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Don't let Achilles tendonitis be your "Achilles Heel"

By Tyler Dyck

In Greek mythology, the baby Achilles--who grew up to be one of the most fearless warriors in the Trojan war--was held by the heel and dipped by his mother in the River Styx, making every inch of his body a natural armor that protected him in battle. Every inch, that is, except the part of the ankle she held to dip him --the Achilles tendon-- where the warrior was ultimately pierced by an arrow and died.

For us mere mortals, we don't need to be shot in the Achilles tendon to know that this is a vulnerable part of body. The *tendo calcaneus* is the largest tendon in the body and is the point where the two calf muscles, the gastrocnemius and the deeper lying soleus, attach to the heel. The calf muscles and therefore the Achilles tendon allow us to rise on our toes, climb stairs, run, jump, even to stand without falling over.

Achilles tendonitis is most common among runners, and in sports that involve jumping, such as volleyball or basketball. Even non-athletes can develop Achilles tendonitis if they walk long distances in the sand, up steep hills, or stairs. It typically begins as stiffness felt after activity or discomfort at the beginning of a run or workout. It commonly lessens as you continue your activity, and as the tendon warms up, but increases after the activity as inflammation sets in. Left untreated, it can progress to continuous pain with any activity. While inflammation is a part of the healing process, continual irritation of the tendon will prevent it from healing.

Here's how it works: tendons lie within a sheath that is lined with cells that provide nourishment and lubrication so that the tendon can slide up and down freely within the sheath. If the tendon becomes irritated, the lining of the sheath becomes inflamed and produces extra fluid resulting in a tight and less mobile environment for the tendon and the source of pain. If this condition continues and the inflammatory phase progresses, adhesions will develop between the sheath and the tendon, further limiting movement and potentially doing permanent damage.

But why does tendonitis develop in the first place?

Lack of flexibility – Tight calves and Achilles tendons are at more risk for tearing during running or jumping activities. I have even seen an extreme example of developing tearing

when a client changed from shoes with heels (which allow the Achilles tendon to remain in its shortened position) to flat shoes.

Shoes – Your footwear should have good shock absorption and a supportive heel counter (the back of your shoe) to provide stability.

Running surface – Avoid running on hard surfaces such as cement, and choose softer surfaces like pavement, grass, or a running track.

Foot mechanics – People who over-pronate (flattening arches) are vulnerable to tendonitis because the Achilles is placed on a continuous stretch during the activity.

Training errors – If you are a runner, increasing your mileage or doing "hill work" too quickly in your training will place unnecessary stress on the Achilles tendon.

So what can a physiotherapist do to help?

A physiotherapist can assess your current stress factors and work with you to minimize any excessive forces placed on the tendon. Initially, the best thing to do is rest and ice, although a "heel lift" can be placed in the shoe along with certain taping techniques to minimizing the stress on the tendon. Treatment usually includes education, ultrasound, and electrical stimulation in the early phases. Stretches, deep friction massage, and strengthening can then be introduced and gradually your physiotherapist will be able to tell you how and when to resume your activity. Early intervention, assessment, and treatment minimize the unwanted stresses and promote a healthier return to activity.

For further information on this topic please contact the Fawzia Sultan Rehabilitation Institute (FSRI) in Hawally at 264-2862, or check out our website at www.rehabinstitutekuwait.com

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