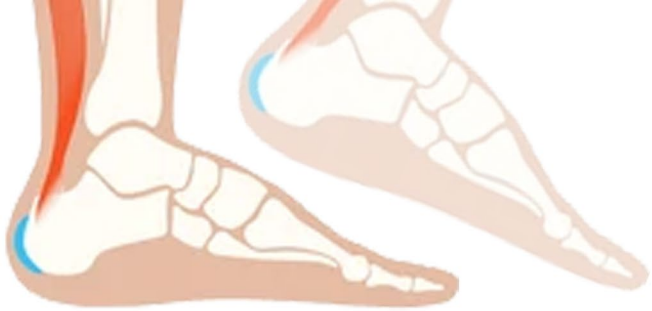
Achilles Tendon

INFO SHEET



Active Answers Physiotherapy

WHAT IS THE ACHILLES TENDON?

The Achilles tendon (AT) is a remarkable structure that originates from the calf muscle (including the soleus and gastrocnemius muscles) before inserting into the heel bone. It transmits forces from the calf muscle complex to the foot and ankle.

The Achilles tendon is the largest and strongest tendon in the human body as it has to withstand upwards of 12x body weight load during running. Given these demands, it's not surprising that it is a common problem among runners and walkers. This often manifests as a "tendinopathy," which is an umbrella term used to describe pain and dysfunction of the tendon.

It can occur across a variety of demographics and stem from a multitude of factors (i.e. age, genetics, training load, medication). Individuals dealing with an Achilles tendinopathy can be expected to return to sport anywhere from six weeks up to one year, though symptoms can sometimes persist to varying degrees for years.

TYPES (TREATED SLIGHTLY DIFFERENTLY):

- Mid Portion
  - 2-6cm above the insertion into the heel
  - Most common presentation
- Insertional
  - The junction where the tendon inserts into the heel bone

FEATURES OF ACHILLES TENDINOPATHY

- Pain with squeezing the tendon (midportion) or pressure to the heel bone (insertional)
- Pain with increased loading (i.e progressing speed, distance, jumping)
- Increased pain with calf stretching for insertional tendinopathy
- Compromised function (i.e. strength, endurance, & performance)
- Often swollen and thickened
- Morning stiffness with initial steps
- Tends to "warm-up" with activity

COMMON CAUSES

- **Extrinsic factors:**
  - Increasing running distance or speed
  - Hill running
  - Poor recovery
  - Change in footwear to minimalist shoes or running barefoot
- **Intrinsic factors:**
  - Reduced ankle range of motion
  - Calf weakness

MANAGEMENT STRATEGIES

- Temporarily remove or reduce aggravating activities (i.e. running, skipping, hopping)
- Minimise positions of compression by inserting heel lifts or wear shoes with a greater heel (especially in the case of insertional tendinopathy)
- Begin correct exercise loading. Exercise is supported with the highest level of evidence in terms of optimal management and should be the cornerstone of treatment before other interventions are considered
- While interventions such as platelet rich plasma (PRP) injections, shockwave therapy, corticosteroids, NSAIDs are often considered in the management, none of these options have been shown to be as effective as exercise therapy in isolation.

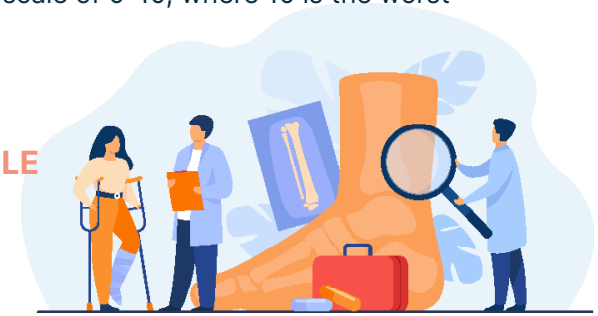
RETURNING TO RUNNING:

- Start back on flat ground and minimise uphill running.
- Running with a rear-foot strike (heel strike) requires less load to the achilles then a forefoot strike (toe strike)
- Increasing step rate (cadence) leads to a shorter step length, which reduces achilles load
- Avoid soft surfaces such as sand, which requires an increased demand on the achilles

EXERCISE AND PAIN:

- It is acceptable to have a low level of pain while exercising and may actually be important to ensure appropriate load and adaptation to the tendon.
- It is vital to monitor pain levels during and after exercise (up to 24hrs post). If pain levels increase and do not return to your pre exercises baseline then the exercise amount is too great.
- We measure pain on a scale of 0-10, where 10 is the worst pain imaginable

0-2/10 = SAFE
2-4/10 = ACCEPTABLE
>5/10 = HIGH RISK



PAIN AND EXERCISE DIARY

- We recommend keeping a pain and exercise diary to ensure we can manage the appropriate tendon loading.
- This allows us to closely monitor how well your tendon is tolerating exercise and helps guide exercise progressions and return to running/sport

@activeanswersphysio

facebook.com/activeanswersphysio

www.activeanswersphysio.com.au

Active Answers Physiotherapy