## Medial Patellofemoral Ligament Reconstruction with Tibial Tubercle Osteotomy

Phase	Goals	Precautions/Restrictions	Treatment
Weeks 0-6	<ul> <li>Manage swelling and pain</li> <li>Protect surgical site</li> <li>Achieve quadriceps/hamstring/glute activation</li> <li>Symmetric knee extension by week 2</li> <li>Moderate irritability of knee (wks 0-2)         <ul> <li>Swelling is improving</li> <li>&lt;5/10 pain</li> </ul> </li> <li>Low irritability of knee (wks 2-6)         <ul> <li>Minimal swelling with activities</li> <li>&lt;2/10 pain</li> </ul> </li> </ul>	<ul> <li>Weight bearing (heel to flat)</li> <li>Weeks 0-6 TWB</li> <li>Locked in extension while WB</li> <li>Ambulate with crutches and brace</li> <li>ROM restrictions:</li> <li>0-90 knee flex AAROM to AROM</li> <li>PASSIVE knee extension only</li> </ul>	<ul> <li>PRICE</li> <li>Quadriceps/hamstring, glute activation should be emphasized</li> <li>Ankle: range of motion and strength</li> <li>Cryotherapy/Modalities as indicated</li> <li>Initial visit: FOTO, LEFS, PRO</li> <li>OKC strengthening:         <ul> <li>Hip: all planes of motion</li> <li>Ankle: all planes of motion</li> </ul> </li> <li>Week 6: FOTO, LEFS, PRO</li> </ul>
Weeks 6-8	<ul> <li>Full AROM by 8 weeks</li> <li>Restore strength of quadriceps, hamstrings, hips</li> </ul>	<ul> <li>Progress to WBAT beginning at wk 6 pending x-ray and MD visit; wean from crutches as able</li> <li>Discontinue brace with adequate quad control</li> <li>Avoid excessive loading of anterior knee (no patellofemoral pain)</li> <li>No impact (running, cutting, pivoting)</li> </ul>	<ul> <li>Begin active knee extension as tolerated</li> <li>Normalize gait</li> <li>Initiate CKC exercises</li> <li>Stationary bike</li> <li>Cryotherapy/Modalities as indicated</li> <li>Week 8: FOTO, LEFS, PRO</li> </ul>
Weeks 8-12	<ul> <li>Ambulate community distances by 12 weeks without assistive devices</li> <li>No effusion in knee</li> <li>Restore total leg strength</li> </ul>	<ul> <li>Avoid loaded range of motion (&gt;90°)</li> <li>No impact (running, cutting, pivoting)</li> </ul>	<ul> <li>Progress CKC into greater ROM (&lt;90°), single leg, multi-planar, and with resistance as tolerated</li> <li>Initiate proprioceptive training</li> <li>Initiate pool if accessible</li> <li>Week 12: FOTO, LEFS, PRO</li> <li>Can begin medial/lateral patellar mobilizations</li> </ul>
Weeks 12-16	<ul> <li>Preparation for more advanced exercise/activity</li> <li>Normalize asymmetries</li> <li>70% symmetry with isokinetic quad strength testing</li> </ul>	<ul> <li>Avoid loaded range of motion (&gt;90°)</li> <li>Proper exercise form and control during exercise performance</li> <li>No impact (running, cutting, pivoting)</li> </ul>	<ul> <li>Progress strength, endurance, and proprioception</li> <li>Advance cardiovascular conditioning         <ul> <li>Elliptical trainer</li> </ul> </li> <li>Week 16: SGYM with testing         <ul> <li>Y- balance</li> <li>Body weight single leg press</li> <li>Humac testing (90/180 deg/sec)</li> <li>FOTO, LEFS, PRO</li> </ul> </li> </ul>
Weeks 16+	<ul> <li>Begin impact training once cleared by MD (jumping, running etc.)</li> <li>Unrestricted return to activity (Months 6-9)</li> </ul>	<ul> <li>Avoid running/jumping on a painful or swollen knee</li> <li>Avoid cutting, pivoting, and high intensity plyometrics until wk 20</li> <li>Proper form and control during exercise performance</li> </ul>	<ul> <li>Can begin loading beyond 90° as tolerated</li> <li>Can begin linear jogging and light impact         <ul> <li>Avoid cutting, pivoting until week 20</li> </ul> </li> <li>Anticipated final visit: SGYM with testing         <ul> <li>Y- balance</li> <li>Humac testing (90/180 deg/sec)</li> <li>Single leg vertical jump</li> <li>Single leg hops: for distance, triple hop</li> </ul> </li> <li>FOTO, LEFS, PRO</li> </ul>

This protocol is not meant to be prescriptive but a recommendation to guide the rehabilitation process.

Each patient's progress may vary based on specifics to their injury and procedure.



