

Modified Brostrom Procedure - Operative Rehabilitation Guideline

This rehabilitation program is designed to return the individual to their activities as quickly and safely as possible. It is designed for rehabilitation following a Modified Brostrom procedure. Modifications to this guideline may be necessary dependent on physician specific instruction, degree of the tear, specific tissue healing timeline, chronicity of injury and other contributing impairments that need to be addressed. This evidence-based guideline is criterion-based; time frames and visits in each phase will vary depending on many factors including patient demographics, goals, and individual progress. This guideline is designed to progress the individual through rehabilitation to full sport/ activity participation. The therapist may modify the program appropriately depending on the individual's goals for activity.

This guideline is intended to provide the treating clinician a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post injury care, based on exam/treatment findings, individual progress, and/or the presence of concomitant injuries or complications. If the clinician should have questions regarding progressions, they should contact the referring physician.

General Guidelines/Precautions:

- Some patients may also have an internal brace procedure. If this is the case, guideline is accelerated and weight bearing is allowed at 2 weeks, self ROM at 4 weeks and formal physical therapy at 6 weeks.
- In the first 6 weeks, formal physical therapy does not occur unless there has been an internal brace procedure. Patients may be educated at their follow up physician appointments however in ROM to be completed at home. This will be per physician preference and occur during clinic appointments.

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PHASE	SUGGESTED INTERVENTIONS	GOALS/MILESTONES FOR PROGRESSION
<p>Phase I 0-6 Weeks</p>	<p>Specific Instructions:</p> <ul style="list-style-type: none"> Transfer & gait training with appropriate AD, NWB on surgical LE. Preoperative teaching to plan for their period of NWB and supports they may need per patient specific needs 	<p>Goals of Phase:</p> <ul style="list-style-type: none"> Patient will be independent in mobility necessary for safe d/c home from their surgical procedure. Patient may or may not need assistance depending on their level of support at home
<p>Phase II Strengthening 6-8 Weeks</p>	<p>Specific Instructions:</p> <ul style="list-style-type: none"> Transition from cast to walking boot. Gait training to normalize pattern, wean from AD as able. No ROM into inversion (passive, active or active-assist) No passive stretching into plantarflexion. The motion gained with normal walking will be adequate progression for plantarflexion ROM. <p>Exercise Examples:</p> <ul style="list-style-type: none"> Towel crunches NuStep Sub-maximal isometrics (all planes except inversion) Progress to strengthening with theraband for dorsiflexion and plantarflexion Proprioception with activities involving bilateral stance <p>Manual Therapy</p> <ul style="list-style-type: none"> Soft tissue mobilization - light <p>Manual therapy to metatarsals</p> <ul style="list-style-type: none"> Avoid mobilizing talocrural and subtalar joints <p>Modalities</p> <ul style="list-style-type: none"> For edema management and pain as indicated 	<p>Goals of Phase:</p> <ul style="list-style-type: none"> Transition to normalized gait pattern in walking boot Prevention of deconditioning Prevention of scar adhesions <p>Criteria to Advance to Next Phase:</p> <ul style="list-style-type: none"> Normalized gait without pain with involved ankle protected in ankle brace Pain free eversion against gravity
<p>Phase III Advanced Strengthening 8-12 Weeks</p>	<p>Specific Instructions:</p> <ul style="list-style-type: none"> Begin inversion AROM Ambulation can progress to a normal shoe with ankle brace and to no AD if not already there; looking for normal gait pattern <p>Manual Therapy:</p> <ul style="list-style-type: none"> Stretching gastrocnemius, soleus and tibialis posterior Soft tissue mobilizations <p>Exercise Examples:</p> <ul style="list-style-type: none"> Add inversion and eversion AROM, progress to strengthening with bands Strengthening can now be closed chain Advance proprioception and balance to single leg activities, varied surfaces 	<p>Goals of Phase:</p> <ul style="list-style-type: none"> Full AROM by 12 weeks No edema post activity Normalized, pain free gait on level ground, stairs and inconsistent surfaces with and without ankle support Strength within 85% of non-operative limb No apprehension with high level activity and direction changes No apprehension with sport specific drills and activities
<p>Phase IV 13+ Weeks</p>	<p>Specific Instructions:</p> <ul style="list-style-type: none"> Increase exercise intensity of cardio (bike, elliptical) to prepare for jogging. Utilize Sanford Running program to progress. Plyometric program - begin in AP plane and progress to lateral movements & diagonals Complete sport specific functional training 	<p>Goals of Phase:</p> <ul style="list-style-type: none"> No apprehension with high level activity and direction changes No apprehension with sport specific drills and activities

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****NOTE:** Progression of functional activities should be performed only as pain and proper biomechanics allow. Emphasis should be on proper shock absorption and control of dynamic valgus stress at knee (hip medial rotation with knee valgus) with each task performed. Progression to single limb based tasks (deceleration, hopping, and cutting) should not be performed until double limb activities have been mastered. Activities requiring dynamic control of rotational stress at the knee (cutting, multiple plane lunges/jumps/hops) should not be performed until sagittal and frontal plane control has been mastered. Return to sport may occur at any time during this stage as cleared by physician and as progress and goal achievement occurs.

REFERENCES:

1. Neely, Greg. Rehabilitation Protocol Modified Brostrom Procedure
2. Jae-Sung Yoo and Eun-Ah Yang. Clinical results of an arthroscopic modified Brostrom operation with and without internal brace. *Journal of Orthop Traumatol.* 2016 Dec; 17(4): 353-360
3. Brigham & Women's Hospital, Department of Rehabilitation Services, Modified Brostrom-Gould Repair for Chronic Lateral Ankle Instability