

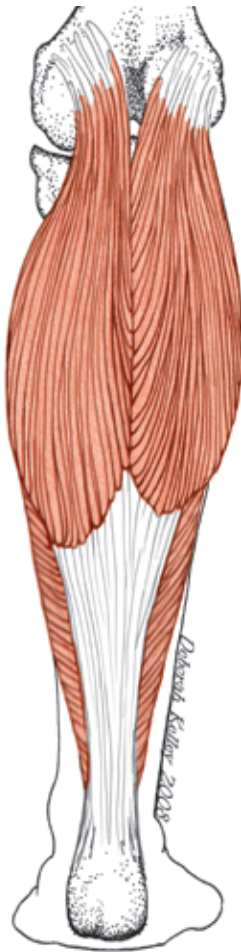
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Heel Pain

Achilles Tendonitis

Pain in the heel localized at the achilles tendon

A repetitive stress injury characterized by pain, inflammation, and swelling of the achilles tendon and its sheath. The entire calf muscle group may be affected.



DIAGNOSIS & ASSESSMENT

My career in sports medicine acupuncture began in February, 1982. It was my first year of practice, and I was at the beginning stages of applying the knowledge of academic training to the day-by-day realities of the clinic. One afternoon a long-distance runner walked in my door to inquire about acupuncture for his lingering achilles tendonitis. Within minutes he was on the treatment table. It was his first-ever acupuncture experience and my first athlete with a sports injury. I treated his inflamed tendon once a day for four straight days. That weekend I accompanied him as he ran the Mission Bay Marathon in San Diego. I will never forget that foggy California morning as thousands of runners competed in this famous 26.2 mile race. And out of the fog emerged my patient as he crossed the finish line first!

I had no idea that I was treating an elite distance runner at the time. But having my patient win such a high profile race was the jump start that my practice needed. I really don't even remember which points I used; all I recall is that within days my office was filled with runners and other athletes. And it all started with achilles tendonitis.

Over the years I have treated this injury countless times, and have learned a lot about the achilles. It is the largest and strongest tendon of the body, serving as the attachment to the calcaneus for the gastrocnemius and soleus muscles of the calf. It is commonly inflamed and irritated by repetitive stress, usually in runners and other lower-extremity athletes. The occurrence of achilles tendonitis is reported to be as high as 18 percent in the running community.¹ After all, running produces forces up to 10 times the individual's body weight within the achilles tendon.²

The patient usually reports pain in the area of the heel, localized at the tendon. The most common inflammation site is from 2 to 6 centimeters proximal to the attachment at the calcaneus.³ This area has a reduced amount of blood flow and therefore is less resilient to repetitive strain injuries. Some sources consider micro-tears to the tendon as the etiology. Others use the diagnostic term tendinosis, referring to inflammation without tendon strain.

In addition to pain, the patient presents with swelling of the tendon and its sheath. Crepitus may be felt on ankle movements. A common accompanying symptom is stiffness, usually experienced in the morning upon first steps or after prolonged sitting or rest. Stiffness often diminishes as the tendon "warms up", and returns again during or after activities such as hiking or running.

Begin examination with the patient lying prone (face down), with both feet on a bolster or hanging off the end of the table. The ankle should be flexed (dorsiflexion) at about a 90-degree angle. Visually examine whether the injured tendon is larger and thicker in size than the unaffected side. The more thickened the tendon, the more significant the inflammatory process has progressed. This is usually seen in chronic cases. It alerts you and the patient that in addition to acupuncture treatment, modifications to training and other activities may be necessary. After observation, palpate the tendon by "pinching" from the medial and lateral sides, starting at the calcaneus and moving upwards (proximally) towards to belly of the calf muscles. The area of maximal tenderness is usually in the mid-tendon area of the achilles.

While mid-tendon is the most common site of inflammation, palpate the muscle-tendon junction slightly inferior to Bl 57. While less common, this can be a site of injury. Also pay attention to the tendon-to-bone attachment at the calcaneus, as micro-tears can occur there. The calf muscles (the gastrocnemius and soleus group) should be

palpated from the popliteal fossa at Bl 40 inferiorly to Bl 57. This area of the muscle may present with ah shi points that are often incorporated into the treatment protocol.

You may also want to perform two simple orthopedic tests:

1. Resisted plantar flexion

The action of the calf muscles is plantar flexion, which is “pointing the toes”. Pain on resisted plantar flexion helps to confirm involvement of the achilles tendon.

2. Passive dorsiflexion

As the practitioner flexes the patient’s ankle past 90 degrees, there may be discomfort in the heel as the muscle-tendon unit is passively stretched.

Achilles tendonitis usually is of insidious onset, and is frequently associated with a change in training, such as increased mileage, hills, or speed. A change in running shoe or running surface may also be contributing to the condition. As with most lower-extremity injuries, consider having the patient evaluated for foot biomechanical imbalances. Both abnormal pronation or supination create additional repetitive strain and may need to be corrected.

In summary, achilles tendonitis is usually mid-tendon, about 2 to 6 centimeters proximal to its attachment to the calcaneus. But occasionally there may be lesions proximally at the muscle-tendon junction as you approach the area of Bl 57. Strain may also occur at the attachment to calcaneus, which may not present with the inflammation and tenderness that is so characteristic at the mid-portion of the tendon. In general, proceed with acupuncture with confidence – most patients can be helped if not totally cured with proper treatment.

SUMMARY OF THE INJURY

- Clinical Features**
- Repetitive stress causes pain, inflammation, and swelling of the tendon and its sheath
 - Most common site is from 2 to 6 centimeters proximal to the attachment at the calcaneus
 - Pain usually starts after a change in activity level, such as increased mileage, hills, or speed
 - Crepitus may be felt on ankle movements
 - Biomechanical imbalances usually contribute to the development achilles tendonitis.
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- Common Patient Complaints**
- Pain in heel, localized at the achilles tendon
 - Stiffness may accompany the complaint of pain
 - Symptoms often experienced upon taking first steps in the morning or after prolonged sitting or rest
 - Symptoms relieved as the heel “warms up” with moderate activity, but pain returns again during or after exercise
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- Differentiation from Similar Injuries and Conditions**
- Inflammation of the achilles bursa
 - Tendon tear, tendon rupture
 - Bone spur that irritates the tendon
 - Plantar fasciitis occasionally refers pain to the heel
 - Talar joint dysfunction of the ankle
 - Referred pain from trigger points in the soleus
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- Typical Medical Recommendations**
- R.I.C.E. (Rest, Ice, Compression, and Elevation) when acute.
 - Anti-inflammatory medications
 - Modify activity
Decrease activities that aggravate the condition, especially during treatment. Cross-train, including cycling, swimming, and running in water.
 - Stretching
Stretching of the gastrocnemius and soleus muscles of the calf is usually part of the treatment and rehabilitation of achilles tendonitis.
 - Biomechanics
Correct pronation or supination with shoes and/or orthotics. Some podiatrists recommend a heel lift. For chronic tendonitis, other lower-extremity biomechanical imbalances may need to be assessed.
 - Physical therapy
Ultrasound, deep-friction massage, and other physical therapy modalities.
 - Orthopedic evaluation and procedures
If a grade II or grade III tear occurs, immobilization or surgery may be required. Chronic cases may have fibrous tissue between the tendon and sheath, which could require a surgical sheath release.