



Achilles Tendon Rupture

A Road Map to Recovery

A comprehensive guide on Achilles Rupture and all the associated questions which come with it.

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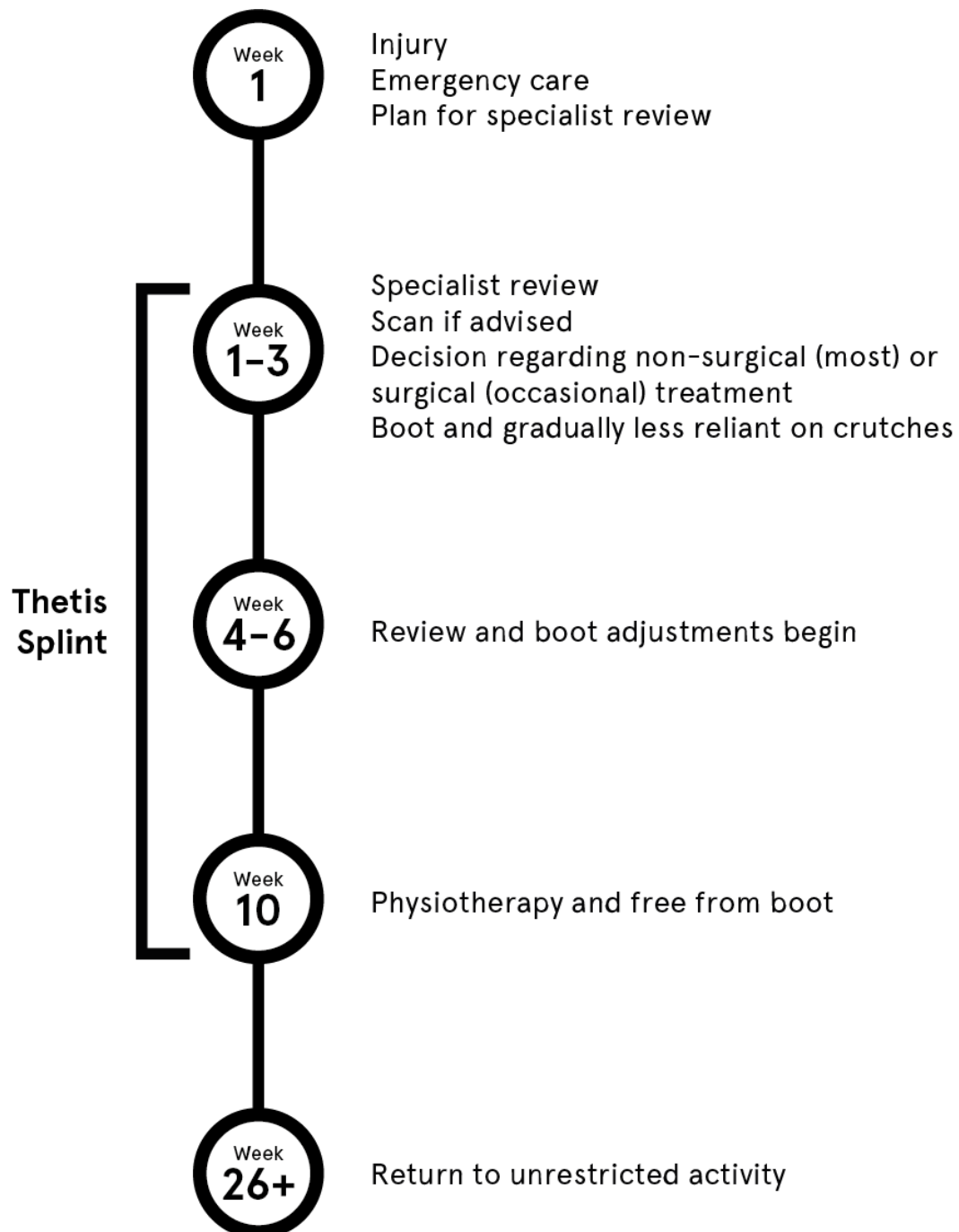
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Timeline



Is my Achilles ruptured?

Is my Achilles ruptured?

If you get sudden sharp pain in the back of the heel, sometimes with an audible snapping sound, then you may have torn the Achilles tendon. You should assume that is the case until you are sure it is a less serious injury. You may be tempted think you have just sprained your ankle. There are several myths about what is and is not possible to do with your leg after you have suffered a tear to the Achilles tendon, and sometimes this leads to a delayed diagnosis. Even with a torn Achilles you can move the foot (other tendons help to do this) and you can still walk (albeit awkwardly). However, you cannot stand on tip toes on just the injured leg. Sometimes people seek help after a delay, having initially hoped that the injury was something more minor and would recover quickly.

What happens when you tear your Achilles?

The Achilles tendon joins the calf muscles to the heel bone. It is important for standing up on tip toes and pushing off when you walk. If it tears, then the muscle is no longer connected to the heel and so the ankle movement is weak.

How to tell if your Achilles tendon is about to tear?

Most ruptures of the Achilles happen suddenly with no warning at all. The reasons for this are not well understood, but susceptibility to rupture may relate to poor blood supply to the tendon. Most patients with a rupture report that they have never had any previous Achilles trouble (such as tendinitis / tendinopathy).

How do you tear your Achilles?

Pushing off with your foot causes a strong and sudden contraction of the calf muscle which may prove to be too much for the tendon. The tendon is made of millions of hairs that run like a horse's tail from the calf muscle to the heel bone. Why the tendon should suddenly fail is not well understood. Each fibre tears at a different point, so the tear is not clean but results in two ragged ends.

How do Achilles tears happen?

The type of injury can be any sudden push-off using the ankle. The classical stereotype is of a middle-aged person returning to sport. Pushing a heavy object or (particularly in older individuals) just an awkward stumble can be enough.

What else it could be?

A torn calf muscle (tennis leg) is a different injury where sudden pain develops, but in the middle of the calf rather than low down by the heel. Like a torn Achilles tendon, this can be suddenly very painful. A tearing or snapping feeling is common. This injury is less severe than an Achilles rupture.

What does it feel like when you tear your Achilles tendon?

Usually, you experience a sudden pain in the back of your leg. You might hear a snap. Sometimes other people hear it too. Often the rupture happens during sport. You might think that an opponent has kicked you or your tennis partner hit you with their racquet.

How painful is a torn Achilles?

The pain is instantaneously quite severe but settles down quickly. The absence of lasting pain makes some people believe (hope) that nothing too serious has happened.

How do you know if you have torn your Achilles?

Sudden pain in the back of the heel, often with an accompanying snapping sound. The pain subsides quickly. You **can** still move your toes and ankle. You **can** still stand and walk/limp. You **cannot** stand onto tip toes on just the injured leg.

Should I go to hospital?

If you are in doubt, seek medical advice and have the injury checked. Limping around hoping it will get better means a delay in diagnosis and a greater chance that surgical repair will be needed.

How bad is an Achilles tear?

Properly treated Achilles tendon ruptures heal well, but recovery is lengthy. You can expect to be in a boot or similar support for your leg for about 10 weeks. After this it takes months to regain the muscle strength. If you ask someone who has been through this, they will say that they were limited in activities for at least 6 months and that full recovery takes about a year.

How common is an Achilles tendon rupture?

Between 0.01% and 0.02% of the population tear their Achilles every year. In the UK it is estimated that there are 11,000 confirmed cases per year. In the US the estimate is 59 000.

What happens if my Achilles is ruptured?

What will happen in A&E?

Your injury will be assessed and if an Achilles tendon rupture is suspected then you will be put into a tip toe position with (usually) a plaster cast bandaged in place. This is so that at the back of your leg the two ends of the torn tendon will sit together and can start to heal. You might be fitted with a boot incorporating a high heel instead. You should be given crutches to help you walk.

Blood thinning medicine is usually advised in order to prevent a blocked vein (thrombosis). Arrangements are made for you to see a specialist for further care.

What will the specialist do?

When you are seen by the specialist, the plaster cast is removed to allow the injury to be re-assessed and the diagnosis confirmed. Occasionally the Achilles tendon is normal and a similar more minor injury (e.g. calf muscle tear) is found instead. Sometimes there is no rupture, just tendinitis of the Achilles.

Often an ultrasound scan is performed. This is not to check the diagnosis, but is to ensure that, in the tip toe position, the two ends of the tendon meet. Occasionally (about 10% of the time) they do not. Blood or other tissue can get between the tendon ends. This situation leads to a discussion regarding the merits of surgery. The goal of surgery is to remove the debris from between the two ends of the tendon and stitch them together to allow healing. The repair is not strong. The rehabilitation is the same for surgically repaired tendons as it is for those managed without an operation.

The ultrasound scan also checks that there is no thrombosis (leg vein blockage) in the leg. After the ultrasound scan a special boot with heel wedges or hinges is fitted to replace the cast. This must be worn for a total of 10 weeks, to allow the tendon to heal. During this period the tip toe posture is maintained in the boot. If you remove the boot and stand up, the ankle will bend upwards and the repairing tendon is torn again.

Sleeping in the hot and heavy boot is the most common complaint from patients recovering from an Achilles tendon rupture. The specially designed Achilles Rupture Night Splint, from Thetis Medical (www.thetismedical.com) solves these problems.

The recovery is like the game Snakes and Ladders (Shutes and Ladders) – each week sees you closer to the finish. But one small mistake is like landing on the big snake that takes you right back to the beginning, with a re-rupture.

How many check-ups?

A clinic appointment may be recommended after 5 weeks to check healing and give instructions for gradual adjustment of the boot. Referral to physio is arranged. Further scans are not routinely required.

Depending upon the type of boot you are using, instructions regarding changing the heel wedges or adjusting the hinge are now required. The position of the foot is gradually adjusted until you are walking almost flat in your boot (week 8-10). After 10 weeks your tendon is sufficiently well healed to discontinue the boot and start physiotherapy. However, the tendon has not reached full strength yet. It is advisable to put the boot on if you are going anywhere crowded, where the terrain is unpredictable or if there is any other reason why you might stumble or trip. Re-rupture of the tendon at this stage in recovery is extremely frustrating.

When should I see a physio?

Physiotherapy starts 9-10 weeks after injury. A specific rehab protocol is used by the physiotherapy team. Building up calf muscle strength is the key goal. This requires lots of exercises in between visits to the physiotherapist. It is important to NOT do vigorous stretches (even if the tendon feels a little tight) because the tendon can stretch out too much, resulting in long term loss of power in the leg. You can expect any tightness to gradually resolve over time and with normal activity.

Should I take blood-thinners?

An Achilles rupture is a relatively high-risk injury for developing a blockage in the leg veins. For this reason, blood-thinners are often recommended. Injections or tablets can be used. Different hospitals have different policies in this regard. No-one really knows the best duration to take blood-thinners for. After a new hip or new knee operation blood-thinners are often recommended for 6 weeks and many Foot and Ankle Surgeons recommend this duration of preventative treatment for Achilles rupture patients.

If you have not been given any blood-thinners then 150mg of Aspirin a day is something you could consider taking until you discuss the issue with your specialist.

Remember that even with blood-thinners it is possible (though very rare) to develop a thrombosis/blocked vein. Swelling of the whole leg up to the knee should prompt medical review even if painless.

Achilles Tear Treatment

How to treat a torn Achilles tendon / Op vs Non-Op?

Tendons, like bones, heal well in the right conditions. For the Achilles tendon it is thought that healing is best when the two torn ends are close together. Usually this is achieved by putting the foot into a tip toe position and keeping it there with a plaster cast or boot. If the ends of the tendon do not come together well, leaving a "gap" (this can be determined using an ultrasound scan) then surgery may be an option. The operation is to bring the ends together. It does not make the tendon strong. The same long recovery is required whether or not surgery is used.

How long can you wait for Achilles tendon surgery?

Most surgeons prefer to repair the tendon (when surgery is required) within three weeks of the injury. This is because after that the "elastic" tendon ends have pulled apart and are harder to join.

How long does Achilles tendon surgery take?

Surgery to repair the Achilles tendon is usually performed as a Day Surgery procedure. The operation takes less than one hour. The recovery and rehabilitation will take many months.

Recovery from Achilles Rupture Surgery

It takes 2 weeks for the skin stitches to heal and you will probably be in a plaster cast till then. Once you are supported in a suitable boot, with the foot held in a tip-toe posture, then you can (and should) walk. Crutches may still be useful, to help with balance. After a few weeks (4-6) the boot is adjusted little by little to allow the heel to come down. From ten weeks (approximately) the boot is no longer needed. Now the long process of building up the muscle and rehabilitating begins. This phase lasts for about 6 months.

Pain after Achilles tendon rupture / surgery

The initial "snap" is painful, but this usually subsides quickly. The injury is then surprisingly painless. Similarly, if surgical repair is needed there is not much need for pain medication once the soreness from the skin cut settles.

- **Heel pain** - Once you are walking in the boot then the underneath of the heel can become sore. Adding a gel heel cushion from the chemist store may help. This type of pain tends to resolve once you begin rehabilitation without the boot.
- **Calf pain** - This should not be ignored, particularly if there is swelling affecting the whole lower leg. This combination of problems might mean there is a blocked vein (thrombosis), which can still occur even if you are taking blood thinners to prevent such problems. Seek medical advice if you are worried about this.

- **Calf spasm** – A more common type of calf pain is cramping from the muscle which “has nothing to pull on” due to the tendon rupture. This type of pain will not have associated swelling and is intermittent.
- **Knee pain** – This can occur due to the awkwardness of the high heeled boot and might affect either knee.
- **Nerve pain** – nerve damage is possible with surgical repair but tends to leave numbness rather than pain. Awkward walking from the boot (or crutches) can rarely give rise to back trouble and sciatica-like pain.

Scar healing post-surgery.

The skin scar from an Achilles tendon repair usually heals very well, becoming almost invisible with time. During the early weeks after surgery there is a risk of skin infection, so resting properly to begin with is important (to keep the swelling down and stop the wound stretching). Once the plaster is removed and the sutures have gone you may wish to use creams or ointments rich in Vitamin E. Special scar reducing adhesive dressings may be of benefit, especially if you are prone to broad or “keloid” scar formation.

Torn Achilles recovery

Walking casts vs boots

The beauty of the boots is that they can be removed (for a wash or to scratch an itch). The danger of the boots is that they can be removed (at which point the Achilles is at risk of re-injury).

So - boots are both good and bad!

Boots are convenient and safe – as long as they are used properly and you don't cut corners. Misuse may lead to a re-rupture of the tendon, which usually requires an operation. Then you have to start the recovery all over again. This is extremely frustrating.

Which Achilles tendon rupture boot is best?

Boots come in two different designs. Both are shaped to hold your ankle in a tip-toes position. This brings the torn tendon ends together to allow healing.

Wedges are used in some boots to lift the heel. As the weeks of recovery pass, the number of wedges (and so the height that the heel is lifted to) is gradually reduced.

Hinges are fitted to other boots. The angle of the hinge is adjusted towards a flatter foot posture as recovery progresses.

Nobody knows for certain whether one or other style is better for recovery.

Both types of boot work very satisfactorily – as long as they fit well and are used properly.

How to sleep with torn Achilles tendon?

Yes, you **DO** need to maintain a tip toe position at night. You must either use your boot or consider a Thetis Achilles Night Splint. If you take the boot or splint off, then the healing tendon is at high risk of re-injury.

Sleeping in the hot and heavy boot is the most common complaint from patients recovering from an Achilles tendon rupture. The specially designed Achilles Rupture Night Splint, from Thetis Medical (www.thetismedical.com) solves these problems.

Sleeping in the boot brings other problems. Since you are walking on it during the day, the bottom of the boot inevitably gets dirty. Some boots have a detachable sole, but this leaves sharp plastic edges. The Thetis Achilles Night Splint avoids this too. Another solution is to put the injured leg, inside the boot, into an old pillowcase. This protects the other leg from being scratched by the plastic and straps. It also keeps the bed clean.

How long for an Achilles tendon rupture to heal?

Whether the tendon is treated with surgery, or allowed to mend naturally in a boot, the healing time is long. It is usual to spend 10 weeks in a plaster cast or boot. After this, healing is sufficiently advanced to allow walking without the boot, and physiotherapy begins. However, the tendon is not at full strength even then. Re-rupture is still possible. Competitive sport is not advised until at least six months from injury.

Recovery time with and without surgery?

There is no difference. Surgery does not make the recovery from a torn Achilles tendon any quicker. The goal of surgery is just to ensure that the two ends of the torn tendon sit close together, so that natural healing can occur. The stitches are not strong enough to support body weight. Activity without the protective boot or cast cannot commence until the tendon has had sufficient time to heal.

Partial Achilles tear recovery.

The Golden Rule is that there is NO SUCH THING as a partial tear of the Achilles tendon. Assume you have a complete rupture of the tendon until a specialist has assessed your injury. (A partial tear can in fact occur but is extremely rare).

Achilles tendon recovery/rehab exercises.

Your physiotherapist will guide you through the stages of recovery. The goal is to build the calf muscle strength. Lots of heel lifts/tip toe exercises are required, before advancing to a return to sport program. All this takes at least six months. It is important to avoid stretching exercises even if the tendon feels tight. With time it will always gradually stretch a little.

Life After Achilles Tendon Rupture.

Life after Achilles tendon rupture.

Properly treated, Achilles tendon ruptures heal very well. However, full recovery takes a very long time. You can expect to be in a boot or similar support for about 10 weeks. After this it takes many months to regain the muscle strength. If you ask someone who has been through all this, they will say that they were limited in activities for at least 6 months and that full recovery takes about a year.

Even in the long-term, the calf muscle on the injured side is a little smaller than it used to be – but still strong enough to work normally.

Similarly, the healed tendon remains thicker than it once was. This improves with time (months to years) but the tendon never quite gets as slim as it was before injury.

When can I play sport again?

This depends upon the sport, but most rehabilitation programs reach the point where you can resume after 6 months.

When can I go back to physical work?

This depends upon the precise nature of the work, but most rehabilitation programs reach the point where you can resume after 6 months.

When can I walk after Achilles rupture?

Once you are supported in a suitable boot, with the foot held in a tip-toe posture, then you can (and should) walk. Crutches are only to help with balance. A shoe with a generous heel on the other foot helps to even you up. Walking on the injured leg, in the boot, is good for the healing. The action of walking helps the tendon ends to join in an efficient and strong manner. This early walking has led to fewer re-ruptures compared to previous regimens, when treatment required months of plaster casts and hopping one-legged with crutches.

How to avoid re-rupture.

Wear the boot as instructed for the full 10 weeks. Don't take any short-cuts. Your recovery is like the game Snakes and Ladders (Shutes and Ladders in the US) – each week sees you closer to the finish. But one small mistake is like landing on the big snake that takes you right back to the beginning, with a re-rupture. If you take it off to wash, be seated first; maintain the tip-toe posture; do not bend the ankle up to reach your toes to wash or dry them. If you are not sufficiently flexible get help. Do not assume that you'll be fine, hopping into the shower. One tiny slip can be disastrous.

Walking without the boot.

This is not advised until the tendon is healed, after 10 weeks. The recovery is like the game Snakes and Ladders (Shutes and Ladders) – each week sees you closer to the finish. But one small mistake is like landing on the big snake that takes you right back to the beginning, with a re-rupture. This is why it is so important to keep the boot on as instructed.

Little Gems

Recovery from Achilles tendon rupture is long and frustrating. Here are five “tips and tricks” for making the journey more comfortable.

Remember that recovery is like a game of Snakes and Ladders. Each week you are closer to the finish – but one small error can mean that you slide all the way back to square one.

Crutches and scooters

Once you are out of plaster and into a boot you can (and should) be walking with weight through the injured leg. Crutches are for balance only. Hopping around using the crutches without weight through the injured leg is bad for the healing of the tendon. Similarly, using a medical scooter means that the injured leg is not used enough. Try not to use these scooters after you are free from plaster.

Once your confidence improves it is a good idea to use just one crutch, in the hand on the opposite side to the tendon injury (right Achilles = left hand crutch). You can abandon the crutches all together if balance and confidence permit.

Crutches are awkward to store. If you lean them against the wall they ALWAYS fall over. Did you know that if you store crutches upside down then they don’t fall? The weight is closer to the floor and the rubber “foot” doesn’t slide against the wall.

Other Foot

The heel lift or hinges in your boot keep the toes down to help tendon healing. However, the injured leg is then longer than the other one. To aid balance, a shoe with plenty of height can be worn on the other foot to help. Wedge shoes; chunky trainers; Cuban heels? There is also a commercially available strap-on device that fits over a shoe to help even up (type this into your web browser) the uninjured leg.

Night-time

Yes, you DO need to keep the foot in the tip toe position at night. You may use either the boot or the Thetis Achilles Night Splint in bed. If you take the boot or splint off at night, then the healing tendon is at high risk of re-injury.

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Sleeping in the boot brings other problems. Since you are walking on it during the day, the bottom inevitably gets dirty. Some boots have a detachable sole, but this leaves sharp plastic edges. The Thetis Achilles Night Splint avoids this. Another solution is to put the injured leg, inside the boot, into an old pillow case. This protects the other leg from being scratched by the plastic and straps. It also keeps the bed clean.

Socks

Plastic boots are more convenient for your recovery than plaster casts. They do, however, get hot and sweaty. A sock made of Merino wool (popular with hikers and skiers) helps to

wick away the natural moisture. These are probably better than the liners and socks supplied by the boot manufacturers.

Washing

Skin care while using the boot is vital (see Socks above). It is important to wash daily and check the skin for any rashes or blisters.

Routine baths and showers are difficult with a boot on. DO NOT BE TEMPTED to take off the boot and “just carefully hop into the shower”. Bathrooms are wet and slippery – and one small slip can re-rupture the tendon.

You may like to use the commercially available special plastic covers that go over plaster casts and boots. Some people just use heavy duty bin bags for the same job.

When you do remove the boot, always be seated. Put the heel out in front of you and after undoing the straps lift the leg out, CONSTANTLY maintaining the tip toe posture.

If you are washing the toes or changing your sock DO NOT flex the ankle upwards. This disrupts or stretches the healing tendon. If you find that reaching your toes is difficult then find a helper.