Physical Therapy ACL Reconstruction

Post-Operative Therapy Plan

Primary Surgery: ACL Reconstruction

____ Autograft: hamstring / patellar tendon
____ Allograft
____ Hybrid (augmented autograft)

Secondary Procedures: None

Date of Surgery: _____

Surgeon: _____

Date of ACL Injury: _____

WB Precautions: Crutch ambulating WBAT until cleared by PT to discontinue crutches (should be weight bearing as soon as block wears off)

Brace: No brace

Next Follow Up with MD/PA: _____

Last Reviewed: 1/2019; Current to: 1/2020

Early Rehab Recommendations per AAOS Guidelines (2015)

- Unrestricted and immediate range of motion unless specifically requested by surgeon
- Full weight bearing immediately
- No postoperative bracing
- Open chain exercises okay at 6 weeks, but limit last 20-30 degrees initially
- Early closed chain exercises encouraged

Other Recommendation: use NMES (Russian estim) for quad contraction first 6-8 weeks

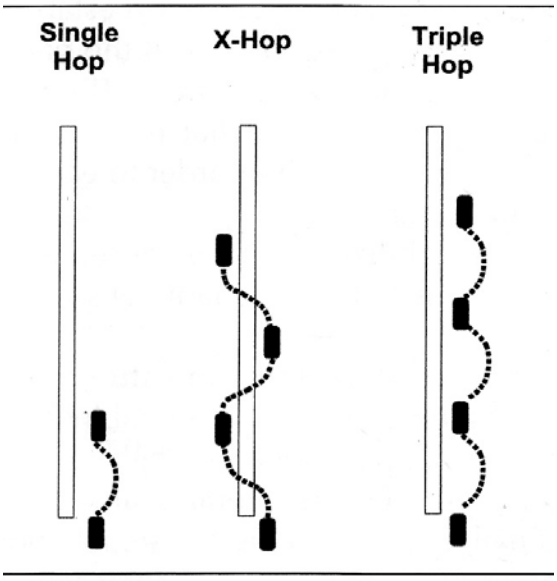
Functional Strength Testing (Start week 3-4): For functional strength testing use the Lower Quarter Y Balance Test. This test compares side to side reaching in 3 different directions and also compares the reaches to limb length. Passing the LQYBT is not expected until 4-5 months post op but can be used as an exercise to improve strength, proprioception, mobility and coordination starting at week 3 to 4. Lower Quarter Y Balance Test Score Sheet

Plyometric progression to include Running (Week 8 to Discharge)

- No running until double and single leg hopping are shown to be tolerated well and with good form

Double leg hop cycle x 2 weeks
Single leg hop cycle x 2 weeks
Begin running progression
Teach jump prep (countermovement) drills
Higher intensity plyometric exercises (incorporate practice of hop testing)
Implementation of sport specific multi-directional and reactive drills

Return to Play (RTP)/Discharge Time Lines and Criteria:



***-Psychological testing:* ACL-RSI administered at 3, 6 months, and at discharge and 12 month follow up**

-Functional Testing at 6 months* *(discharge potential if non-athlete)

- **FMS> 14 with no 0's or 1's**
- **Lower Quarter Y Balance Test:**
  - **< 5 cm asymmetry in all 3 reaches**
  - **> 94% Composite Score**
- **Hop Testing: ≥ 95% Limb Symmetry Index**
  - **Single Hop for distance**
  - **Triple Hop for distance**
  - **Triple Crossover Hop for distance**
- **Closed Kinetic Chain Dorsiflexion**
  - **>35 degrees bilaterally**
  - **< 5 degrees of asymmetry**

-Return to Sport Testing for Athletes (8-12 months)

- **Meet above standards in fatigued state. Recommend Borg scale rate of perceived exertion at 15. Fatigue patient in movements similar to sports demands**

Other functional testing can be included: tuck jump assessment, isokinetic testing, single leg squat, etc.

Ideally patients should achieve the following milestones before advancing to the next stage.

Please print below chart and use check list as progress note for MD.

Last Reviewed: 1/2019; Current to: 1/2020

	Intervention	Milestones
Week 1	Ice/modalities to decrease pain and inflammation. Compression and elevation for swelling. Patellar mobilization. Gait training. Bike ASAP, unless otherwise noted. NMES highly encouraged.	___Full hyperextension ___AROM/PROM= 0-90+ ___Active quadriceps contraction
Weeks 2	Bilateral CKC exercises (mini-squats/proprio) & step ups in pain free range. Portal/incisional mobilization as needed. Prioritize activities to get full hyperextension. Aquatic therapy/walk/job when wounds heal (start at chest level)	___ ROM: Full hyperextension to 110 flexion ___ Walking without crutches, no limp ___ Walking with full use of TKE ___ No quad lag with SLR in full hyperextension
Week 3-5	Progress bike, initiate elliptical, progress strengthening & proprioception to unilateral as tolerated.	___ Flexion motion continually progressing ___ Full extension/hyperextension. ___ Bilateral squat without pain to 60 degrees ___ LQYBT initiated as exercise ___ Reciprocal stair climbing
Week 6-8	Advance proprioception and strengthening drills. Initiate gym strengthening to include light open chain activities if tolerated (avoid full extension with knee extension machine) Plyometric progression initiates (*see above)	___ Flexion ROM within 80% and gradually improving ___ Bilateral squat without pain to 90 degrees ___ LQYBT Asymmetries < 15 cm; composite score >75% ___CKC Dorsiflexion >35 and <5 deg asymmetry
Week 8-12	Initiate open chain freestyle swimming and run progression can start if single and double leg hopping is tolerated and with safe form	___Double leg hop cycle without pain/with control ___Single leg hop cycle without pain/with control
Week 12	Progress appropriate gym strengthening program. Begin running progression if appropriate per the plyometric progression outlined above. Start St. Luke's Online Knee Injury Bridge Program at home	___ Prone knee flexion within 90% of uninvolved ___ Bilateral squat without pain _____ degrees ___ LQYBT Asymmetries < 10 cm; composite score >85% ___ Administer ACL-RSI, Score is:_____/100 ___ Run progression initiated
Week 16 (4 mo)	Continue aggressive LE strengthening & cardiovascular training. Implement low intensity sports specific drills. Incorporate jump prep (countermovement) drills Gradually advance plyometrics from bilateral to unilateral as tolerated. Progress from easy low speed cutting, jumping, plyometrics	___ Maintaining gains in strength (>=90%) ___ Bilateral squat without pain _____ degrees ___ LQYBT Asymmetries < 8 cm; composite score > 90% ___ Symmetric active and passive knee flexion compared to uninvolved side in prone
Week 20 (5 mo)	Continuation and progression of above - Include deceleration activities	___LQYBT Asymmetries < 5 cm anterior, <6 cm PM and PL; composite score >94% ___Hop Testing LSI >85% if tested ___FMS Composite Score >14
Week 26-34 (6-8 mo)	Higher level plyometrics, initiate more aggressive sport specific drills, evaluate form under fatigue	Hop Testing LSI ≥ 95% FMS Composite > 14 and no 0's or 1's ___ Administer ACL-RSI, Score is: ____/120
Week 34-40 (8-12 mo)	Continued return to sport training	Hop Testing LSI at 95% or better after fatigue protocol (Borg Scale 15 or greater) ___ Administer ACL-RSI, Score is: ____/120

When patient is discharged and returned to play, 12 month f/u with the surgeon to be scheduled. Prior to follow up, repeat functional testing. Can be scheduled with St. Luke's Rehab by calling 208-385-3720.

This therapy plan provides a synopsis of guidelines for recovering from surgery with St. Luke's Sports Medicine. It is provided as an educational resource. Individual circumstances vary and these plans cannot replace the advice of a medical professional.

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