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Post-Operative Protocol: Lateral Ankle Stabilization (Brostrom-Gould)

PRE-OPERATIVE			
PRE-OP (2-4+ WEEKS)	RESTRICTIONS & PRECAUTIONS	PHYSIOTHERAPY INTERVENTIONS	REHABILITATION GOALS
	None	- Education RE: what to expect & what is expected of you post-operatively - Education & practice RE: use of gait aid, mobility, transfers, and stairs while maintaining post-op WB status - Education re: benefits of strengthening & cardio pre-operatively - Review immediate post-operative exercises	- Prepare for post-op rehabilitation - Procure equipment for post-op rehabilitation - "Even up" shoe - Gait aid - Walking boot - Safe ambulation, transfers and stairs with gait aid while maintaining post-op WB status
POST-OPERATIVE			
IMMEDIATE POST-OP (0-2 WEEKS)	RESTRICTIONS & PRECAUTIONS	PHYSIOTHERAPY INTERVENTIONS	REHABILITATION GOALS
	- NWB - Elevation of affected side in supine "Toes above the Nose" - Do not get foot wet	MOBILITY - AROM of hips and knees STRENGTH - Strengthening of hips, knees and core while maintaining NWB status OTHER - Education RE: use of gait aid, mobility, transfers, and stairs while maintaining NWB status	- Minimize loss of hip and knee ROM and strength - Minimize loss of core strength - Protect repair - Promote incision healing - Control pain and swelling - Safe ambulation, transfers and stairs with gait aid while maintaining NWB status
Criteria to Progress: <ul style="list-style-type: none"> - Follow-up appointment with surgeon - Staples/sutures removed - Adequate pain control (< 5/10) 			
INTERMEDIATE POST-OP (3-6 WEEKS)	RESTRICTIONS & PRECAUTIONS	PHYSIOTHERAPY INTERVENTIONS	REHABILITATION GOALS
	<i>*Continue with Physiotherapy Interventions from immediate post-op phase as appropriate</i>		
	- Protected WBAT in boot - Boot stays on for sleep - Avoid IV - Avoid end range PF *IV likely to occur	MOBILITY - 3-way ankle ROM *Avoid IV STRENGTH - 3-way submaximal ankle isometrics in neutral position	- Restore ankle ROM - Restore foot and ankle strength - Restore proprioception

AAROM – Active assisted range of motion
 CFL – Calcaneofibular ligament
 LE – Lower Extremity
 PROM – Passive Range of Motion

AROM – Active Range of Motion
 DF – Dorsiflexion
 LSI – Limb Symmetry Index
 ROM – Range of Motion

ASO – Ankle Stabilizing Orthosis
 EV – Eversion
 NWB – Non-Weight Bearing
 WBAT – Weight Bearing as Tolerated

ATFL – Anterior Talofibular Ligament
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INTERMEDIATE POST-OP (3-6 WEEKS)	<ul style="list-style-type: none"> - Avoid mobilizations to subtalar joint - Avoid post-exercise pain and swelling 	<ul style="list-style-type: none"> - Intrinsic foot strengthening <p>OTHER</p> <ul style="list-style-type: none"> - Proprioception (joint position sense) - Gait retraining in boot, gait aid + "Even up" shoe - Scar mobilization once incision is fully healed - Swimming/pool exercises once incision is fully healed - Therapeutic modalities as deemed appropriate by physiotherapist 	<ul style="list-style-type: none"> - Normalize gait as much as possible in with gait aid and "Even up" shoe - Increase scar mobility - Protect repair - Control pain and swelling - Independence with home exercise program to be performed daily
<p><i>Criteria to Progress:</i></p> <ul style="list-style-type: none"> - Adequate pain control (< 3/10) - Incision fully healed - Minimal swelling (< 1cm difference in figure 8 measurement) - Full DF, PF, and EV – IV to neutral only 			
LATE POST-OP (7-12 WEEKS)	<p>RESTRICTIONS & PRECAUTIONS</p> <ul style="list-style-type: none"> - Gradual WBAT - ASO brace/semi rigid stirrup when WB - May remove brace for sleep and NWB ROM exercises - Avoid stress to CFL and ATFL - Avoid post-exercise pain and swelling 	<p>PHYSIOTHERAPY INTERVENTIONS</p> <p>MOBILITY</p> <ul style="list-style-type: none"> - Gradually restore IV ROM - Gentle calf stretching - Foot and ankle mobilizations as appropriate <p>STRENGTH</p> <ul style="list-style-type: none"> - Isometric IV - 3-way ankle strengthening against resistance - Seated calf raises <p>OTHER</p> <ul style="list-style-type: none"> - Bipedal and single leg balance exercises - Stationary cycling and other aerobic machines as tolerated - Gait retraining 	<p>REHABILITATION GOALS</p> <ul style="list-style-type: none"> - Restore full ankle ROM - Restore LE strength - Restore balance - Restore cardiovascular endurance - Normalize gait pattern
<p><i>Criteria to Progress:</i></p> <ul style="list-style-type: none"> - No post-exercise pain and swelling - Symmetrical ankle ROM - Normalized gait pattern without gait aid - Symmetrical joint position sense (< 5 degree error) - > 90% LSI Y-balance test 			

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TRANSITIONAL (13-20 WEEKS)	RESTRICTIONS & PRECAUTIONS	PHYSIOTHERAPY INTERVENTIONS	REHABILITATION GOALS
<i>*Continue with Physiotherapy Interventions from late post-op phase as appropriate</i>			
	- Avoid post-exercise pain and swelling	MOBILITY - As per previous phase STRENGTH - Standing calf raise progressions - 4-way ankle strengthening against resistance - Single leg strengthening - Forward and lateral lunges OTHER - Progress balance and proprioception exercises - Beginner level plyometrics	- Progress LE strengthening - Normalize functional movements - Gradually wean out of brace
Criteria to Progress: <ul style="list-style-type: none"> - No post-exercise pain and swelling - No pain or swelling with 30 minutes of fast paced walking - > 90% LSI single hop test for distance and triple hop for distance - > 90% LSI single leg heel raise in both height and number of repetitions 			
RETURN TO SPORT (21+ WEEKS)	RESTRICTIONS & PRECAUTIONS	PHYSIOTHERAPY INTERVENTIONS	REHABILITATION GOALS
	- Wear a lace-up ankle support for athletics	- Interval walk/jog - Return to running program - Agility and plyometrics	- Initiate sport specific training - Progress to full return to sport

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Beginner Level Plyometrics

- 3x15 bipedal heel raises
 - o Move to rebounding bipedal heel raises as tolerated
- 3x15 single leg heel raises
 - o Move to rebounding single leg heel raises as tolerated
- Bipedal hopping in place
- Single leg hopping in place

Single Hop Test

- Jump as far as possible on a single leg, without losing balance and landing firmly
- The distance is measured from the start line to the heel of the landing leg

Standing Heel Raise Progression

- 25 repetitions needed to progress
 - o Bipedal standing heel raises with 25% body weight on affected side
 - o Bipedal standing heel raises with 50% body weight on affected side
 - o Bipedal standing heel raises with 75% body weight on affected side
 - o Bipedal standing heel raises with single leg lowering on affected side
 - o Single leg heel raises

Triple Hop Test

- Jump as far as possible on a single leg three consecutive times, without losing balance and landing firmly
- The distance is measured from the start line to the great toe of the landing leg

Y-Balance Test

- Patient stands on one leg while reaching out in 3 different directions with the contralateral leg (Directions are anterior, posteromedial, and posterolateral)
- 3 trials in each of the 3 directions for each foot are collected and the maximum reach in each direction is used for analysis

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