



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

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

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
<i>Abbreviation: CKC, closed kinetic chain.</i> <i>*Exercise parameters: 3 sets, 15 to 25 repetitions, 30- to 60-second rest periods, 3 to 4 times per week.^{49,52}</i>			

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
<i>Abbreviation: CKC, closed kinetic chain.</i> <i>*Exercise parameters: 3 sets, 8 to 12 repetitions, 2- to 3-minute rest periods, 3 times per week.^{49,52}</i>			

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% [†]	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