

# Self management of Achilles Tendinopathy

Information and Exercises

Dr Julia Newton, Dr Natasha Jones, Mr Simon Wood

Contact: [contactus@oxfordsem.net](mailto:contactus@oxfordsem.net)

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**This booklet has been designed to help guide you through the management of your Achilles tendinopathy. It is important that you read this booklet so that you have a better understanding of the condition and its management.**

## Prevalence of Achilles tendinopathy:

Achilles tendinopathy is a relatively common soft tissue injury that can affect both athletes and non-athletes. It is more common in people who participate in sports that predominantly involve running such as football, tennis, volleyball, badminton, middle and distance running. Achilles tendinopathy affects people of all ages and both men and women.

## What causes Achilles tendinopathy?

The cause of Achilles tendinopathy still remains unclear. There are many factors that can lead to Achilles tendinopathy. A tendinopathy occurs when the tendon is unable to adapt to the strain being placed upon it. This leads to microdamage within the tendon fibres, and results in the tendon attempting to heal in response to the strain. A tendinopathy is an abnormal healing response.

Many things affect the load being put through the tendon. It is not simply the result of exercising too much.

These may be:

- Age: More common in middle aged people.
- Gender: More common in the male population.
- Weight: Higher than average body weight.
- Diabetics: Increased risk of developing a tendinopathy.
- Tight and/or weak calf muscles.
- Poor endurance of the calf muscles.
- Poor core stability around the hip/knee.
- Stiff joints in the foot.

Training issues

These are thought to be the most common cause for developing Achilles tendinopathy.

Common training errors:

- Running too far.
- Running at a too high an intensity.
- Increasing running distances too soon.
- Lack of variation in training.
- Poor footwear.

- Too much hill running.  
For training tips please refer to page 13

## Imaging

Commonly an Ultrasound Scan is used to confirm the diagnosis of Achilles tendinopathy. This is a quick, safe and effective way of visualising the tendon. Magnetic Resonance Imaging (MRI) can also be used but is a more time consuming scan and not as readily available as Ultrasound. Imaging is not always necessary. Achilles tendinopathy is often diagnosed on clinical findings alone.

## Common symptoms associated with Achilles tendinopathy

The most common symptoms that people complain of when presenting with an Achilles tendinopathy are:

1. Morning stiffness: Many people complain of stiffness around the tendon on rising in the morning which usually resolves after a few minutes of walking. In some cases the stiffness may last longer.
2. Tenderness over the Achilles tendon: Often the tendon is very tender to touch when gently squeezed. In some cases there may be a tender lump and/or audible clicking from the tendon on moving the ankle.
3. Variable pain: Some people can 'exercise' through the pain. This means that the pain settles during exercise but after resting the pain may increase. Some people can experience severe pain from the Achilles tendon which stops them doing their sport.

## Treatments

### Simple pain relief:

It is very important to modify the pain associated with tendinopathy as the pain can become a problem in itself.

Ice: Applying ice wrapped in a damp tea towel to the tendon helps reduce pain. Apply for 20 minutes, 4 times a day or after exercise.

Simple pain killers: Paracetamol or anti-inflammatories such as Ibuprofen or Diclofenac.

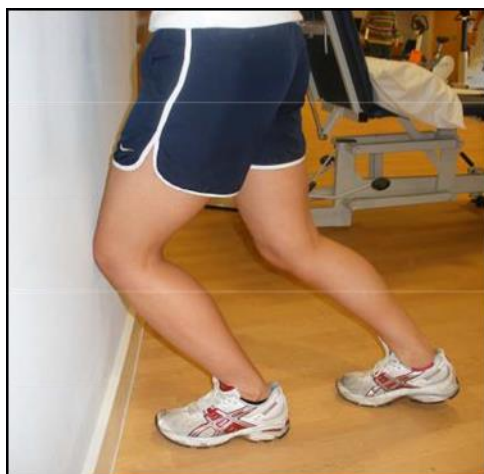
Relative rest: Maintain fitness using different forms of exercise but resting the tendon e.g. Swimming, cycling, aqua running

### Stretching calf muscles:

Always stretch after you have warmed up.

Do both stretches on both legs even if your symptoms are only on one side.

*Left Soleus Stretch:*



Hold the Stretch for at least 1 minute(time it!)

Slightly bend the back knee and let the heel raise slightly

Sit back on the right leg

You should feel a stretch at the back of your calf.

### *Right Gastrocnemius stretch*



Hold the Stretch for at least 1 minute(time it!)

Do not let your heel come off the ground

You should feel a stretch at the back of your calf.

## The Eccentric programme:

The Eccentric exercise program works to strengthen and lengthen the calf muscles. This forms the main component of the rehabilitation programme.

The eccentric exercises can take between 3 to 6 months to significantly improve your symptoms. In some cases it may happen more quickly. Approximately 70% of people are able to return gradually to their sport at around 3 months.

A reduction in morning stiffness is usually the first symptom to improve. Pain or tenderness on the tendon is usually the last symptom to go.

When doing the eccentric exercises, do expect an increase in pain especially when progressing to each phase of the exercise program but this should not go beyond what you perceive to be 4 out of 10. This is based on a scale from '0', being no pain to '10' being worst pain imaginable.

The eccentric exercise program is the 'gold standard' for treatment of this condition. However, it is estimated that between 10% and 30% of patients will not respond to this treatment. If this is the case then you will be referred back to Oxford SEM for a review and alternative treatments can be discussed with your consultant.

Your physiotherapist may also combine additional treatments to assist your

progress.

## Guidelines to the eccentric exercise programme

- There are some important guidelines to observe whilst performing the exercises:
- You may experience an increase in pain from the outset of the eccentric programme. This is normal and should soon settle.
- While doing the eccentric exercises; if your perceived pain increases beyond 4 out of 10 ('0' is no pain and '10' is worst pain you can imagine) then you will need to reduce your repetitions or use the guidelines mentioned for pain relief, until your pain becomes less than 4 out of 10. You can then resume your exercise programme.
- This programme should be done daily for at least 12 weeks. Although you may not feel any benefits from this exercise programme initially it is important to persevere.
- Morning stiffness is usually the first symptoms to improve while tenderness over the tendon is usually the last symptom to resolve.
- If your morning stiffness becomes prolonged as a result of doing the exercises, you will need to reduce your repetitions until this settles down. If reducing your repetitions does not help, try resting for a few days.

## The Eccentric Strengthening Programme:

### *Phase 1: Tiptoes with knees straight*



Stand on both feet. Use your GOOD leg to raise up onto tip- toes. Transfer your weight across to your BAD leg and lower your- self down. Repeat.

Aim for **3 sets of 15 repetitions**

**TWICE** a day

### *Phase 1: Tiptoes with knees bent*



Stand on both feet. Use your GOOD leg to raise up onto tip- toes. Transfer your weight across to your BAD leg and lower your- self down. Repeat.

Aim for **3 sets of 15 repetitions**

**TWICE** a day

*Progress to Phase 2 when Phase 1 becomes easy*



*Phase 2: Unilateral tiptoes: knees straight*



Stand on both feet. Use your GOOD leg to raise up onto tiptoes, transfer your weight across to your BAD leg and lower yourself down. Repeat.

Aim for **3 sets of 15 repetitions,**

**TWICE a day.**

*Phase 2: unilateral tiptoes knees bent*



Stand on both feet. Use your GOOD leg to raise up onto tip- toes, transfer your weight across to your BAD leg and lower your- self down. Repeat.

Aim for **3 sets of 15 repetitions**

**TWICE a day.**

*Progress to phase 3 when these exercises become easier*

*Phase 3: Unilateral heel drops, knee straight, over the edge of a step*



Stand on both feet. Use your GOOD leg to raise up onto tiptoes, transfer your weight across to your BAD leg and lower yourself down, (see picture below). Repeat.

Aim for **3 sets of 15 repetitions TWICE**

**a day**

*Phase 3: Unilateral heel drops, knee straight, over the edge of a step*



The end position.

Aim for **3 sets of 15 repetitions TWICE a**

**day**

*To progress this stage, try adding weight in a rucksack loaded with books, bags of sugar or adding hand held weight.*

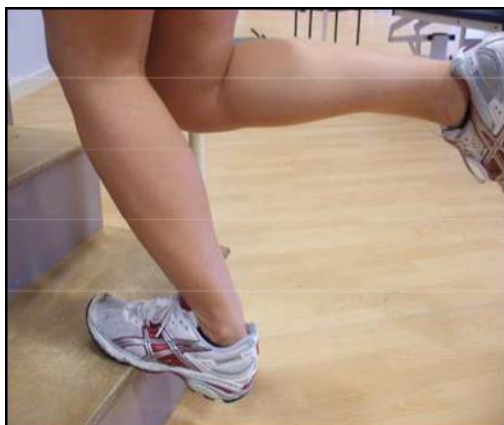
*Phase 3: unilateral heel drops, knee bent, over the edge of a step*



Stand on both feet. Use your GOOD leg to raise up onto tip- toe, transfer your weight across to your BAD leg and lower yourself down. Repeat.

**Aim for 3 sets of 15 repetitions.**

*Phase 3: unilateral heel drops, knee bent, over the edge of a step*



The end position.

**Aim for 3 sets of 15 repetitions. TWICE a day.**

*To progress this stage, try adding weight in a rucksack loaded with books, bags of sugar or adding hand held weight*

## **FAQ's**

### **Q.What is an eccentric exercise programme?**

**A.**There are two types of muscle contraction, concentric and eccentric. Concentric muscle action is where a muscle shortens while doing work, for example lifting a weight in your hand by bending your elbow shortens the bicep muscle. Eccentric muscle action is the opposite of concentric for example when lowering a weight in your hand by straightening your elbow you will notice the bicep muscle lengthening as the weight is lowered. This translates to the ankle in that when you rise up on tiptoes the calf muscle shortens (concentric) and as you lower yourself down from tiptoes, the calf muscle lengthens (eccentric).

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### **Q.Is there a risk that my tendon will rupture while doing my exercises?**

**A.**There is no evidence that the tendon is at risk of rupture while doing these exercises.

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### **Q. Will I be able to return to my sport?**

**A:** If you respond to the eccentric programme then there is no reason why you cannot return to your sport without pain

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### **Q.When can I go back to my sport?**

**A.** The return to your sport is guided by your symptoms and your sport. We advise a gradual return to your sport. You may be de-conditioned and you should remember that the primary cause of a tendinopathy is commonly thought to be due to overuse and training errors

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### **Q. Can I still run during my rehabilitation phase?**

**A.** There is no evidence that you will do yourself further harm. You can run providing there is little discomfort. However, you may prolong your rehabilitation as running may aggravate your pain. You may want to consider alternative forms of exercise such as swimming or cycling to maintain your cardiovascular fitness.

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**.Q. Will I always have to do my exercise programme?**

A. Not normally. If you find your symptoms returning then it is advisable to return to your exercise programme initially. However if your symptoms do not improve then see your GP.

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**Q. What happens if I do not respond to the eccentric exercise programme?**

A. Between 10%-30% of patients do not respond to the eccentric programme. In the event that you do not respond to the exercise programme you should contact us at Oxford Sport and Exercise Medicine. There are alternatives that can be explored and these will be discussed with you at your appointment.

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**Q.Is surgery better than an eccentric programme?**

A. Surgery tends to be the last resort when all other modalities have failed. It is not guaranteed to relieve your symptoms and the evidence supporting surgery in the management of tendinopathy is weak.

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**.Q.Will I benefit from a steroid injection into the tendon?**

A. There is evidence to suggest that there is a risk of the tendon rupturing following a steroid injection so it is not encouraged. Steroid injections are used for inflammatory conditions and there is no evidence of inflammation within most teninopathic tendons, particularly those which have been painful for more than a month.

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## Helpful tips for training

- ✓ Increase your running distance or time by 10% each week.
- ✓ Renew your trainers every 300 to 500 miles. Consider having two pairs of trainers 'on the go' at the same time.
- ✓ Vary your training. Combine different speeds, distances and times during your training period. This will allow the tendon to adapt to the loads placed upon it.
- ✓ Plan your training regime. Use websites such as [www.runnersworld.co.uk](http://www.runnersworld.co.uk) for advice on training tips.
- ✓ Make training more fun. Vary your exercise in different ways to train other parts of your body. This is termed 'cross training' and is a valuable method of reducing injury by distributing the loads placed upon your body.
- ✓ Examples of cross training that you may find useful:
  - Cycling is an excellent form of rehabilitation exercise because it will train both strength and maintain cardiovascular fitness
  - Cross training is particularly useful for runners and many people with Achilles Tendinopathy find they tolerate it well in the rehabilitation phase
  - Cross country skiing
  - Swimming
  - Rowing
  - Pilates
  - Circuit training
  - Spin classes

For all questions or difficulties contact us at:  
<mailto:christine.prior@privatepractice.co.uk>