

Achilles Tendinopathy

Achilles tendinopathy occurs as a result of degeneration within the tendon attaching the calf muscles to the calcaneus (heel bone). Injury occurs when the load applied to the Achilles tendon, either in a single episode, or, over an extended period of time, is greater than the tendon can withstand. The degenerative process can be present for months or even years before symptoms develop. The degenerative process causes separation of the collagen fibres within the tendon reducing its load bearing capacity. This makes it susceptible to aggravation by normal everyday activities such as running, walking up and down stairs, playing sports etc.

Treatment is focused on graded strengthening of the tendon, which increases the load it can withstand, reduces symptoms and allows a return to normal activity. Research shows that a specific type of eccentric (or lengthening) contractions are best suited to stimulate collagen fibre synthesis and restore tendon strength. A structured eccentric strengthening programme, with progressive and controlled increases in load gives the best outcome. However it can take between 6 –12 weeks to see the benefit. In persistent cases a course of Radial Pulse Shockwave may be beneficial in conjunction with the strengthening exercises.

Strengthening program

Do not start these exercises without seeking professional advice and having an accurate diagnosis made. The exercise used is the heel drop. This heel drop exercise should be performed both knee straight and knee bent. This targets both of the muscles that attach to the Achilles tendon. There will be pain involved in performing the exercises but it should be less than a 5/10 and it is import to continue despite the pain. Only stop the exercises if the pain exceeds 5/10 pain. When you no longer have pain with the exercises you need to progress to the next step in the program.

You need to do 3 sets of 15 repetitions, twice daily, 7 days a week for 12 weeks, unless advised otherwise by the physiotherapist.



Figure 1. From an upright body position and standing with all body weight on the forefoot and the ankle joint in plantar flexion (that is the knee straight) (A), the calf muscle was loaded eccentrically by having the patient lower the heel with the knee straight (B) and with the knee bent (C).

Progression of exercises

1. Standing on your toes of your injured leg, lower your heel back to the floor. Push back up to your starting position on your toes using your other leg
2. Standing on a step, push up onto your toes and lower the injured leg just below the level of the step. Push up the starting position using your other leg
3. As above (step 2), push up onto your toes and lower the injured leg as far down as you can
4. As above (step 3), add weight using hand weights, a backpack with weight or a weight machine

Always apply ice following the exercises.