

**THE ROBERT JONES AND AGNES HUNT ORTHOPAEDIC HOSPITAL FOUNDATION NHS TRUST**

**REHABILITATION *GUIDE* LATERAL LIGAMENT RECONSTRUCTION**

(This is not an exhaustive list of all rehabilitative techniques or therapies and this should not over rule any clinical judgement)


WEEK	MOBILITY	REHABILITATION EXERCISES	GOALS
<u>Week 0-2</u>	NWB in POP with appropriate walking aids	<ul style="list-style-type: none"> <li>○ Circulatory exercises</li> <li>○ SQ/IRQ/SLR/Glut/Hams exercises</li> <li>○ Upper body exercises</li> <li>○ Flexibility exercises</li> <li>○ Contralateral leg exercises</li> <li>○ AROM exercise for hip and knee</li> <li>○ Rest in elevation when not exercising or mobilising NWB</li> <li>○ <b>ROM restrictions –</b> <ul style="list-style-type: none"> <li>- <b>Avoid AROM/AAROM/PROM into inversion</b></li> <li>- <b>Avoid AROM/AAROM/PROM into plantarflexion</b></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Good understanding of post- operative rehabilitation.</li> <li>● No complications following surgery.</li> <li>● Elevation to control swelling</li> <li>● Control of pain with adequate pain relief</li> <li>● Education and advice on self-monitoring /management of sensation, skin colour, circulation, temperature.</li> <li>● Safe and independently mobile with appropriate walking aids and correct weight bearing status as advised on discharge from hospital.</li> <li>● Safe with transfers and stairs if necessary</li> </ul>

WEEK	MOBILITY	REHABILITATION EXERCISES	GOALS
<u>Week 2-6</u>  (reviewed in out patient clinic by a member of the F+A team for removal of stitches and removal of cast)	PWB in Aircast boot	<ul style="list-style-type: none"> <li>Start active NWB ROM exercises out of the boot</li> <li><b>ROM restrictions -</b> <ul style="list-style-type: none"> <li><b>-Limit AROM/AAROM/PROM into eversion to 10° in safe controlled manner</b></li> <li><b>-No inversion AROM/AAROM/PROM</b></li> <li><b>-Gentle and controlled AROM/AAROM/PROM into plantarflexion</b></li> <li><b>-Submaximal ankle isometrics in all directions excluding inversion</b></li> </ul> </li> <li>SQ/IRQ/SLR/Glut/Hams exercises</li> <li>Upper body exercises</li> <li>Flexibility exercises</li> <li>Contralateral leg exercises</li> <li>AROM exercise for hip and knee</li> <li>Rest in elevation when not exercising or mobilising NWB</li> <li>Increase weight bearing status</li> </ul>	<ul style="list-style-type: none"> <li>Control of swelling and pain</li> <li>Education and advice on self-monitoring /management of sensation, skin colour, circulation, temperature and swelling.</li> <li>Safe independent use of elbow crutches to encourage gradual increase in weight bearing status.</li> <li>Education on the use of the aircast boot to be worn at all times except for hygiene reasons or when exercising.</li> <li>To aim for FWB in Aircast boot by week 6</li> <li><b>Note: ROM is not equivalent to stretching</b></li> <li><b>Stretching should be avoided until week 12</b></li> </ul>

WEEK	MOBILITY	REHABILITATION EXERCISES	GOALS
<p><u>Week 6-12</u></p> <p>(review in out-patient clinic by a member of the F+A team 6/52 post op with X-ray)</p>	<p>Weight bearing as tolerated</p> <p>Normal footwear</p> <p>A60 splint recommended</p>	<ul style="list-style-type: none"> <li>○ Specific Exercises – <ul style="list-style-type: none"> <li>• ROM restrictions - Avoid inversion AROM/AAROM/PROM until week 9</li> <li>• Stretch tight structures as appropriate (eg gastrocnemius and soleus – care to be taken to keep STJt neutral to avoid excessive stretch on lateral ankle)</li> <li>• Commence proprioception exercise in controlled/predictable manner</li> <li>• CV exercise (no impact)</li> </ul> </li> <li>○ Manual Therapy <ul style="list-style-type: none"> <li>• Soft tissue techniques</li> <li>• Joint mobilisations adhering to identified precautions and avoiding the tensioning of the CFL and ATFL</li> </ul> </li> <li>• Swelling management</li> <li>• Gait re-education from aircast boot in to normal footwear.</li> <li>• Review lower limb biomechanics and kinetic chain</li> <li>• Gradual increase in time and distance weight bearing.</li> <li>• Cycling on static bike, rowing machine</li> <li>• Hydrotherapy for mobility, strength and gait re-education (consider wound healing)</li> <li>• ROM and strength exercises for other joints in kinetic chain as appropriate including core strengthening exercises, hip, knee, gluts/</li> </ul>	<ul style="list-style-type: none"> <li>• Independently mobile in aircast boot +/- walking aid to independently mobile in normal footwear +/- walking aid</li> <li>• Aircast boot can be removed when sitting at rest and at night from week 6</li> <li>• Swelling and pain control as appropriate</li> <li>• Education and advice on self-monitoring /management of sensation, skin colour, circulation, temperature and swelling.</li> <li>• Maintain/improve ankle ROM to achieve full active and passive ankle ROM avoiding excessive stretch especially inversion</li> <li>• Maintain Hip/ Knee ROM and strength</li> <li>• Prevent scar adherence.</li> <li>• Prevent joint stiffness.</li> </ul>

hams/ quads exercises.

- Pacing advice as appropriate

WEEK	MOBILITY	REHABILITATION EXERCISES	GOALS
<p><u>12 weeks – 4 months</u></p> <p>(review in out-patient clinic by F+A Consultant)</p>	<p>FWB</p> <p>Wean out of A60 splint as able</p>	<ul style="list-style-type: none"> <li>○ Specific Exercises               <ul style="list-style-type: none"> <li>• Progress weight bearing exercises (maintain neutral foot posture)</li> <li>• Progress to higher level balance and proprioception - unpredictable/uneven surface exercises</li> <li>• Double leg heel raises → Single leg heel raises</li> </ul> </li> <li>○ Manual Therapy               <ul style="list-style-type: none"> <li>• Soft tissue and Joint mobilisations as appropriate</li> </ul> </li> <li>○ Footwear advice –adjustable shoes to allow for any swelling and supportive. Avoid flip flops.</li> <li>○ Begin unilateral weight bearing exercises</li> <li>○ Strength exercises for foot and ankle and other muscle groups in kinetic chain as appropriate</li> <li>○ Manual Therapy – soft tissue techniques, joint mobilisations and scar massage if indicated.</li> <li>○ Stretch tight structures e.g. TA</li> <li>○ Hydrotherapy to progress strength and mobility including controlled predictable plyometric work</li> <li>○ Lower limb biomechanics/ kinetic chain assessment to address any findings including core stability progressions</li> <li>○ Orthotics if required</li> <li>○ Pacing advice</li> </ul>	<div style="text-align: right;">   <b>The Robert Jones and Agnes Hunt Orthopaedic Hospital</b>  <small>NHS Foundation Trust</small> </div> <ul style="list-style-type: none"> <li>• Promote independent gait</li> <li>• Optimise normal ankle and foot movement and restore gait pattern</li> <li>• Wear correct normal footwear</li> <li>• Achieve Full range of ankle movement</li> <li>• Achieve Grade 4 or 5 muscle strength around ankle</li> <li>• Optimise core strength and kinetic chain control</li> <li>• <b>Guidelines for progression to next phase</b> <ul style="list-style-type: none"> <li>- <b>Return of 90% function of the ankle compared with unaffected side measured with assessments that include but are not limited to</b></li> <li>- <b>Single leg hop for distance</b></li> <li>- <b>Triple hop for distance</b></li> <li>- <b>Star excursion balance test</b></li> <li>- <b>Y-Balance Test</b></li> </ul> </li> </ul>

WEEK	MOBILITY	REHABILITATION EXERCISES	GOALS
<u>From 4 months- 18 months</u>	FWB in normal footwear	<ul style="list-style-type: none"> <li>○ Gait re-education continued- progressions of mobility and function, increasing dynamic control with specific training towards functional goals with return to gentle low impact sports/ activities</li> <li>○ To achieve single leg heel raise</li> <li>○ Progression of ROM, strength, balance and kinetic chain exercises including increasing resistances/ loading (progress resistance/load as clinical judgement suggests, aiming for Grade 4-5 inversion strength)</li> <li>○ Progression of higher level plyometric work in more unpredictable patterns</li> <li>○ Manual Therapy – soft tissue techniques, joint mobilisations and scar massage if indicated.</li> <li>○ Agility exercises</li> <li>○ Sport specific drills/work related training</li> <li>○ Pacing advice</li> <li>○ Establish long term maintenance programme to prevent re-injury</li> </ul>	<ul style="list-style-type: none"> <li>● Promote independent gait- unaided or with walking aid if required long term</li> <li>● Good biomechanical and dynamic control.</li> <li>● Promote appropriate muscle strength/power and endurance</li> <li>● Achieve Grade 5 muscle strength around ankle.</li> <li>● Maintain/improve cardiovascular fitness</li> <li>● Return to gentle no impact sports/hobbies</li> <li>● <b>Running can be initiated when patient is able to perform straight plane jogging without pain</b></li> <li>● <b>Post activity soreness can be used as guideline for return to sport or recreational activity</b></li> </ul>