. Often there is a thickening or prominence at the tendon insertion on the bone in the latter case.

Usually there is pain with activity and when starting to walk after periods of rest. If the condition lasts for only a few weeks or less it is referred to as tendonitis, referencing the inflammatory period. When the inflammatory process leads to healthy healing and to resolution of the injury, tendonitis does not progress to tendinosis.

Tendons however, usually require a long time to heal; their poor blood supply coupled with ongoing activities such as running puts continued stress along the tendon, slowing the healing process further and contributing to the degenerative condition of the tendon known as tendinosis. While tendonitis and tendinosis can develop almost anywhere from head to toe, the Achilles tendon is a very common problem area for athletes including soccer players and one which should be appropriately addressed once symptoms appear.

Symptoms

During the initial inflammatory period of tendonitis, there can be pain and mild swelling or warmth along the tendon. This inflammation should be cared for as outlined in the recommended treatment, to hopefully avoid the development of scar tissue or fibrosis which can cause permanent thickening and tightness of the tendon. It can be difficult to distinguish tendonitis from tendinosis, as oftentimes there is no pain until the chronic tendinosis stage.

Causes

A number of factors cause tendon stress and can lead to inflammation and possibly degeneration including:

- the number of miles run, whether on a road, field, or court;
- the condition of the foot or ankle, ie. a flat or rigid foot puts more stress along one side of the tendon; and
- poor flexibility and tight calf muscles causing an imbalance of strength between the calf muscles and the muscles over the shin.

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Treatment

In the early stages when pain is first noticeable, a gentle stretch of the Achilles and calf muscles is advised, including both the gastrocnemius and the soleus. The gastroc is stretched and strengthened with the knee straight and the soleus with the knee bent.

During this initial inflammatory phase, stretching is recommended several times daily followed by ice for 20-30 minutes. Anti-inflammatory medication should be taken if necessary to control pain. Avoid continued overuse and repetitive stress which contributed to the injury. Athletes do NOT need to stop all activity or exercise, but should choose a milder activity level to not aggravate the condition while continuing to stretch and strengthen. While a reduced level of exercise can be challenging for in-season athletes, it is necessary for the tendon to heal.

If the problem persists and pain continues, sometimes on and off for years, ASTYM (pronounced "A-stim") as part of physical therapy may be recommended. ASYTM resolves tendinosis by re-stimulating the body's inflammatory mechanisms and healing response with a manual pressure technique combined with appropriate stretching and strengthening exercises. ASTYM therapy is usually recommended twice weekly for about a month to resolve the fibrosis or chronic thickening and tightness of the tendon. For more information, visit www.astym.com.

If tendinosis is suspected, a physical exam should be conducted including an analysis of the biomechanical imbalances of the foot and ankle, knee and hip. More aggressive treatment options such as blood injections can be considered for certain tendinosis cases, however, these are rarely necessary for treatment of the Achilles. Corticosteroid injection treatments are not recommended for Achilles tendons.

The best advice to prevent repetitive stress injuries to the Achilles tendon is to maintain good, balanced flexibility and strength of the calf as well as other leg muscles, proper nutrition and hydration, and the use of supportive, cushioned athletic shoes.



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