

ACHILLES TENDINOSIS

Achilles tendon injuries are a common source of significant pain and functional impairment to the individual. There is an increased prevalence in individuals involved in running and jumping activities. However, research also indicates that 33% of individuals with chronic Achilles tendinopathy (AT) are not physically active. The association between AT and oral contraceptives, HRT or HTN in females, as well as obese individuals and middle age men with diabetes has been found to be statistically significant. There are reported fluoroquinolone associated tendinopathies. The term tendinosis reflects the most recent evidence that overuse injuries to tendons are more degenerative than inflammatory. Achilles tendinosis can occur either mid tendon or at insertion.

WHAT THEY SAY

It just started hurting, I don't know what I did
At first my Achilles was just stiff in the morning.
Now I have pain with :

- walking/stairs/ running
- my usual recreational activities

I have recently increased my training
There is a bump on my tendon

WHAT WE SEE

- Tender nodule 2 -6 cm from insertion or insertional tenderness
- Painful heel raise
- Decreased ankle strength
- Increased lateral heel strike
- Increased pronation
- Increased velocity of pronation
- In runners - increased training years, pace and weekly miles



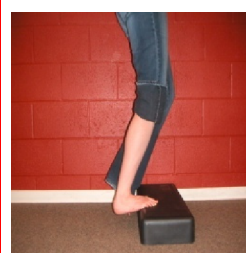
WHAT WE DO

- Complete biomechanical examination of the lower extremity and lumbar spine.
- Identify and correct contributing strength deficits, biomechanical limitations and training errors
- Follow the individual through total recovery to decrease the chance of recurrence. The absence of pain does not indicate full tendon recovery.

Strength and Conditioning

Stress to the musculotendinous unit

(strengthening/stretching) has been found to be



superior to splinting, friction massage or non-thermal ultrasound. Current research supports an eccentric loading protocol for 12 weeks, 7 days a week that continues to overload the tendon is effective treatment for lower

extremity tendinosis. Success with the eccentric protocol is improved if done with an initial 4 - 6 week rest.

WHAT IT'S NOT

- Plantar fasciitis
- Bursitis
- Stress fracture
- Tarsal tunnel syndrome
- Heel pad disorders
- S1 neuropathy

References:

1. Kingma JJ, de Knikker R, Wittink HM, Takken T, Eccentric overload training in patients with chronic Achilles tendonopathy: a systematic review. *Br. J Sports Med.* 2007;41:e3
2. Wasielewski NJ, Kotsko KM, Does Eccentric Exercise Reduce Pain and Improve Strength in Physically Active Adults with Symptomatic Lower Extremity Tendinosis? A Systematic Review. *Journal of Athletic Training*; 2007;42(3):409-421.
3. McCrory JL, Martin DF, Lowery RB, Cannon DW, Curl WW, Read H, Hunter DM Craven T, Messier SP. Etiologic factors associated with Achilles tendinitis in runners. *Medicine and Science in Sports and Exercise*: 1999;31(10):1374-81.