

**f** 833.918.2049

Phase 1	Surgery to 6 weeks post-op
Rehabilitation Goals	<ul> <li>Diminish inflammation and swelling</li> <li>Restore ROM</li> <li>Reestablish quadriceps muscle activity</li> </ul>
Precautions	<ul> <li>Brace locked in extension with ambulation</li> <li>Weight bearing as tolerated</li> <li>Discontinue crutches when patient demonstrates non-antalgic gait</li> <li>ROM 0-90 degrees</li> <li>No resisted knee flexion hamstring strengthening for first 6 weeks unless cleared by physician</li> </ul>
Suggested Therapeutic Exercise/Treatment	<ul> <li>ROM limited from 0-90° for 6 weeks</li> <li>Patellar mobilization</li> <li>Scar tissue mobilization</li> <li>Quad sets</li> <li>Quadriceps and hamstring isometric exercises</li> <li>SLR (4 directions)</li> <li>Electrical stimulation as necessary for quadriceps re-education</li> <li>Cryotherapy, compression, etc., to decrease pain and swelling</li> <li>Hip adduction and abduction as tolerated</li> <li>Avoid active knee flexion</li> </ul>



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Phase 2	6 to 12 weeks post-op
Rehabilitation Goals	<ul> <li>Normalize ROM of the knee</li> <li>Single leg control</li> <li>Normalize gait</li> <li>Good control and no pain with functional movements, including step up/down, partial squat, and partial lunge</li> </ul>
Precautions	<ul> <li>Begin to unlock brace as tolerated</li> <li>Wean from brace as muscle control improves</li> <li>No forced range of motion with knee flexion</li> <li>Avoid maximal loaded squats or deep knee bends to 90 degrees</li> <li>No pivoting, twisting, running or impact activities</li> <li>Avoid activities that cause post-activity swelling</li> </ul>
Suggested Therapeutic Exercise/Treatment	<ul> <li>Gradually increase ROM to unlimited as tolerated</li> <li>Heel slides to increase flexion ROM as tolerated</li> <li>Extension: towel stretch with heel elevated and other variations</li> <li>Stationary bike as tolerated with low resistance</li> <li>Straight leg raises in multiple directions</li> <li>Bridging</li> <li>Closed chain strengthening for quads and glutes</li> <li>Step up exercises</li> <li>Knee extension, leg press</li> <li>Initiate hip hinge movement</li> <li>Hip and core strengthening</li> <li>Ground-based proprioceptive training (No Airex pad, BOSU, etc.)</li> <li>Gait training</li> </ul>



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Phase 3	12 weeks post-op
Rehabilitation Goals	<ul> <li>Increase strength, power, endurance</li> <li>Maximization of strength and mobility to meet demands of ADLs</li> <li>No joint effusion</li> </ul>
Precautions	<ul> <li>Avoid post-activity swelling</li> <li>Avoid posterior knee pain with end-range knee flexion</li> </ul>
Suggested Therapeutic Exercise/Treatment	<ul> <li>Continue ROM and strengthening exercises as needed</li> <li>Add step-downs/ups, lunges, and /or partial squats as tolerated</li> <li>Add eccentric quadriceps and hamstring exercises</li> <li>Initiate elliptical</li> <li>Increase resistance on stationary bike</li> <li>Advancement of lower body strength exercises         <ul> <li>Double leg, split stance, single leg</li> </ul> </li> <li>Squat movement variations (No back squats)</li> <li>Hip hinge movement variations</li> <li>Knee dominant hamstring and quad strengthening</li> <li>Step-up/step down exercises</li> <li>Shuttle press</li> <li>Isotonic knee extensions (ROM 90-40 degrees); MUST be pain free</li> <li>Advanced proprioception exercises (perturbations)</li> <li>Hip and core strengthening</li> </ul>



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Phase 4	
Rehabilitation Goals	<ul> <li>Good control and no pain with sport and work-specific movements, including impact</li> </ul>
Precautions	<ul> <li>Avoid pain and post-activity swelling with therapeutic exercise and functional activities</li> <li>Avoid sports until criteria met along with physician clearance</li> </ul>
Suggested Therapeutic Exercise/Treatment	<ul> <li>Continuing strengthening exercises</li> <li>Progression of plyometric exercises         <ul> <li>Emphasis on proper landing technique</li> <li>Double leg snap down, double leg quick response plyometrics</li> <li>Single leg snap down, single leg quick response plyometrics</li> <li>Progress to double leg max power jumps progressed to single leg</li> </ul> </li> <li>Progress to outdoor running and agility drills</li> <li>Begin practicing skills specific to the activity (i.e., work, recreational activity, sports, etc.)</li> <li>Return to sport when single leg hop &gt;90% and with physician approval</li> </ul>
Progression Criteria	<ul> <li>Achievement of &gt;90% quad index</li> <li>Lack of apprehension with sport-specific movement</li> <li>Independence in maintenance HEP</li> <li>No residual soreness or swelling</li> <li>Advancement through practice continuum</li> </ul>