

Ankle Sprain 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 Ankle Sprain. Modifications to this guideline may be necessary dependent on physician specific instruction, specific tissue healing timeline, chronicity of injury, and other contributing impairments that need to be addressed. This evidence-based Ankle Sprain 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 following Ankle Sprain.

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:

- General healing timeline is variable but can expect 2-6 week time frame on average
- During the acute phase, avoid activities that stress the ligaments on the lateral or medial surface of the foot (depending on MOI)
 - Laterally (most commonly injured): Anterior Talofibular Ligament, Posterior Talofibular Ligament, Calcaneofibular ligament
 - Medially (less commonly injured): Superficial and Deep Deltoid Ligaments
 - Syndesmotic: See "High Ankle Sprain" rehabilitation guideline
- General ROM/strength present at the beginning of rehabilitation is highly variable
- Patient is at risk for recurrent ankle sprains and development of chronic ankle instability
- Rule out fracture and/or need for further imaging through utilization of the Ottawa Ankle Rules (exclude children under 6 or pregnant women)
 - Bone tenderness along the distal 6 cm of the posterior edge of the tibia or tip of the medial malleolus
 - Bone tenderness along the distal 6 cm of the posterior edge of the fibula or tip of the lateral malleolus
 - Bone tenderness at the base of the fifth metatarsal and/or navicular
 - An inability to bear weight both immediately and in the emergency department for four steps
- Avoid activities which increase pain and/or swelling

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PHASE	SUGGESTED INTERVENTIONS	GOALS/MILESTONES FOR PROGRESSION
<p>Phase I Protection Phase</p> <p>0-2 Weeks</p> <p>0-4 Expected Visits</p>	<p>Discuss:</p> <ul style="list-style-type: none"> Anatomy, existing pathology, rehab schedule, and expected progressions. <p>Specific Instructions:</p> <ul style="list-style-type: none"> Do not perform activities that increase pain and/or swelling <p>Suggested Treatments:</p> <ul style="list-style-type: none"> Modalities as indicated: <ul style="list-style-type: none"> Ice, compression, elevation, electrical stimulation ROM: <ul style="list-style-type: none"> PROM, AAROM, AROM within pain free range Protection: <ul style="list-style-type: none"> Protect ligaments from further trauma through use of taping, splinting, orthotics, braces, or casts in severe instances based on clinical judgement and patient presentation WBAT: <ul style="list-style-type: none"> Utilize assistive device as deemed appropriate for normalization of gait pattern <p>Exercise Examples:</p> <ul style="list-style-type: none"> Ankle alphabet PROM in all ankle planes Gastroc/soleus stretching Gait training with various AD's progressing to no AD based on pain level Modalities for pain relief and edema control <p>Other Activities:</p> <ul style="list-style-type: none"> May perform core, hip, and knee strengthening exercises for proximal stabilization if deemed appropriate 	<p>Goals of Phase:</p> <ul style="list-style-type: none"> Diminish pain and inflammation Improve flexibility and range of motion <p>Criteria to Advance to Next Phase:</p> <ul style="list-style-type: none"> Normal gait pattern without use of assistive device Edema reduction with comparable circumferential measurements +/- 1-3 cm to opposite extremity
<p>Phase II Progressive ROM and Early Strengthening</p> <p>1-3 Weeks</p> <p>2-6 Expected Visits</p>	<p>Specific Instructions:</p> <ul style="list-style-type: none"> Do not perform exercises that increase pain and/or swelling <p>Suggested Treatments:</p> <ul style="list-style-type: none"> Modalities as indicated: <ul style="list-style-type: none"> Edema and pain controlling treatments ROM: <ul style="list-style-type: none"> AROM Strengthening: <ul style="list-style-type: none"> Isometric, eccentric, or concentric exercises in pain free range with/without weight bearing as deemed appropriate Manual therapy: <ul style="list-style-type: none"> Talocrural and subtalar joint glides for improved DF/PF and general ankle mobility <p>Exercise Examples:</p> <ul style="list-style-type: none"> DF/PF/Inv/Ev theraband exercises in pain free range Foot intrinsic strengthening Ankle Isometrics Squats stable surface Lunges stable surface Calf Raises Toe Raises Single leg stance with stable/unstable surface and eyes open/eyes closed BAPS board <ul style="list-style-type: none"> Utilize seated if not able to tolerate standing Rocker board Treadmill walking Biking Pool Program <p>Other Activities:</p> <ul style="list-style-type: none"> Progress core, hip, and knee strengthening exercises with focus on stabilization if deemed appropriate 	<p>Goals of Phase:</p> <ul style="list-style-type: none"> Improve muscular strength and endurance Progress to full active and passive ROM Improve total body proprioception and control <p>Criteria to Advance to Next Phase:</p> <ul style="list-style-type: none"> ROM within 90% of unaffected limb No increase in edema or pain following exercise program

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<p>Phase III Advanced Strengthening and Neuromuscular Control</p> <p>2-6 Weeks</p> <p>4-16 Expected Visits</p>	<p>Specific Instructions:</p> <ul style="list-style-type: none"> Continue with previous exercise program; ensure core/hip stability; symmetrical strength of 5/5 should be present in both hip abductors and extensors Modalities only as needed If no sport to return to, consider option of independent program after completion of this phase <p>Suggested Treatments:</p> <ul style="list-style-type: none"> Manual Therapy: <ul style="list-style-type: none"> Soft tissue work, talocrural and subtalar glides for improved ankle mobility Exercises: <ul style="list-style-type: none"> Strengthening, proprioceptive, and beginner agility/power exercises <p>Exercise Examples:</p> <ul style="list-style-type: none"> Standing BAPs board Treadmill running with varying inclines Resisted side stepping BOSU squats BOSU lunges Front/side plank with progressions Bridging with progressions Double leg hopping forward, backward, sideways Dry land jogging/running <p>Other Activities:</p> <ul style="list-style-type: none"> Begin practice with sport activity in controlled environment with additional support as deemed necessary (ex. Taping, braces) 	<p>Goals of Phase:</p> <ul style="list-style-type: none"> Return to strength training with appropriate modifications Improve muscular power, speed, agility, and neuromuscular control Improve proper body mechanics and movement patterns Increase overall proximal stability <p>Criteria to Advance to the Next Phase:</p> <ul style="list-style-type: none"> Ankle strength within 90% of uninvolved ankle with pain free ankle eversion on resisted isometric Able to perform light running with no gait abnormalities Able to SLS for 1 minute without loss of balance on involved limb
<p>Phase IV Return to Sport</p> <p>3-8 Weeks</p> <p>6-12 Expected Visits</p>	<p>Specific Instructions:</p> <ul style="list-style-type: none"> Continue previous exercise program <p>Suggested Treatments:</p> <ul style="list-style-type: none"> Modalities: <ul style="list-style-type: none"> Relief of exercise related muscle soreness through e-stim and cryotherapy Manual Therapy: <ul style="list-style-type: none"> Soft tissue work, talocrural and subtalar glides Exercises: <ul style="list-style-type: none"> High level strengthening, power, and agility based exercises <p>Exercise Examples:</p> <ul style="list-style-type: none"> Single leg hopping forward, backward, sideways Single leg and double leg dot drills with various patterns Agility ladder exercises Box jumps Depth jumps over obstacle/hurdle Single leg bounding Unstable surface landing strategies Sprinting, shuffling, backwards running Sport specific agility/plyometric training <p>Other Activities:</p> <ul style="list-style-type: none"> Return to sport practice in more unpredictable environment in a graded manner with additional support as deemed necessary (ex. Taping, braces) 	<p>Goals of Phase:</p> <ul style="list-style-type: none"> Progression of agility and strengthening exercises to more closely replicate movements performed during sport activity Development of individualized maintenance program in preparation for discontinuation of formal rehabilitation Eliminate possible fear of movement and/or re-injury through use of graded introduction of higher level agility and power exercises <p>Criteria for Return to Sport:</p> <ul style="list-style-type: none"> Demonstration of safe movement patterns and neuromuscular control with higher level agility exercises Pain free completion of exercise program with no observed episodes of instability

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