

Eccentric exercise programme

The eccentric exercise programme is designed to gradually increase the stress going through your tendon in a controlled way; this should gradually reduce swelling and pain. The eccentric exercises can take between 3 to 6 months to significantly improve your symptoms, but sometimes this can happen more quickly. Approximately 70% of people are able to return gradually to their sport or full activities at around 3 months. Unfortunately there are no overnight cures for this condition.

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

It is very important to note that during the eccentric exercise program you may experience an increase in pain, but this will reduce as you continue your rehabilitation

Guidelines for the eccentric exercise programme

There are some important guidelines to observe whilst performing the exercises.

- When you start the eccentric exercises, you are very likely to have an increase in your pain, especially when progressing to each new phase of the exercise program; this is normal and should soon settle. However, this pain should not go beyond what you perceive to be

4 out of 10 (based on a scale from '0' being no pain to '10' being worst pain imaginable).

- Whilst doing your eccentric exercises you should expect your pain levels to be 3-4 out of 10; if you experience less pain than this you can safely progress to the next stage of the eccentric exercise programme. However, if your pain level becomes more than 4 out of 10 you will need to reduce your repetitions or use the guidelines mentioned on page 5 for pain relief. Do this until your pain becomes less than 4 out of 10. You can then resume your set exercise programme.
- This programme should be done every day for at least 12 weeks. Although you may not feel any benefits from this exercise programme to start with it is important to persevere.
- If your morning stiffness in your ankle starts to last longer 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 2-5 days.

The Eccentric Exercise Programme

For each phase of this training programme exercises should be done daily, as described below, with both straight and bent legs, using a wall for stability if required.

Phase 1: Tiptoes on both legs, with legs straight

Phase 1: Tiptoes on both legs, with knees bent

Progress to phase 2 when these exercises become easier and you do not need to use your good leg for support when lowering yourself down.

Stand on both feet with your legs straight. Use your GOOD leg to rise up onto tiptoes. Keeping both feet touching the floor, transfer your weight across to your BAD leg and lower yourself down, using your good leg to help if required. Repeat.

Aim for 3 sets of 15 repetitions TWICE a day



Stand on both feet with a slight bend in your knees. Use your GOOD leg to rise up onto tiptoes. Keeping both feet touching

the floor, transfer your weight across to your BAD leg and lower yourself down, using your good leg to help if required. Repeat.

Aim for 3 sets of 15 repetitions TWICE a day



Phase 2: Tiptoes on one leg, with leg straight

Phase 2: Tiptoes on one leg, with knee bent.

Progress to phase 3 when these exercises become easier.

Stand on both feet with your legs straight. Use your GOOD leg to rise up onto tiptoes. Transfer your weight across to your BAD leg, lift your good leg up, and lower yourself down. Repeat.

Aim for 3 sets of 15 repetitions TWICE a day



Stand on both feet with your knees slightly bent. Use your GOOD leg to rise up onto tiptoes. Transfer your weight across to your BAD leg, lift your good leg up, and lower yourself down. Repeat.

Aim for 3 sets of 15 repetitions TWICE a day



Phase 3: Heel drops over the edge of a step, with leg straight.

Stand on both feet with your heels over the edge of a step and your legs straight. Use your GOOD leg to rise up onto tiptoes. Transfer your weight across to your BAD leg and lower yourself down, (see picture below for the finishing foot position). Repeat.

Aim for 3 sets of 15 repetitions TWICE a day



Phase 3: Heel drops over the edge of a step, with knee bent

To progress these phase 3 exercises you can wear a rucksack with books in it, to increase the weight and load through the tendon.

Stand on both feet with your heels over the edge of a step and your knees slightly bent. Use your GOOD leg to rise up onto tiptoe. Transfer your weight across to your BAD leg and lower yourself down, (see picture for the finishing foot position). Repeat.

Aim for 3 sets of 15 repetitions TWICE a day



Stretches

These stretches help to lengthen the two muscles (soleus and gastrocnemius) that are connected by the Achilles tendon to your heel bone. This is important to reduce abnormal tightness across the tendon.

Stretching the soleus muscle

Stretching the gastrocnemius muscle

It is good to stretch these muscles in both legs, swapping leg positions as described above.

Using a wall for support, plant your foot flat on the floor behind you.

With your knee bent, lean forwards, reducing the angle between your foot and your shin, until you feel the stretch in the back of your calf muscle in the leg you have planted behind you.

Hold the stretch for 30 seconds to 1 minute

DO NOT let your heel come off the ground



Using a wall for support, plant your foot flat on the floor behind you.

With your leg straight, lean forwards, reducing the angle between your foot and your shin, until you feel the stretch in the back of your calf muscle in the leg you have planted behind you.

Hold the stretch for 30 seconds to 1 minute

DO NOT let your heel come off the ground



Frequently asked questions

Q. What does 'eccentric exercise' mean?

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. 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).

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.

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.

Q. When can I go back to my sport?

A. The return to your sport is guided by your symptoms and the type of sport you like to do. We advise a gradual return to your sport. You may have lost condition during your injury and recovery, which is why maintaining your cardiovascular fitness through other activities (such as swimming and cycling) is important. You should remember that the primary cause of a tendinopathy is commonly thought to be due to overuse and training errors.

Q. Can I still run during my rehabilitation phase?

A. There is no evidence that you will do yourself further harm if you return to running. You can run, providing you have little discomfort. However, your rehabilitation may take longer 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.

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. However, if your symptoms do not improve you will need to see your GP.

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

A. It is estimated that between 10% to 30% of people will not respond to this treatment. Surgical options can then be discussed.