

Tendinopathy

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Achilles Tendinopathy - Diagnosis

This article is the first in a series on Achilles tendinopathy.

This condition is particularly common among middle-aged runners & those involved in jumping sports, having an annual incidence of 7% to 9%. It affects males more frequently than females. It occasionally afflicts sedentary individuals, particularly those with co-morbidities including obesity, diabetes and inflammatory arthropathies.

There are two classic forms, the mid-substance and the insertional types. While they may present similarly, the distinction between them is important when it comes to rehabilitation, as they will respond differently to exercise.

Symptomatology:

Pain and stiffness will often be worse after rest, particularly first thing in the morning. It will be present at the start of activity but settle after warming up. It will then often be worse after activity, and as the condition progresses pain may last throughout activity.

Signs:

Mid-substance tendinopathy is characterised by tenderness 2-6cm proximal to the Achilles insertion. With insertional tendinopathy the region of tenderness is over the posterior calcaneus. Strength testing will usually reveal decreased plantar flexor strength and endurance.

Differential Diagnosis:

While the clinical diagnosis is usually straight forward, other injuries to consider include ²:

1. Acute Achilles tendon rupture
2. Partial tear of the Achilles

3. Retro calcaneal bursitis. This will often co-exist with insertional tendinopathy.
4. Posterior ankle impingement.
5. Irritation or neuroma of the sural nerve.
6. Os trigonum syndrome
7. The presence of an accessory soleus. This is rare but occasionally responsible for persistent pain in the Achilles region.
8. Achilles tendon ossification
9. Plantaris tendinopathy.
10. Systemic inflammatory disease

Imaging:

This is rarely necessary, but may be helpful when the diagnosis not clear. MRI and ultrasound have similar reliability.

Examination:

Palpation of the area of tenderness is the key finding. Additional tests may include the one or two-legged hop test comparing sides, and a muscular endurance test such as the repetitive heel raise. When the diagnosis is unclear, tests should also be conducted to rule out other conditions listed above. Description of these tests is beyond the scope of this newsletter, however the forced plantar flexion test can be helpful in excluding posterior impingement or os trigonum syndrome.

References:

1. Alfredson, H et al (1998). Heavy-load eccentric calf muscle training for the treatment of chronic Achilles tendinosis. *AJSM*, 26, 3, 360-366.
2. Carcia, C et al (2010). Achilles tendinopathy: clinical practice guidelines. *JOSPT*, 40, 9, A1-A26.
3. Sussmilch-Leitch, S et al (2012). Physical therapies for Achilles tendinopathy: a systematic review and meta-analysis. *Journal of Foot & Ankle Research*, 5,

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