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REHABILITATION GUIDELINES FOR PCL RECONSTRUCTION

PHASE I (0-6 WEEKS)

DATES:

Appointments	<p>MD appointment week 1</p> <p>Begin physical therapy 3 days post op</p>
Rehabilitation Goals	<ul style="list-style-type: none"> • Protect healing bony and soft tissue structures. • Minimize the effects of immobilization: decrease swelling, promote quad strength, avoid blood pooling in veins • Early protected range of motion (protect against posterior tibial sagging). • Strength progression of quadriceps, hip, and calf with an emphasis on limiting patellofemoral joint compression and posterior tibial translation. • Patient education for a clear understanding of limitations and expectations of the rehabilitation process, and need for supporting proximal tibia/preventing sag.
Precautions	<ul style="list-style-type: none"> • Knee flexion 0-90 degrees x 6 weeks • Brace locked in extension x 2 weeks when weight bearing • Brace un-locked 2-6 weeks for gait in controlled setting at home or in PT • No open chain hamstring work x 6 weeks • PCL with posterolateral corner or LCL repair TTWB x 6 weeks • Brace on at all times even when sleeping x 6 weeks
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • Quad sets, patellar mobs, heel slides • Gastrocnemius/soleus stretch • SLR w/ brace in full extension until quad strength prevents extension lag • Side-lying hip/core: hip abduction • Ankle Pumps • Focus on prone based exercises • Hamstrings avoidance x 6 weeks post-op
Progression Criteria	<ul style="list-style-type: none"> • Criteria for progression to Phase II: • Good quadriceps control (good quad set, no lag with SLR). • 90 degrees knee flexion. • Full knee extension. • No signs of active inflammation



PHASE II (6-12 WEEKS)

DATES:

Appointments	Continue physical therapy (2-3x/week)
Rehabilitation Goals	<ul style="list-style-type: none"> • Increase ROM (particularly flexion). • Normalize gait with crutches • Continue to improve quadriceps strength and hamstring flexibility.
Precautions	<ul style="list-style-type: none"> • 6-8 weeks: Brace unlocked for all activities. • 8 weeks: Brace discontinued, as allowed by surgeon. • No squats > 90 degrees
Suggested Therapeutic Exercises	<p>6-8 weeks</p> <ul style="list-style-type: none"> • Wall slides/mini-squats (0-45 degrees). • Leg press (0-60 degrees). • Standing 4-way hip exercise for flexion, extension, abduction, adduction (from neutral, knee fully extended). <p>8-12 weeks</p> <ul style="list-style-type: none"> • Stationary bike • Closed kinetic chain terminal knee extension using resisted band or weight machine. Note: important to place point of resistance to minimize tibial displacement. • Balance and proprioception exercises. • Seated calf raises. • Leg press and squats (0-90 degrees).
Cardiovascular Exercises	<p>8-12 weeks</p> <ul style="list-style-type: none"> • Stairmaster. • Elliptical trainer • Stationary bike
Progression Criteria	<ul style="list-style-type: none"> • Full, pain free ROM. (Note: it is not unusual for flexion to be lacking 10-15 degrees for up to 5 months post-op.) • Normal gait without brace or crutches. • Good to normal quadriceps control. • No patellofemoral complaints. • Clearance by surgeon to begin more concentrated closed kinetic chain progression.

PHASE III (12-16 WEEKS)

DATES:



Appointments	Continue physical therapy (2-3x/week)
Rehabilitation Goals	<ul style="list-style-type: none"> • Restore any residual loss of motion that may prevent functional progression. • Progress functionally and prevent patellofemoral irritation. • Improve functional strength and proprioception using close kinetic chain exercises. • Continue to maintain quadriceps strength and hamstring flexibility • Normal gait without brace or crutches
Precautions	Sports Brace: Medicompany M4S PCL dynamic knee orthosis or Rebound PCL brace
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • Advance closed chain strengthening-Leg press limited to 0-90 degrees, Hip machine. • Progress proprioception activities • Jogging in pool • Hamstring curls in standing to 45 degrees
Progression Criteria	<ul style="list-style-type: none"> • Clearance by surgeon to resume full or modified/partial activity (i.e. return to work, recreational, or athletic activity) • No significant patellofemoral or soft tissue irritation. • Presence of necessary joint ROM, muscle strength and endurance, and proprioception to safely return to athletic participation. • Full, pain free ROM. • Satisfactory clinical examination. • Quadriceps strength 85% of uninvolved leg. • Functional testing 85% of uninvolved leg. <p>No change in laxity testing.</p>

PHASE IV (16-24 WEEKS)

DATES:

Appointments	Continue physical therapy (<i>Independent Gym or 1x/month</i>)
Rehabilitation Goals	<ul style="list-style-type: none"> • Safe and gradual return to work or athletic participation. • This may involve sport-specific training, work hardening, or job restructuring as needed. • Patient demonstrates a clear understanding of their possible limitations. • Maintenance of strength, endurance, and function.
Precautions	<ul style="list-style-type: none"> • Sports Brace
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • 16 wks: Begin jumping • 20 wks: Advance to sprinting • Backward running, cutting/pivoting/changing direction



- Leg press and hamstring curl machine, wall slides, Roman Chair, step ups, squats
- Initiate plyometric program and sport-specific drills
- Work hardening program as indicated by physical therapist and/or surgeon recommendation. Patient will need a referral from surgeon to begin work hardening.

References: Brotzman SB, Wilk KE, Clinical Orthopaedic Rehabilitation. Philadelphia, PA: Mosby Inc; 2003: 300-302.

Sports Medicine



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