# Physiotherapy Rehabilitation Guidelines for patients undergoing Lateral Ligament Reconstruction of the Ankle

<table>
<thead>
<tr>
<th>Document Type</th>
<th>Guideline</th>
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<tr>
<td>Date Approved</td>
<td>13/11/2017</td>
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<tr>
<td>Ratifying Body</td>
<td>Drugs &amp; Therapeutics Committee</td>
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<tr>
<td>Related Documents</td>
<td>Physiotherapy rehabilitation guidelines – Pes Cavus Correction</td>
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<td></td>
<td>Physiotherapy rehabilitation guidelines – Anterior ankle arthroscopy</td>
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<tr>
<td>Author</td>
<td>Joanna Benfield, Foot &amp; Ankle Specialist Physiotherapist, RNOH</td>
</tr>
<tr>
<td>Owner (Executive Director)</td>
<td>Lucy Davies</td>
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<tr>
<td>Directorate</td>
<td>Operations</td>
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<tr>
<td>Superseded Documents</td>
<td>Rehab Guidelines for Lateral Ligament Reconstruction of the Ankle (2008)</td>
</tr>
<tr>
<td>Subject</td>
<td>Clinical, Clinical Units, Communication, Inpatient &amp; Outpatient Services</td>
</tr>
<tr>
<td>Review Date</td>
<td>13/11/2022</td>
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<tr>
<td>Consultation Group/Approving Bodies/Subjeect Matter Expert</td>
<td>Members of Foot and Ankle Unit Team (4 consultants, &amp; Clinical Nurse Specialist)</td>
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<td></td>
<td>Members of Outpatient Musculoskeletal Physiotherapy Team (Band 5, 6, 7 and 8a staff members at Stanmore and Bolsover Street)</td>
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<tr>
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<td>Members of Inpatient Orthopaedic Physiotherapy Team (Band 7 and 8a staff members)</td>
</tr>
<tr>
<td>Readership</td>
<td>All staff (inc. Clinical)</td>
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Version 1.0
### Equality Impact Assessment (EIA) Disclosure Statement

This policy was assessed on the 1st day of June 2017 for its impact on equality. The assessment determined that the policy will not have a significant negative impact on equality in relation to each of the protected staff/patient groups below:

- i.) Age;
- ii.) Sex (Male and Female);
- iii.) Disability (Learning Difficulties/Physical or Sensory Disability);
- iv.) Race or Ethnicity;
- v.) Religion and Belief;
- vi.) Sexual Orientation (gay, lesbian or heterosexual);
- vii.) Pregnancy and Maternity;
- viii.) Gender Reassignment (The process of transitioning from one gender to another);
- ix.) Marriage and Civil Partnership.
1. Privacy Impact Assessment (PIA) Disclosure Statement

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<tr>
<td>This policy was assessed on the 1&lt;sup&gt;st&lt;/sup&gt; day of June 2017 for its impact on privacy. The assessment determined that the policy will not have a significant negative impact on privacy of members of staff/patients.</td>
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</table>
2. Introduction and aims

Please note that this is advisory information only. Individual / your experiences may differ from those described. All exercises must be demonstrated to a patient by a fully qualified physiotherapist. We cannot be held liable for the outcome of you undertaking any of the exercises / interventions shown here independently of direct supervision from the RNOH.

As a specialist orthopaedic hospital we recognise that our broad and often complex patient group needs an individualised rehabilitation approach. Our emphasis is on patient-specific rehabilitation, which encourages recognition of those patients who may progress slower than others. These rehabilitation guidelines are therefore ‘milestone driven’ and designed to provide an equitable rehabilitation service to all our patients. They will also limit unnecessary visits to the outpatient clinic at RNOHT by helping the patient and therapist to identify when specialist review is required.

3. Definitions

See section 6.

4. Duties and Responsibilities

Not applicable for this guideline.
5. Body of Policy

Team Contact Details:
Foot & Ankle Unit Consultants: Mr Singh, Mr Cullen, Mr Goldberg & Mr Welck

Foot and Ankle Unit:
- Tel: 0208 909 5125
- E-mail: footandankle@rnoh.nhs.uk
(Please note that if e-mailing from an e-mail address external to RNOH that this e-mail address is not secure so please do not include patient identifiable data)

Physiotherapy Department:
- Tel: 0208 909 5820
**Indications for surgery:**
Generally for Chronic Lateral Ankle Instability in patients who have failed to respond to conservative treatment.

**Possible complications:**
- Infection
- Bleeding
- Nerve damage
- Deep Vein Thrombosis
- Pulmonary Embolism
- Scarring
- Persistent / Recurrent pain
- Recurrent instability
- Talo-crural and sub-talar joint stiffness
- Numbness/Pin’s & Needles in the foot post-operatively

**Surgical techniques**
The technique(s) used will depend on the severity of the ankle instability and the quality of the lateral ligament complex.

Surgery tends to include one of the following:
- **Primary Anatomical (non-augmented) repair.** 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.
- **Secondary Extrinsic (augmented) repair.** The surgeon may use the peronei and re-route them, commonly through the lateral malleolus in order to gain greater stability. A Chrisman-Snook stabilisation is the commonly used technique at RNOH.

**Expected outcome:**
- Improved function / mobility
- Improved pain relief, with decreased analgesic requirements
- Improved ankle-hindfoot complex stability
- Decreased requirement for orthotics
- Return to full sporting activity
- Full recovery may take up to twelve months
**Pre-operatively**

The patient will be seen pre-operatively where able and with consent, the following will be assessed or discussed:

- Current functional levels
- General Health
- Social history and home set up
- Ability to mobilise, plus the provision of appropriate walking aids to be used post operatively
- Post-operative expectations
- Post-operative management explained, including the provision of bed exercises.

**Post-operatively**

Always check the operation notes, and the post-operative instructions. Discuss any deviation from routine guidelines with the team concerned. This is very important as the patient may have had a combination of techniques which may affect weight-bearing status and progressions.
INITIAL REHABILITATION PHASE: 0-4 Weeks

Goals:
- To be safely and independently mobile with appropriate walking aid, adhering to weight bearing status
- To be independent with home exercise programme as appropriate
- To understand self-management / monitoring, e.g. skin sensation, colour, swelling, temperature, circulation, elevation

Restrictions:
- Ensure that weight bearing restrictions are adhered to:
  - **Primary Anatomical Repair and Secondary Anatomical Repair:**
    - Back slab with foot in neutral dorsiflexion and maximum eversion for 2 weeks Non Weight Bearing (NWB).
    - Below Knee Plaster of Paris (BK POP) at 2 weeks. Full Weight Bearing (FWB).
    - POP removed at 4 weeks. Into ankle brace. FWB.
- No Range of Movement into Inversion for 6 weeks and care on Plantarflexion for 6 weeks to avoid stretching / stressing / damaging the repair site.
- Elevation
- If sedentary employment, may be able to return to work from 4 weeks post-operatively, as long as provisions to elevate leg, and no complications

Treatment:
- Likely to be in Walker Boot or POP
- **Pain-relief:** Ensure adequate analgesia
- **Elevation**
- **Exercises:** teach circulatory exercises
- **Education:** teach how to monitor sensation, colour, circulation, temperature, swelling, and advise what to do if concerned
- **Mobility:** ensure patient independent with transfers and mobility, including stairs if necessary

On discharge from ward:
- Independent and safe mobilising, including stairs if appropriate
- Independent with transfers
- Independent and safe with home exercise programme / monitoring

Milestones to progress to next phase:
- Out of POP. Team to refer to physiotherapy at 4 weeks from clinic.
- Progression from NWB to FWB phase. Team to refer to physiotherapy if required to review safety of mobility / use of walking aids
- Adequate analgesia
RECOVERY REHABILITATION PHASE: 4 weeks- 12 weeks

Goals:
- To be independently mobile unaided
- To achieve full range of movement
- Muscle strength: eversion grade 4 or 5 on Oxford scale
- Optimise normal movement

Restrictions:
- No Range of Movement into Inversion until week 6, and care on Plantarflexion, to avoid stretching / stressing / damaging the repair site. Care on inversion and plantarflexion until week 12
- Do not formally stretch ligament reconstruction into inversion or plantarflexion. It will naturally lengthen over a 6 month period
- Ensure adherence to weight bearing status
- To wear ankle brace until week 12, and longer if needed, until good stability and proprioceptive control
- No balance exercises until eversion grade 4 or 5 on Oxford scale achieved
- No impact exercise; i.e. jogging, aerobics

Treatment:
- Pain relief
- Advice / Education
- Posture advice / education
- Mobility: ensure safely and independently mobile. Progress off walking aids once able.
- Gait Re-education
- Exercises:
  - Passive range of movement (PROM) / Active assisted range of movement (AAROM) / Active range of movement (AROM) (See restrictions above)
  - Strengthening exercises as appropriate
  - Core stability work
  - Balance / proprioception work once appropriate
  - Stretches of tight structures as appropriate (e.g. Achilles Tendon), not of ligament reconstruction
  - Review lower limb biomechanics and kinetic chain. Address issues as appropriate
- Swelling Management
- Manual Therapy:
  - Soft tissue techniques as appropriate
  - Joint mobilisations as appropriate
- Monitor sensation, swelling, colour, temperature, circulation
- Orthotics if required via surgical team
- **Hydrotherapy** if appropriate
- **Pacing advice** as appropriate

**Milestones to progress to next phase:**
- Muscle strength: eversion grade 4 or 5 on Oxford scale
- Full range of movement
- Neutral foot position when weight bearing / mobilising

**Failure to meet milestones:**
- Refer back to team / Discuss with team
- Continue with outpatient physiotherapy if still progressing
INTERMEDIATE REHABILITATION PHASE: 12 weeks – 6 months

Goals:
- Independently mobile unaided out of brace
- Grade 4 or 5 muscle strength around ankle
- Optimise normal movement
- Return to low impact activity / sports

Restrictions:
- Do not formally stretch ligament reconstruction into inversion or plantarflexion. It will naturally lengthen over a 6 month period
- To wear ankle brace until week 12, and longer if needed, until good stability and proprioceptive control
- No balance exercises until eversion grade 4 or 5 on Oxford scale achieved

Treatment:
Further progression of the above treatment:
- **Pain relief**
- **Advice / Education**
- **Posture advice / education**
- **Mobility**: Progression of mobility and function
- **Wean from Brace**: Once appropriate when has good stability and proprioceptive control
- **Gait Re-education**
- **Exercises**:
  - Range of movement
  - Progression of strengthening exercises as appropriate including of evertors.
  - Core stability work
  - Balance / proprioception work including progression to use of wobble boards, trampet, gym ball, dyna-cushion as appropriate
  - Stretches of tight structures as appropriate (e.g. Achilles Tendon), **not of ligament reconstruction**
  - Review lower limb biomechanics and kinetic chain. Address issues as appropriate.
  - Sports specific rehabilitation
- **Swelling Management**
- **Manual Therapy**:
  - Soft tissue techniques as appropriate
  - Joint mobilisations as appropriate ensuring awareness of those which may be fused and therefore not appropriate to mobilise
- **Monitor** sensation, swelling, colour, temperature, circulation
- **Orthotics** if required via surgical team

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- Hydrotherapy if appropriate
- Pacing advice as appropriate

**Milestones to progress to next phase:**
- Independently mobile unaided out of brace
- Muscle strength: eversion grade 5 on Oxford scale
- Returned to low-impact activity / sports

**Failure to meet milestones:**
- Refer back to team / Discuss with team
- Continue with outpatient physiotherapy if still progressing
FINAL REHABILITATION PHASE: 6 months – 1 year

Goals:
- Return to high impact sports if set as patient goal
- Normal evertor activity
- Single leg stand 10 seconds, eyes open and closed
- To be able to do multiple single leg heel raise
- Establish long term maintenance programme

Treatment:
- **Mobility / function**: Progression of mobility and function, increasing dynamic control with specific training to functional goals
- **Gait Re-education**
- **Exercises**:
  - Progression of exercises including strengthening, balance and proprioception, core stability
  - Sports specific / functional exercises
- **Swelling Management**
- **Manual therapy**
  - Soft tissue techniques as appropriate
  - Joint mobilisations as appropriate ensuring awareness of those which may be fused and therefore not appropriate to mobilise
- **Pacing advice**

Milestones for discharge:
- Independently mobile unaided
- Return to normal functional level
- Grade 5 eversion strength on Oxford scale
- Good proprioceptive control on single leg stand on operated limb
- Appropriate patient-specific functional goals achieved
- Return to sports if set as patient goal
FAILURE TO PROGRESS

If a patient is failing to progress, then consider the following:

<table>
<thead>
<tr>
<th>POSSIBLE PROBLEM</th>
<th>ACTION</th>
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<tbody>
<tr>
<td>Swelling</td>
<td>Ensure elevating leg regularly</td>
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<tr>
<td></td>
<td>Use ice as appropriate if normal skin sensation and no contraindications</td>
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<td>Decrease amount of time on feet</td>
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<td></td>
<td>Pacing</td>
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<td></td>
<td>Use walking aids</td>
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<td></td>
<td>Circulatory exercises</td>
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<td></td>
<td>If decreases overnight, monitor closely</td>
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<td></td>
<td>If does not decrease overnight, refer back to surgical team or to GP</td>
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<tr>
<td>Pain</td>
<td>Decrease activity</td>
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<td></td>
<td>Ensure adequate analgesia</td>
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<td></td>
<td>Elevate regularly</td>
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<td>Decrease weight bearing and use walking aids as appropriate</td>
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<td></td>
<td>Pacing</td>
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<td></td>
<td>Modify exercise programme as appropriate</td>
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<td>If persists, refer back to surgical team or to GP</td>
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<tr>
<td>Breakdown of wound e.g. inflammation, bleeding, infection</td>
<td>Refer to surgical team or to GP</td>
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<td>Recurrent instability</td>
<td>Refer back to surgical team</td>
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<td>Ensure exercises not too advanced for patient</td>
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<td>Address core stability</td>
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<td></td>
<td>Liaise with podiatrist/orthotics re: footwear</td>
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<tr>
<td>Numbness/altered sensation</td>
<td>Review immediate post-operative status if possible</td>
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<td></td>
<td>Ensure swelling under control</td>
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<td></td>
<td>If new onset or increasing refer back to surgical team or GP</td>
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<td></td>
<td>If static, monitor closely, but inform surgical team and refer back if deteriorates or if concerned</td>
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</tbody>
</table>

6. Monitoring and the effectiveness of this policy

This guideline will be reviewed 5 yearly.
Appendix 1:  Glossary of Terms

Not applicable.
Appendix 2: Other linked trust policies and guidelines

Physiotherapy rehabilitation guidelines – Pes cavus correction
Physiotherapy rehabilitation guidelines – Anterior ankle arthroscopy
Physiotherapy rehabilitation guidelines – Total Ankle Replacement
Physiotherapy rehabilitation guidelines – Subtalar and hindfoot fusion
Physiotherapy rehabilitation guidelines – Hallux valgus deformity- Scarf Osteotomy
Physiotherapy rehabilitation guidelines – Tibialis Posterior Reconstruction
Physiotherapy rehabilitation guidelines – ACI of the ankle

All other RNOH Physiotherapy Rehabilitation Orthopaedic Post-operative Guidelines (Knee, Sarcoma Unit, Peripheral Nerve Injuries, Shoulder & Upper Limb, Spinal Surgery Unit)
Appendix 3: Extra sources of information and support

Summary of evidence for physiotherapy guidelines

A comprehensive literature search was carried out to identify research relating to rehabilitation for ankle instability and surgery for recurrent ankle instability and subsequent rehabilitation. After reviewing the articles and information, the physiotherapy guidelines were produced on the best available evidence.


This policy is available on request in large print and alternative languages. It is a manager’s responsibility to ensure employees are aware of these options.

* The following policies must be sent for review to the Local Counter Fraud Specialist:

- Fraud and Bribery
- Standard Financial Instructions
- Declaration of Interests
- Gifts and Hospitality
- Whistleblowing
- Disciplinary
- IT
- Anti-Money Laundering
- Managing Sickness Absence
- Secondary Employment
- Expenses
- Overpayment
- Financial Redress
- TOIL (Time off in Lieu)
- Code of Conduct/Standards of Business Conduct
- Data Protection
- Lone Worker
- Patient Transport
- Commercial Sponsorship
- Overseas Visitors
- Disclosure