

Foot and ankle

Achilles tendon rupture repair

There is no agreed single best treatment for Achilles tendon ruptures. Similar results can be achieved with non-surgical and surgical treatments. There is some evidence that there is earlier recovery, improved strength and functional recovery after surgical fixation.

Newer techniques allow acute ruptures to be repaired through much smaller incisions, reducing the risk of wound complications, preserving the blood supply and aiding recovery. Small incisions allow small tapes to be placed through the tendon and anchored into the heel bone.

The expected outcomes of surgery are:

- improved function and mobility
- improved strength
- return to full sporting activity
- full recovery may take up to 12 months

After surgery

Our care is specifically tailored to each patient, which allows recognition and modified care for those patients who may progress slower than others.

Our rehabilitation protocols are 'milestone driven' designed to provide rehab guidance

for all of our patients. The aim is to limit unnecessary visits to the rooms and help to identify when specialist review is required.

Rehabilitation protocol

Some of the physiotherapy terms may be unfamiliar to you at the moment. They will become clear as you work with your physiotherapist.

Time after surgery	Physiotherapy/support
<p>Phase I – Initial rehabilitation (0 – 6 weeks)</p> <p>Goals:</p> <ul style="list-style-type: none">• To be safely and independently mobile with appropriate walking aid, adhering to weight bearing restrictions• To be independent with a home exercise program, as appropriate• To understand self-management and monitoring (e.g. skin sensation, colour, swelling, temperature)	

<p>Day 1 – 2 weeks</p>	<p>Immediately after surgery, you will:</p> <ul style="list-style-type: none">• be fitted with a moon boot that holds your foot in flexion (2–3 wedges or 30 degrees)• be taught exercises to help your circulation• be required to elevate your leg (nose above nose) as much as possible• learn how to monitor sensation, colour, circulation, temperature and swelling of your foot/ankle (and what to do if you're concerned)• be given adequate pain relief <p>You will have a wound review at 2 weeks and then you'll be referred for outpatient physiotherapy</p>
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2 – 6 weeks

During this time, you'll start bearing weight (up to around 50%). You can also expect the following.

Foot position:

Your moon boot will be adjusted to reduce the flexion of your foot:

- weeks 2–4 (3 wedges or 30 degrees)
- weeks 4–6 (2 wedges or 20–30 degrees)
- week 6+ (neutral position)

Therapy and exercises:

- Inflammation control
 - o use of ice and elevation
- Exercises
 - o active dorsiflexion exercises to neutral and inversion/eversion below neutral
 - o gentle active plantarflexion
 - o knee/hip exercises, as necessary
 - o non-weight bearing fitness work
 - o hydrotherapy within range of motion and weight bearing status (when your wound is well healed)

Phase II – Recovery rehabilitation

Goals:

- To be independently mobile out of the boot
- To achieve full range of motion
- Muscle strength improving
- Optimise normal movement

6 – 8 weeks

During this time, you will:

- bear weight as tolerated
- receive pain relief advice and education
- receive posture advice and education
- wean out of the boot and back into normal footwear
- receive gait re-education
- achieve safe and independent mobility without a walking aid

Foot position:

- moon boot in neutral position (no wedges)

Therapy and exercises:

- Inflammation control
 - o use of ice and elevation, as needed
- Exercises
 - o dorsiflexion stretching (slowly)
 - o graduated resistance exercises (closed chain to open chain to functional)
 - o proprioception and gait training
 - o fitness exercise full weight bearing
 - o hydrotherapy
- Manual therapy
 - o soft tissue techniques as appropriate (e.g. scar massage)

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| | <ul style="list-style-type: none">o joint mobilisation as appropriateo monitoring of sensation, swelling, colour and temperatureo pacing as appropriate |
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8 – 12 weeks	Your therapy will continue but during this time you can expect to: <ul style="list-style-type: none">• wean off the boot• return to crutches or stick as necessary during gait re-education (then wean off those)• continue to progress your range of motion, strength and proprioception
<p>Phase III – Intermediate rehabilitation</p> <p>Goals:</p> <ul style="list-style-type: none">• Independent mobility (unaided)• Optimise normal movement• Return to normal activities	

12 weeks +	<p>From here, you will:</p> <ul style="list-style-type: none">• continue to progress range of motion, strength and proprioception• retrain strength, power, endurance and control• introduce dynamic exercises including plyometric training• commence sport-specific training <p>Therapy and exercises:</p> <ul style="list-style-type: none">• Exercises<ul style="list-style-type: none">o range of movemento progress strengthening of calf muscleso core stability worko balance and proprioception work (i.e. use of wobble boards, gym ball, Dyna cushion®)o stretches of tight structures as appropriateo sports-specific exerciseso exercises to address any lower limb biomechanical issues as needed• Manual therapy<ul style="list-style-type: none">o soft tissue techniques as appropriate (e.g. scar massage)o joint mobilisation as appropriateo monitoring of sensation, swelling, colour and temperatureo pacing as appropriate
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Milestones for discharge:

- Independently mobile unaided
- Muscle strength – plantarflexion grade 5 with no pain
- Return to low-impact activity/sports

Phase IV – Final rehabilitation

Goals:

- Return to high impact sports (if you've set this as a goal)
- Normal plantarflexion activity
- Single leg stand 10 seconds, eyes open and closed
- To be able to do multiple heel raises
- Establish long term maintenance program

<p>6 months +</p>	<p>From here, you will:</p> <ul style="list-style-type: none"> • work on progressing your mobility and function, increasing dynamic control with specific training to functional goals • continue gait re-education • receive pacing advice <p>Therapy and exercises:</p> <ul style="list-style-type: none"> • Exercises <ul style="list-style-type: none"> ○ sports-specific/functional exercises ○ exercises to address any lower limb biomechanical issues as needed ○ <p>Milestones for discharge:</p> <ul style="list-style-type: none"> • Independently mobile unaided • Good proprioceptive control on single leg stand on operated limb • Return to normal functional level • Return to sports (if this is your goal)
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Failure to progress

If your rehabilitation is not progressing as expected, your physiotherapist may perform or recommend one or more of the following actions.

Possible problem	Action
Foot swelling	<p>Ensure leg is being elevated regularly</p> <p>Use ice as appropriate (if normal skin sensation and no contraindications)</p> <p>Decrease amount of time on feet</p> <p>Use walking aids</p> <p>Circulatory exercise</p> <p>If the swelling decreases overnight, then monitor closely</p> <p>If the swelling doesn't decrease overnight, refer back to surgeon or GP</p>
Swelling of calf	<p>If accompanied by pain, refer urgently to emergency department or surgeon to rule out deep vein thrombosis (DVT)</p>
Pain	<p>Decrease activity</p> <p>Ensure adequate analgesia</p> <p>Elevate regularly</p> <p>Decrease weight bearing and use walking aids as appropriate</p> <p>Modify exercise program as appropriate</p> <p>If persistent, refer back to surgeon</p>

<p>Breakdown of wound (e.g. inflammation, bleeding, infection)</p>	<p>Urgent referral back to surgeon</p>
<p>Suspected re-rupture</p>	<p>Refer back to surgeon</p> <p>Ensure exercises not too advanced</p>
<p>Numbness or altered sensation</p>	<p>Review immediate post-op status if possible</p> <p>Ensure swelling is under control</p> <p>If new onset or increasing, refer urgently back to surgeon</p> <p>If static, monitor closely, but inform surgeon and refer back if the problem worsens or if concerned</p>