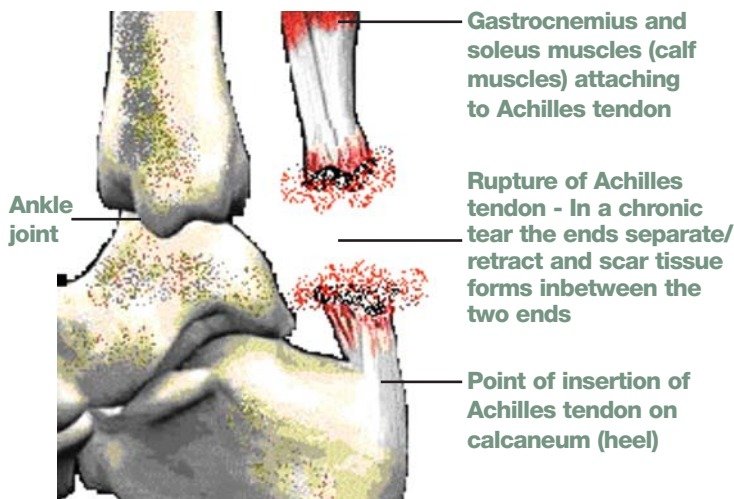


Chronic Achilles Tendon Rupture Reconstruction



Type of Procedure:	Overnight stay (24 hrs)
Length of Procedure:	1 hour
Anaesthesia:	General anaesthetic with nerve block

Rupture or tearing of the Achilles tendon is a common condition and typically occurs in an individual who undertakes sporting activity to which they are unaccustomed.

For example, the invitation to play tennis after a prolonged period of little or no exercise. However, tears can also occur in those who play sport regularly but it is usually the more explosive take-off / high impact landing action sports that are responsible (although tears can occasionally occur after simply stumbling when walking). Essentially, there is a vigorous contraction of the calf muscle and the Achilles tendon tears. The patient often describes the sense that someone or something has hit the back of their leg producing sudden pain. Although it is possible to walk, it is painful and the leg is weak.

When the Achilles tendon rupture is not diagnosed promptly, the ends of the tendon begin to separate (retract). Walking, the strength of the leg, and pushing off with the foot become increasingly difficult. There are however other muscles in the leg which try to compensate for the loss of the Achilles and the leg muscle (the gastrocnemius muscle), but these are never sufficient to maintain the power and strength of the leg. Due to the extra work load on the other muscles of the leg which try to compensate for the weakness, the toes may begin to curl and may become permanently deformed.

Surgical treatment of this condition is ideal, and should be performed as soon as possible after the diagnosis is made to maximise the return of strength before the tendon retracts too far.

The type of surgery performed depends on the amount of separation between the tendon ends. If the separation is minimal, then the tendon ends can be stitched together as we do for an acute rupture of the Achilles tendon. If the separation is more significant, then other procedures need to be performed including the use of a tendon transfer and/or other techniques to achieve a repair of the Achilles tendon. The tendon transfer uses the 'flexor hallucis longus' tendon (FHL) which is the second strongest muscle in the leg after the gastrocnemius (calf muscles that attach to the Achilles tendon). The FHL normally bends the big toe downwards and after transferring the tendon, this movement will be weaker and in some instances the patient may notice that they cannot bend the tip of the toe downwards although this is rarely a problem.

Summary

- The goal of the surgery is to return you to full healing and strength of the tendon in as short a time as possible. With long delays in diagnosis and hence treatment then this may not be possible and then surgery aims to maximise future strength and function.
- You will need to use crutches for six weeks after surgery, although you will usually be able to take some weight through the leg in a boot from 2 weeks post operatively. The boot is worn until 10 weeks following surgery.
- Physiotherapy is very important after the surgery. You will need to work hard in Physiotherapy to regain the strength in the leg.
- If only the left leg is involved, then you may begin to drive at 14 days after surgery.

Alternatives to Surgery

Whilst surgery is usually recommended for delayed presentation / chronic tears of the Achilles tendon, there are occasions when surgery is not necessarily advisable (general health concerns or other problems with mobility)

Some (~50%) of patients treated without surgery manage to regain reasonable mobility without significant pain but this is variable and there is usually substantial loss of power with a limp when walking. A specialised brace (AFO) may also help.

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Main Risks Of Surgery

Swelling / Scar - Initially the foot and ankle will be swollen and needs elevating. The swelling will disperse over the following weeks and months but will remain evident for up to 6-9 months. The scar can cause irritation to begin with but usually settles to a great extent over the first 4-6 weeks.

Wound healing problems - The risk of serious wound healing problems is approximately 1%. It is important to keep the foot elevated over the first 10 days to reduce the swelling and risk of wound healing problems. In rare circumstances when the wound is problematic, further surgery can sometimes be required.

Infection - The risk of deep infection occurring is approximately 1%. You will be given intravenous antibiotics to help prevent this. It is important to keep the foot elevated over the first 10 days to reduce the swelling and risk of infection. If there is an infection, it may resolve with a course of antibiotics but may require a period of hospitalisation or rarely, further surgery.

Nerve damage - The sural nerve is close to the incision. This supplies sensation to the outside of the foot. This may rarely (1%) be damaged during the surgery and this may leave a patch of numbness on the outside of the foot. This numbness may be permanent would not affect function.

Re-rupture of the Achilles Tendon - Following surgical repair of the tendon the risk of further rupture is less than 3% (compared to approximately 20% in some reports of non surgical treatment of this injury). It is very important that patients follow the post operative instructions provided to minimise the risk of such problems.

Deep Vein Thrombosis (DVT) - This is a clot of blood in the deep veins of the leg. The risk of a clot occurring is reported as less than 1% after foot and ankle surgery which is generally substantially lower than after hip or knee surgery. Suspicion of DVT is raised if the leg becomes very swollen and painful. There are tests that can be performed to confirm / exclude the presence of a DVT. If confirmed, you will probably require treatment with a blood thinning agent (heparin preparation and / or warfarin). The main concern with regards a DVT is that rarely (<1:1000 chance with foot and ankle surgery) a piece of clot can break away in the leg and travel to the lungs which is much more serious and can be life-threatening. This is called a pulmonary embolus and signs of this include chest pain and shortness of breath.

For the first 2 weeks following surgery it is likely that you will be treated with a blood thinning agent (LMWH - low molecular weight heparin injections) to minimise the risk of DVT / PE but this does not afford total protection and exercises to keep the toes and knee moving are advised, as well as remaining generally mobile.

If you are concerned that the leg has become more swollen and painful (some swelling always occurs after surgery), or if you experience chest pain/shortness of breath, then you should contact the hospital, general practitioner, or accident and emergency department immediately.

Sick Leave

In general 4 weeks off work is required for sedentary employment, 12 weeks for standing or walking work and 16 weeks for manual / labour intensive work. We will provide a sick certificate for the first 2 weeks; further certificates can be obtained from your GP.

Driving

May return to driving after outpatient review at 2 weeks post surgery ONLY IF left leg surgery only and automatic vehicle - otherwise unable to drive until 3 months post surgery.

These notes are intended as a guide and some of the details may vary according to your individual surgery or because of special instructions from your surgeon.

Day 1

- Below knee cast (backslab plaster) applied at end of surgery
- Expect some numbness in foot for 12-24 hours
- Pain medication and elevation of foot
- Blood drainage through cast expected
- Treatment with LMWH injections

Day 2

- Elevation of leg as much as possible for first 2 weeks
- Mobilisation non-weight bearing with physiotherapist (crutches / frame)
- Discharge home day 2 or 3 usually possible
- No weight bearing on operated leg for first 4 weeks
- May shower / bath if able to keep leg dry

2 Weeks

- Outpatient review of wounds (and removal stitches if necessary)
- Cast replaced with boot including heel wedges
- No weight bearing on operated leg / boot until 4 weeks post surgery
- Patient to remain in boot at all times (except for supervised physio)
- Supervised physiotherapy may begin. Only include:
 - Swelling control - ice, elevation, effleurage and massage as appropriate
 - Scar mobilisation
 - No stretches / active exercises until 4 weeks post surgery
 - No unsupervised boot removal
- May return to driving at this stage ONLY IF left leg surgery only and automatic vehicle - otherwise unable to drive until 3 months post surgery

4 Weeks

- Outpatient review and removal of (2) heel wedges as appropriate
- Allowed to partially weight bear on operated leg with crutches / frame
- Supervised physiotherapy to continue (+ unsupervised exercise may begin) as instructed by physiotherapist including:
 - Swelling control - ice, elevation, effleurage and massage
 - Scar mobilisation
 - Assisted/active PF, DF Inversion/eversion exercises to begin gently

6 Weeks

- Outpatient review and further wedges removed
- Usually allowed to begin full weight bearing in boot at this stage
- Boot removed for bathing / showering at this stage
- To remain in boot until 10 weeks following surgery
- Physiotherapy to continue:
 - a Swelling control – ice, elevation, effleurage and massage
 - b Scar mobilisation
 - c Assisted / active PF, DF Inversion / eversion exercises
 - d Gait progression work
 - i Aim for walking without walking aids (if plantegrade achieved)
 - ii Aim to achieve walking with parallel bars out of boot prior to week 10 (usual stage of boot removal)

10 weeks (2.5 months)

- Physiotherapy to continue:
 - a Scar mobilisation
 - b Assisted / active PF, DF Inversion / eversion exercises
 - c Boot removed (by physio once functional dorsiflexion achieved)
 - d Begin double stance heel raises and continue strengthening
 - e Single gel heel insert in shoe - worn until 14 weeks after surgery
 - f May begin proprioceptive work after week 10

12 weeks (3 months) onwards

- Outpatient review
- Physiotherapy to continue:
 - a Begin single stance heel rise exercises
 - b Begin jogging on trampoline and treadmill via walk-run programme
 - c Eventually progress 20 minute outdoor run before adding cutting
 - d Progress later to figure of eight drills as appropriate

Sick Leave

In general 4 weeks off work is required for sedentary employment, 12 weeks for standing or walking work and 16 weeks for manual / labour intensive work. We will provide a sick certificate for the first 2 weeks; further certificates can be obtained from your GP.

Driving

IF have an AUTOMATIC VEHICLE and ONLY LEFT leg surgery then it is likely you will be allowed to drive after your outpatient review at 2 weeks post surgery. IF you have a MANUAL VEHICLE or RIGHT leg surgery then you will NOT be able to drive until 3 months post surgery.

These notes are intended as a guide and some of the details may vary according to your individual surgery or because of special instructions from your surgeon.

sussexfoot&anklecentre

The Sussex Foot & Ankle Centre was founded in 2005 by two orthopaedic surgeons, David Redfern and Stephen Bendall, with the aim of providing a high quality specialist service for the diagnosis and treatment of all foot and ankle problems. Both orthopaedic surgeons are specialists in problems affecting the foot and ankle and have many years of experience. They operate the service with outpatient clinics at the Brighton and Haywards Heath Nuffield Hospitals.

The sussex foot and ankle center strives to provide the best advice and treatment for all foot and ankle problems. This includes sports injuries and trauma, bunions, metatarsalgia, and arthritis. Both surgeons have particular interests in minimally invasive surgery and are at the forefront of developing such techniques in this country.

Both surgeons are also academically very active and have appointments within the national (BOFAS) and international (EFAS) professional foot and ankle surgery societies.

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