University Hospitals Coventry and Warwickshire NHS Trust

Patient Information

Trauma and Orthopaedics

Achilles tendon injury (rupture) - VACOped boot

What is the Achilles tendon?

The Achilles tendon (TA) is the large tendon that connects your calf muscles to your heel bone.

The calf muscles point the foot/ankle down. They also support your body weight when you stand on your tip toes or push off during walking and running. The Achilles is the strongest tendon in the human body.

Causes of injury

Injury is often caused by a sudden increase in the load or stress on the Achilles tendon. This could be during times of increased intensity or physical activity, like impact or jumping sports.

There can be other causes such a stepping down a hole or missing a step and landing awkwardly.

Symptoms

- Sudden onset of pain at the back of the heel or just above it
- A sensation of being kicked in the back of the leg, with many hearing a loud “pop” or “snap.”

- You will find it difficult to walk normally, and your foot and ankle may feel floppy and weak.

Diagnosis

A diagnosis will be made using different techniques.

Your medical professional will carry out a physical examination.

Ultrasound or MRI scans are not routinely requested. Your clinician can discuss this further with you if they feel a scan is needed.

Options for treatment

A ruptured TA can be treated non-surgically or surgically.

Surgical

If surgically repaired, the two ends of the tendon are stitched back together, if possible. You will then be placed in a plaster cast for a short period of time, followed by the boot as described below.

You will be in the boot for the same amount of time as those treated without surgery.

Having surgical repair leads to similar long-term outcomes, as not having surgery. But it may increase your risk of surgical complications.

Due to this, TA ruptures are most often treated non surgically.

Non-surgical

If treated without surgery, you are given a specialist boot to wear. This will keep your foot in a “tip toe” position, which aims to put the tendon ends as close together as possible, allowing it to heal back together.

The boot is slowly adjusted over time to bring your foot to a more normal position.

The VACOped boot

The boot used to treat Achilles tendon ruptures is called a VACOped boot. This will be fitted at your clinic appointment. You will be taught how to put the boot on and take it off (when needed) and how to care for your foot and ankle while wearing the boot.

It is important to make sure you put the boot on and wear it correctly to reduce the risk of any complications, such as re-injury and pressure areas.

You will also be shown how to mobilise in the boot, initially using crutches.

It is safe to put your full weight on the injured foot, as tolerated. **with the boot on for support.**

The total time you will need to wear the VACOped boot is usually 11 weeks. But this may vary depending on your clinical findings.

You must wear the boot day and night. The boot should only be removed on the advice of your physiotherapist or doctor.

Boot maintenance

- For the first 4 weeks, we advise removing the boot once a day while sitting down, only for washing your leg and checking for any pressure areas.

Boot removal caution

- Whenever you remove the boot during the entire 11 weeks, it is very important that you **do not** stand on the injured foot without the boot on. If you do this, it may cause further injury and lead to a poor recovery. You should not do anything that may risk this happening, such as standing in the shower.

Showering guidelines

- For showering, use a waterproof cover over the boot to allow you to stand safely while showering with the boot on. Either before or after showering, wash the injured leg separately while sitting down. Maintain the foot in the tip toe position and avoid pulling or pushing the foot upwards.

Timescale in the boot

- 0 to 4 weeks - fixed 30 degrees equinus (tip toe) with thick sole in place.
- Week 5 - change to 25 degrees
- Week 6 - change to 20 degrees
- Week 7 - change to 15 degrees and exchange the sole of the boot to a flat sole.
- Week 8 - change to 10 degrees
- Week 9 - change to 5 degrees
- Week 10 - change to 0 degrees (foot flat)
- Week 11 - start to spend less time wearing the boot and wean into normal footwear with a heel raise.

Once you start wearing normal shoes, a small heel raise will be provided by your physiotherapist. This should be worn inside your usual trainers or shoes for a further 6 to 8 weeks, both indoors and outdoors.

- Week 17 to 19 – wean into normal footwear. You do not need to use a heel raise anymore and can start wearing flat shoes or no shoes again.

Further appointments

At your first appointment, the boot will be fitted and a referral to physiotherapy will be made.

You will be seen again in the Orthopaedic Foot and Ankle clinic 4 weeks later for further assessment. At this stage, you will be shown how to unlock the boot and how to do this yourself at home each week.

Physiotherapy will start after the 4-week check and will continue for as long as is required.

Further reviews in the Orthopaedic clinic are scheduled around 3, 6 and 12 months from when the boot was fitted.

Rehabilitation

You will be referred to a physiotherapist to oversee and progress your rehabilitation. Physiotherapy will start just after your 4 week follow up check in Orthopaedic clinic.

During your physiotherapy sessions, you will receive full advice and guidance on exercises to perform and their timing. The physiotherapist will also advise you on when it is best to return to work and activity.

A brief overview of rehabilitation timescale is outlined below:

- **0 to 4 weeks:** Complete rest while wearing the boot.
- **4 to 11 weeks**: Focus on protected range of movement (ROM) and basic calf and ankle strength exercises. Exercises for other body areas will also be shown to help overall strength.
- **3 months to 5 months:** Progressively increase calf strength. Continue to build up other body areas to support recovery.
- **5 months onwards**: Build up to functional and sport related exercises as able.

It is important that you do your exercises at home regularly. Only do the exercises recommended by your physiotherapist.

This is a significant injury and recovery can take up to 12 months or more. If able, most people do not return to sport for at least 9 to 12 months, but it is often longer. This will depend on your progress in therapy.

There is a chance you may never return to your previous full level of activity despite the tendon healing and your rehabilitation being complete. This may be due to poor recovery of strength and/or a tendon that has not healed in an effective position/length.

If you do not follow advice given by your physiotherapist or try to carry out exercises or activities that have not been recommended, you are at risk of re-injury which may lead to poor long-term outcomes for your recovery.

Risks

Blood Clots

It has been shown that 4% (4 out of every 100 people) who have non-surgical treatment for an Achilles tendon injury are at risk of developing a blood clot in the calf (deep vein thrombosis - DVT).

To try and reduce the risk of blood clots, you will be prescribed blood thinning medication that you will inject yourself with at home daily for the first 6 weeks.

You will be taught how to do this and provided with all the support and information required.

Signs and symptoms of a blood clot

After an Achilles tendon injury, inflammation is normal which may also cause some swelling and pain around the injury site. However, deep vein thrombosis (DVT) often presents differently with one or more of the following symptoms:

- Pain in the calf muscle
- Swollen calf / lower leg
- Red and or shiny skin in the calf area
- Calf skin that is hot to touch
- Chest pain
- Shortness of breath

If you have or develop any of these symptoms, we advise that you attend the Emergency Department (A&E) urgently, even if you are taking blood thinning medication.

For more information on DVT, please visit the NHS link:
https://www.nhs.uk/conditions/deep-vein-thrombosis-dvt

Pressure area/ sore skin

Skin, particularly on top of the foot, can sometimes become sore or blistered while wearing the boot due to increased pressure.

The boot is enclosed and can also become warm, causing sweating, which can occasionally cause skin irritation.

We advise to remove the boot once per day for washing and to check the skin.

Make sure the boot is correctly fitted and assembled each time it is put back on (see link below).

Ensure the foot and toes are completely dry before replacing the boot and use talcum powder if needed. It may also help to wear a longer loose cotton sock within the boot.

If you develop any areas of sore skin, we advise you call the number on this sheet to discuss how to manage this with the Foot and Ankle team.

Pins and Needles/ Numbness

Some people may experience pins and needles or numbness in the top of the foot extending into the toes, often in the first week or two of wearing the boot. This is often temporary and is due to the boot and foot position causing some irritation of the nerves.

We advise making sure that the boot is fitted correctly. Intermittently slightly loosening the foot straps but still keeping the correct foot position when not weight bearing, can allow for this to settle.

Useful links

Guides for the boot can be accessed at the following links. They can also be found on the OPED website.

Putting the boot on:

https://www.youtube.com/watch?v=of9Elg-FzFc

How to change the cushion liner:

https://www.youtube.com/watch?v=xEdDyIolKg4

How to set the boot position:

https://www.youtube.com/watch?v=32V_sIBUXhc

How to change the wedge sole:

https://www.youtube.com/watch?v=RzCeNksOV8c

Contact details

If you have any questions or concerns, please contact the following during Monday to Friday, 8am to 4.30pm:

Consultants' secretaries:

- Mr Dhukaram (Jas Virdi): 024 7696 5095
- Mrs Chapman (Amber Jolliffe): 024 7696 7117

Specialist Physiotherapists:

John Skidmore and Andrew Pritchard can be contacted via the secretaries.

Final summary checklist

Boot fitted/ safe ☐

Information leaflet supplied. ☐

Prescribed blood thinning medication ☐

Sick note (if required) ☐

Physiotherapy referral added ☐

ATRS pre-injury score ☐

Next orthopaedic clinic appointment will be on week commencing

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If you have not had confirmation of this appointment within 2 weeks of the boot being fitted, please call the secretaries mentioned to make sure it has been arranged.

Further information on sports injuries can be found at https://www.nhs.uk/conditions/sports-injuries/

The Trust has access to interpreting and translation services. If you need this information in another language or format 024 7696 5095 and we will do our best to meet your needs.

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