

### Achilles Tendinosis Rehabilitation Exercises (Mid-Tendon)

Mid-portion tendinopathy effects the mid portion of the achilles typically 2-7cm above the calcaneus – heel bone

The area is likely to be swollen and is often painful when palpated by pinching the tendon.

In mid-portion achilles tendinopathy is thought of as a tensile loading problem.

#### **Reactive Phase**

## Phase 1 - Reactive Phase - Reducing pain

## Manage Load

- · avoid tight shoes that cause direct tendon compression
- reducing or resting from running
- wearing shoes with a heel may help to reduce load on the tendon
- using a heel raise within your shoe may also help reduce achilles load as a short term measure

## 2. NSAIDS

- Ibuprofen can be helpful to reduce tendon swelling and pain.
- Always consult your GP or pharmacist before taking medications. T
- The tendon isn't really inflamed but the medication is thought to work in the reactive stage by regulating the activity of tenocytes (cells within the tendon that produce proteins which promote swelling).

### 3. Isometric exercises

- tendon pain is likely to effect muscle function
- using isometric exercises to reduce pain and maintain strength can be very beneficial

# Calf Raises:



- Standing balance yourself on both feet. ( you can use a chair for stability)
- Rise up on your toes, drop down so your heel drop below the bottom of the step then come up 1cm, place 100% of your body weight on the injured side hold for 45 seconds and then repeat on the other leg.
- Repeat 3 times, 2-3 times a day
- It is ok to feel some discomfort (max 5/10)

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## Phase 2 - Strengthening

Once the pain has settled it is time to improve the load capacity of the muscle and tendon by improving calf strength.

Normally you should be able to manage 10-15 single leg calf raises with minimal increase in your pain before you progress to this level

The calf complex is composed of 2 main muscles – gastrocnemius and soleus – both need to be strengthened.

The most simple way of achieving this is by doing calf raises on the edge of a step.

### **Eccentric Calf Raises:**



- Standing balance yourself on both feet. (you can use a chair for stability)
- Rise up on your toes, slowly lower with both legs, when there is no pain progress onto 1 leg
- Rise up on your toes, slowly lower on the injured leg with your leg straight, then repeat with your leg bent (100% bodyweight is on the injured leg).
- Repeat 15 times do 3 sets of 15, 2 times a day, 7 days a week for 12 weeks
- Gradually add load with some weight in a backpack

Or

### **Heavy Slow Resistance:**



- Standing balance yourself on your injured foot
- Rise up on your toes for a count of 3 and back down for a count of 3 with your leg straight then repeat with your leg bent
- Repeat 3 x 8 reps
- Repeat 3 times / week
- This is a heavy loaded exercise so load can be added to a back pack or you can use the smith machine at the gym.
- Gradually increase load
- The target for strength is to be able to complete 8 reps taking 6 seconds per rep, pushing 0.4-0.5 times body weight

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Single Leg Balance:



- Stand without any support and attempt to balance on your injured leg.
- Begin with your eyes open and then try to perform the exercise with your eyes closed.
- Hold the single leg position for 30 seconds.
- Repeat 3 times, 2 times a day

## Phase 3 - Energy storage exercises

- Start these exercises when you have minimal or markedly reduced morning stiffness in the achilles tendon on waking.
- Very mild tenderness on palpation of the achilles tendon
- Have been tolerating some running without a flare in tendon irritability and symptoms.

Double Leg (DL)



- Double leg (DL) quick jumps soft knees 3 x 60 jumps
- Double leg quick jumps stiff knees 3 x 30 jumps
- Double leg forwards/backwards 3 x 10 jumps
- Double leg side/side 3 x 10 jumps
- Repeat 3 x week
- As a guide each week progress to include the next level
- Eg week 1 DL 3x 60 jumps, then week 2 add DL 3x30 stiff knee jumps etc

## Single Leg (SL)



(Malliaris)

- SL 3 x 60 hops
- SL 3 x 30 stiff leg hops
- SL 3 x 30 forward/backwards hops
- SL 3 x 10 side hops
- SL 3 x 5 zig zag hops
- Add speed when familiar with above program
- SL 3 x 10 hop on 20cm box + speed
- SL 3 x 10 hopping for height (ie bounds for maximal power-increases rate of force development)
- Repeat 3 x week
- As a guide each week progress to include the next (ie add 1 set per session) based on tolerance

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