

## Patellar and Quadriceps Repair/Augmentation Rehabilitation Protocol

**\*\*Contact MD regarding specific patient restrictions and limitations\*\***

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 of their injury and procedure.

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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