Standard Multi-ligament Reconstruction Rehabilitation Protocol

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This protocol provides general guidelines for rehabilitation following standard multi-ligament reconstruction. Progression should be individualized based on the procedure, healing, and patient response, with modifications as directed by the surgeon.

Phase	Goals	Precautions / Restrictions	Treatment
Days 0-10	• **Protect surgical site** • Decrease pain and inflammation • PRICE principles	• See specific tissue rehabilitation restriction appendix. • Post-op brace on full time. Utilize shower bag to keep limb completely dry.	**General guidelines** • Touch weight bearing with brace locked in extension using crutches. • Cryotherapy: 5-7times per day
Day 10 to week 6	• **Protect surgical site** • Decrease pain and inflammation • PRICE principles • Minimize muscle atrophy	• Post-op brace utilized during all rehabilitation exercises, but can be unlocked. • Brace removed for showers only.	**General guidelines** • 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	• **Maintain integrity of repair.** • Establish **normal walking mechanics.** • Obtain full knee range of motion. • Build core, hip and lower extremity muscle strength and endurance.	• 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.**	**General guidelines** • 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	• **Maintain integrity of repair.** • Develop lower extremity endurance, strength, and power.	• **Avoid cutting, running, pivoting and jumping.** • Custom brace used 24/7.	**General guidelines** • 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.

Phase	Goals	Precautions / Restrictions	Treatment
			Week 24 ● FOTO, LEFS
Weeks 36-48	● Initiate return to sport progression ● **90%** LSI on isokinetic strength and functional testing.	● Custom brace used 24/7. ● Return to sport/work based on MD approval.	**General guidelines** ● 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

Specific Tissue Restrictions

ACL

- No modifications to rehab.

PCL

- Protect posterior translation of tibia for six weeks.
- Avoid gravity causing posterior glide (e.g. straight leg raise without a brace)
- 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

- 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.
- Side-lying abduction straight leg raises may only be performed with brace locked in extension and no resistance for 8 weeks.

MCL

- Perform range of motion exercises with foot internally rotated.
- Avoid excessive valgus forces to the knee joint.
- 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

- Focus on form and control