

Standard Multi-ligament Reconstruction Rehabilitation Protocol

Phase	Goals	Precautions/Restrictions	Treatment
Days 0-10	<ul style="list-style-type: none"> Protect surgical site Decrease pain and inflammation PRICE principles 	<ul style="list-style-type: none"> See specific tissue rehabilitation restriction appendix. Post-op brace on full time. Utilize shower bag to keep limb completely dry. 	<ul style="list-style-type: none"> Touch weight bearing with brace locked in extension using crutches. Cryotherapy: 5-7times per day
Day 10 to week 6	<ul style="list-style-type: none"> Protect surgical site Decrease pain and inflammation PRICE principles Minimize muscle atrophy 	<ul style="list-style-type: none"> Post-op brace utilized during all rehabilitation exercises, but can be unlocked. Brace removed for showers only. 	<ul style="list-style-type: none"> Partial weight bearing (25% body weight) with brace locked in extension using crutches. Quadriceps sets, gluteal sets, patellar mobilizations, ankle pumps, straight leg raise (flexion). Multi-planar hip strengthening with specific tissue injury restrictions. Cryotherapy: 5-7times per day Initial visit: FOTO, LEFS
Weeks 6-16	<ul style="list-style-type: none"> Maintain integrity of repair. Establish normal walking mechanics. Obtain full knee range of motion. Build core, hip and lower extremity muscle strength and endurance. 	<ul style="list-style-type: none"> Custom brace should be used 24/7 including rehab. If patient does not have 90 degrees of knee flexion, contact surgical team. No isolated hamstrings strengthening until 16 weeks post-op. If combined PCL and PLC no isolated hamstrings strengthening until 24 weeks post-op. 	<ul style="list-style-type: none"> Begin weight bearing progression by 25% each week crutches and brace unlocked. Discontinue crutches when able to walk without pain or limp. Positional restrictions are removed for range of motion exercises. Core, hip and lower extremity strengthening exercises appropriate for current weight bearing status. Progress proprioceptive exercises when able to bear full weight. PRICE principles as needed. Week 6 and 12: FOTO, LEFS
Weeks 16-36	<ul style="list-style-type: none"> Maintain integrity of repair. Develop lower extremity endurance, strength, and power. 	<ul style="list-style-type: none"> Avoid cutting, running, pivoting and jumping. Custom brace used 24/7. 	<ul style="list-style-type: none"> Progress core, hip and lower extremity strengthening exercises. Multiple plane proprioceptive exercises. Begin to challenge cardiovascular system with sports specific modifications. Begin isolated hamstrings strengthening. If combined PCL and PLC delay until 24 weeks. Week 24: FOTO, LEFS
Weeks 36-48	<ul style="list-style-type: none"> Initiate return to sport progression 90% LSI on isokinetic strength and functional testing. 	<ul style="list-style-type: none"> Custom brace used 24/7. Return to sport/work based on MD approval. 	<ul style="list-style-type: none"> Low level sport specific activity. Isokinetic testing knee flexion/extension at 60, 180, and 300 degrees/second Single leg hop, Single leg triple hop, and cross-over single leg hop testing Week 36 and anticipated last visit: FOTO, LEFS

This protocol is not meant to be prescriptive but a recommendation to guide the rehabilitation process. Each patient's progress may vary based on specifics of their injury and procedure.

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Specific Tissue Restrictions

Tissue	Rehabilitation Modifications	
ACL	<ul style="list-style-type: none"> No modifications to rehab. 	
PCL	<ul style="list-style-type: none"> Protect posterior translation of tibia for six weeks. Avoid gravity causing posterior glide (e.g. straight leg raise without a brace) 	<ul style="list-style-type: none"> No active hamstrings contractions for 8 weeks. Prone straight leg raise (extension) may only be performed with brace locked in extension and no resistance for 8 weeks. Perform prone passive flexion range of motion with support of posterior tibia x 6 weeks.
PLC	<ul style="list-style-type: none"> Follow PCL rehab modifications for posterior translation of the tibia. Avoid hamstrings contractions for 8 weeks. Avoid rotation and varus stress for a minimum of six weeks. 	<ul style="list-style-type: none"> Side-lying abduction straight leg raises may only be performed with brace locked in extension and no resistance for 8 weeks.
MCL	<ul style="list-style-type: none"> Perform range of motion exercises with foot internally rotated. Avoid excessive valgus forces to the knee joint. 	<ul style="list-style-type: none"> Protect hyperextension if the capsule is involved for a minimum of 6 weeks. Side-lying adduction may only be performed with brace locked in extension and no resistance for a minimum of 8 weeks.
Meniscus Root/Body Repair	<ul style="list-style-type: none"> Focus on form and control 	

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