# Ankle instability surgery

Ankle instability surgery is generally reserved for people with chronic ankle instability who have failed to respond to conservative treatment.

The surgical technique used will depend on the severity of the ankle instability and the quality of the lateral ligament complex. Surgery tends to include one or more of the following:

- Ankle arthroscopy to assess and address any problems within the ankle joint. This includes removing scar tissue and dealing with cartilage damage or loose bodies.
- Primary anatomical (non-augmented) repair. This is carried out by reattaching torn ligaments in order to regain lateral ankle stability. A Brostrom repair is the common technique used in an anatomical repair, reinforced with the Gould modification.
- Occasionally, augmentation with tendon grafts or synthetic ligaments are required. Repair of unstable peroneal tendons (at the outer side of the ankle) and tears of these tendons may be required.

The expected outcomes of surgery are:

- Improved function and mobility
- Improved pain relief with decreased analgesic requirements
- Improved ankle-hind foot complex stability
- Decreased requirement for orthotics
- 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 |
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| Phase I – Initial rehabilitation (0 – 6 weeks)<br><br>Goals:<br><br>• To be safely and independently mobile with appropriate walking aid, adhering to weight bearing restrictions<br>• To be independent with a home exercise program, as appropriate<br>• To understand self-management and monitoring (e.g. skin sensation, colour, swelling, temperature) | |

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| Day 1 – 6 weeks | **Restrictions**:<br>• For the first 2 weeks you will be non-weight bearing (NWB) in a moon boot (foot in neutral position). You will have a wound review in the rooms and then be referred for outpatient physiotherapy, aiming to start at week 3<br>• At week 3 you should progress to 50% weight bearing. You'll begin range of motion exercises – initially from the ankle dorsiflexed (DF) 10 degrees (ankle to ceiling) to plantarflexion (PF) 20 degrees (ankle to the floor). Avoid inversion/eversion<br>• At week 4 you should be fully weight bearing in the boot. Continue similar range of motion. Avoid inversion/eversion<br>• During weeks 5 to 6, your range of motion increases to DF 20 degrees and PF 40 degrees. Avoid inversion/eversion<br>• At 6 weeks you should be fully weight bearing and can start to wean out of the boot<br><br>**Therapy and exercises**:<br>• Inflammation and pain control<br>o walker boot or plaster<br>o analgesia as needed<br>o using ice and elevating leg (toes above the nose)<br>• Exercises<br>o circulation exercises<br>• Education and support<br>o you will be taught how to monitor sensation, colour, circulation, temperature, swelling (and advised about |

what to do if concerned)

- Mobility
    - your physiotherapist will ensure that you can manage to move around independently, including using stairs if necessary

Milestones to progress to next phase:

- Out of boot
- Progress to partial or full weight bearing (PWB, FWB)
- Team to refer to physiotherapy if required to review safety of mobility (including stairs if necessary)
- Adequate analgesia

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Phase II – Recovery rehabilitation

Goals:

- To be independently mobile out of the boot or plaster
- To achieve full range of movement
- To achieve muscle strength of eversion grade 4 or 5 on Oxford scale
- Optimise normal movement

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| 6 – 12 weeks | **Restrictions**:<br>• No balance exercises until eversion grade 4 or 5 on Oxford scale achieved<br>• Do not formally stretch repair – it will naturally lengthen over a 6-month period<br>• No impact exercise (e.g. jogging, aerobics)<br>**Therapy and exercises**:<br>• Treatments<br>o pain relief advice and education<br>o posture advice and education<br>o gait re-education<br>o pacing as appropriate<br>o swelling management<br>• Mobility<br>o your physiotherapist will ensure that you can manage to move around independently without a walking aid<br>• Exercises<br>o active assisted range of movement (AAROM)<br>o active range of movement (AROM)<br>o resisted inversion and eversion exercises with progression<br>o encourage isolation of evertors without overuse of other muscles.<br>o biofeedback likely to be useful |

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| | ○ strengthening exercises of other muscle groups as appropriate<br>○ core stability work<br>○ exercises to teach you to find and maintain sub-talar neutral<br>○ balance and proprioception work once appropriate<br>○ stretches of tight structures as appropriate (e.g. Achilles Tendon), not of repair<br>○ exercises to address any lower limb biomechanics issues as needed<br>• Manual therapy<br>○ soft tissue techniques as appropriate (e.g. scar massage)<br>○ joint mobilisations as appropriate particularly sub-talar joint<br>○ monitor sensation, swelling, colour and temperature<br>○ orthotics if required (bracing or taping acceptable)<br>○ hydrotherapy if appropriate<br>○ pacing advice as appropriate<br>Milestones to progress to next phase:<br>• Muscle strength: eversion grade 4 or 5 on Oxford scale<br>• Full range of movement<br>• Mobilising out of boot<br>• Neutral foot position when weight bearing/mobilising |

Phase III – Intermediate rehabilitation

Goals:

- To be independently mobile unaided
- Optimise normal movement
- Return to normal activities

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| 12 weeks – 6 months | Therapy and exercises:<br>• Treatments<br>o pain relief advice and education<br>o posture advice and education<br>o gait re-education<br>o pacing as appropriate<br>o progression of mobility and function<br>• Exercises<br>o range of movement<br>o progress strengthening of evertors<br>o core stability work<br>o balance and proprioception work (i.e. use of wobble boards, gym ball, Dyna cushion)<br>o stretches of tight structures as appropriate (e.g. Achilles tendon)<br>o exercises to address any lower limb biomechanics issues as needed<br>o sports specific rehabilitation<br>• Manual therapy<br>o soft tissue techniques as appropriate (e.g. scar massage)<br>o joint mobilisations as appropriate particularly sub-talar joint<br>o monitor sensation, swelling, colour and temperature |

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| | o orthotics if required (bracing or taping acceptable)<br>o hydrotherapy if appropriate<br>o pacing advice as appropriate<br><br>Milestones for discharge:<br><br>• Independently mobile unaided<br>• Muscle strength: eversion grade 5 on Oxford scale<br>• Returned to low-impact activity/sports |

Phase IV – Final rehabilitation

Goals:

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

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| 6 months + | Therapy and exercises:<br>• Treatments<br>o progression of mobility and function<br>o gait re-education<br>o pacing advice<br>• Exercises<br>o sports specific rehabilitation<br>o addressing any specific issues<br>Milestones for discharge:<br>• Independently mobile unaided<br>• Good proprioceptive control on single leg stand on operated limb<br>• Return to normal functional level<br>• Return to sports (if this is your goal)<br>• Grade 5 eversion strength |

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

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| Suspected re-rupture | Refer back to surgeon<br><br>Ensure exercises not too advanced |
| Numbness or altered sensation | Review immediate post-op status if possible<br><br>Ensure swelling is under control<br><br>If new onset or increasing, refer urgently back to surgeon<br><br>If static, monitor closely, but inform surgeon and refer back if the problem worsens or if concerned |