



Indiana University Health

IU Health Physicians Orthopedics & Sports Medicine

MENISCAL ROOT REPAIR

PHYSICAL THERAPY PROTOCOL (LaPrade Protocol)

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Patient Name: _____ **Date of Surgery:** _____

___ **Evaluate and Treat** ___ **Provide patient with home program**

Frequency: _____ x/week x _____ weeks



TABLE 1

PROTECTION PHASE REHABILITATION GUIDELINES

Time Frame	Precautions	Goals/Criteria to Advance	Interventions
Weeks 0-6	NWB PROM: 0°-90° for 2 weeks Progress ROM as tolerated thereafter No isolated hamstrings activation	Protect surgical repair Resolve joint effusion to trace amount Restore full ROM	ROM Patella, patellar tendon, and quadriceps tendon mobilizations Quadriceps activation focusing on terminal extension Quadriceps stretching in Thomas stretch position (within ROM restrictions) Gastrocnemius stretching Hip and core strengthening Core and upper-body strengthening as indicated and appropriate

Abbreviations: NWB, non-weight bearing; PROM, passive range of motion; ROM, range of motion.

TABLE 2

WEIGHT-BEARING TOLERANCE PHASE REHABILITATION GUIDELINES

Time Frame	Precautions	Goals/Criteria to Advance	Interventions
Weeks 7-9	Gradual progression of WB Knee flexion <40° with CKC activity CKC activity limited to WB status	Achieve full WB Normalize gait pattern on flat ground Maintain trace to no joint effusion Tolerate 25 minutes of standing and walking activity	Progressive balance training consistent with WB status Calf raises Leg presses Double-leg squats once full WB with ambulation Core and upper-body strengthening as indicated and appropriate Stationary bike without resistance

Abbreviations: CKC, closed kinetic chain; WB, weight bearing.



TABLE 4

ENDURANCE PHASE REHABILITATION GUIDELINES

Time Frame	Precautions	Goals/Criteria to Advance	Interventions*
Weeks 10-15	Knee flexion <70° with CKC activity	90-second hold in single-leg squat position at 45° of knee flexion	Double-leg squats Static lunges Dynamic lunges Stationary bike with resistance

Abbreviation: CKC, closed kinetic chain.

**Exercise parameters: 3 sets, 15 to 25 repetitions, 30- to 60-second rest periods, 3 to 4 times per week.^{49,52}*

TABLE 5

STRENGTH PHASE REHABILITATION GUIDELINES

Time Frame	Precautions	Goals/Criteria to Advance	Interventions*
Weeks 16-21	Until week 20, maximum of 90° of knee flexion with CKC activity	Quadriceps index >80% Anterior reach on Y Balance Test, <8-cm difference compared to uninjured side	Single-leg squats Single-leg deadlifts Step-ups/step-downs Multidirectional lunges Stationary bike with resistance

Abbreviation: CKC, closed kinetic chain.

**Exercise parameters: 3 sets, 8 to 12 repetitions, 2- to 3-minute rest periods, 3 times per week.^{49,52}*

TABLE 6

RUNNING PROGRESSION

Week	Walk-Run Protocol
1	4-minute walk, 1-minute run for 15-20 minutes
2	3-minute walk, 2-minute run for 20 minutes
3	2-minute walk, 3-minute run for 20 minutes
4	1-minute walk, 4-minute run for 20 minutes



TABLE 8

**PLYOMETRICS AND RETURN-TO-SPORT
REHABILITATION GUIDELINES**

Time Frame	Precautions	Goals/Criteria to Advance	Interventions
22 or more weeks	No deep squatting for 6 months	Pass Vail Sport Test, >46/54 ²⁰ Anterior reach on Y Balance Test, <5-cm difference ⁵⁰ Y Balance Test composite score, >94% ⁵⁰ Quadriceps index, >90% ⁶¹ Modified agility T test, >90% of uninvolved ⁴¹ Single-leg hop series, >90% ¹	Double-leg and single-leg jump training Ladder drill agility Lateral hops with and without resistance Progressive cutting activities

**Exercises and parameters should be specific to desired activities.*

**Single hop for distance, 6-m timed hop, triple hop for distance, crossover hop for distance.^{43,53}*

Adapted from Robert F. LaPrade, MD (TRIA Orthopaedics)

By signing this referral, I certify that I have examined this patient and physical therapy is medically necessary. This patient ___ would ___ would not benefit from social services.

Date: _____

Bryan M. Saltzman, MD