

## Patellar and Quadriceps Repair/Augmentation Rehabilitation Protocol

Phase	Goals	Precautions/Restrictions	Treatment
Weeks 0-3	<ul style="list-style-type: none"> <li>Protect surgical site</li> <li>PRICE principles</li> <li>ROM: 0-30 degrees</li> <li>Reduce muscle atrophy</li> <li>Reduce swelling</li> <li>Decrease pain and inflammation</li> </ul>	<ul style="list-style-type: none"> <li>ROM: 0-30 degrees with surgeon approval               <ul style="list-style-type: none"> <li>Active flexion, passive extension</li> </ul> </li> <li>TWB with the knee in full extension using crutches.</li> <li>Brace must be on at all times, locked in extension when weight bearing</li> <li>Allograft use will slow progression (contact surgeon for restrictions)</li> </ul>	<ul style="list-style-type: none"> <li>PRICE               <ul style="list-style-type: none"> <li>Cryotherapy: 5-7 times per day</li> <li>Compression with TubiGrip/TEDS</li> </ul> </li> <li>ROM: limited to 0-30 deg:               <ul style="list-style-type: none"> <li>Supine knee extension with towel under ankle</li> <li>Patella mobilizations</li> </ul> </li> <li>Quadriceps recruitment</li> <li>Global LE isometric/proximal hip strengthening</li> <li>Gait training with crutches</li> <li>Cardio: Upper body ergometer</li> <li>Initial Visit: FOTO, LEFS</li> </ul>
Weeks 3-6	<ul style="list-style-type: none"> <li>Protect surgical site</li> <li>Price principles</li> <li>ROM: 0-60 degrees</li> <li>Reduce atrophy/progress strengthening</li> <li>Reduce swelling</li> <li>Progress weight bearing</li> <li>SLR without extensor lag</li> </ul>	<ul style="list-style-type: none"> <li>ROM: 0-60 degrees               <ul style="list-style-type: none"> <li>Active flexion, passive extension</li> </ul> </li> <li>Progress to WBAT at 6 weeks</li> <li>Brace must be on at all times, locked in extension when weight bearing</li> <li>Avoid painful activities/exercises</li> </ul>	<ul style="list-style-type: none"> <li>Gait training from to WBAT</li> <li>Core stabilization exercises</li> <li>Global LE strengthening               <ul style="list-style-type: none"> <li>SLR in all planes</li> </ul> </li> <li>Double limb weight shift/balance/proprioception</li> <li>Cardio: Upper body ergometer</li> <li>Week 6: FOTO, LEFS</li> </ul>
Weeks 6-9	<ul style="list-style-type: none"> <li>ROM: 0-90 degrees</li> <li>Wean from crutches with brace unlocked from 30-490 degrees</li> <li>Initiate functional LE strength with quad activation in weight bearing</li> </ul>	<ul style="list-style-type: none"> <li>ROM: 0-90 degrees               <ul style="list-style-type: none"> <li>Active flexion, passive extension</li> </ul> </li> <li>Brace only worn while weight bearing</li> <li>Avoid painful activities/exercises</li> </ul>	<ul style="list-style-type: none"> <li>Aerobic training               <ul style="list-style-type: none"> <li>UBE and UE circuit</li> </ul> </li> <li>Increase loading capacity for lower extremity strengthening exercises               <ul style="list-style-type: none"> <li>0-40 degree knee flex maximum with all weight bearing activity</li> </ul> </li> <li>Continue balance/proprioceptive training</li> <li>Core strength</li> <li>OKC strength all planes</li> <li>Week 9: FOTO, LEFS</li> </ul>
Weeks 9-16	<ul style="list-style-type: none"> <li>Full ROM</li> <li>Normalize gait</li> <li>Discontinue brace</li> <li>Functional strengthening</li> </ul>	<ul style="list-style-type: none"> <li>Progressive ROM               <ul style="list-style-type: none"> <li>Active extension</li> </ul> </li> <li>Avoid impact of involved LE</li> <li>No eccentric training of involved LE</li> </ul>	<ul style="list-style-type: none"> <li>Walking drills</li> <li>Initiate stretching as needed</li> <li>Progress as tolerated: ROM, CKC strength, Endurance, Proprioception/Balance</li> <li>Cardio: Stationary bike, elliptical</li> <li>Week 12: FOTO, LEFS</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.



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Phase	Goals	Precautions/Restrictions	Treatment
Weeks 16+	<ul style="list-style-type: none"> <li>Initiate increased impact and dynamic activity with surgeon approval</li> <li>Correct asymmetries between LEs</li> <li>Return to sport/recreational activity</li> </ul>	<ul style="list-style-type: none"> <li>Impact activity with surgeon approval               <ul style="list-style-type: none"> <li>No running with knee effusion</li> </ul> </li> <li>Avoid faulty mechanics during movement</li> <li>Initiate sport specifics with surgeon approval</li> <li>Post activity soreness resolution within 24 hours</li> </ul>	<ul style="list-style-type: none"> <li>Initiation of power activity</li> <li>Sport specific movements when allowed</li> <li>Core strength</li> <li>Agility/footwork when allowed</li> <li>Cardio: Sport specific energy system training</li> <li>Week 16: FOTO, LEFS</li> </ul>

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