



Brian P. Davis, MD  
 ABOS Board-Certified Sports Medicine,  
 Shoulder, Knee, & Elbow Surgeon  
 office: 303.321.1333  
 BrianDavisMD.com

## PATELLAR TENDON REPAIR POST OPERATIVE PROTOCOL

	Time Frame (Weeks)	Guidelines	Goals
<b>PHASE I</b>	0 to 2	<b>CRUTCHES:</b> 50% partial weight bearing x 2 weeks <b>BRACE:</b> Locked 0/0 knee extension for 6 weeks  <b>EXERCISE PROGRESSION</b> <ul style="list-style-type: none"> <li>• Gait training</li> <li>• Range of motion 0°-30°</li> <li>• Beginning gentle submaximal quad sets</li> </ul> <b>RECOMMENDED LOAD</b> <ul style="list-style-type: none"> <li>• Short but frequent bouts of ROM, quad activation 3+x/day</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce inflammation</li> <li>• Patellar mobilization</li> <li>• Full extension, passive and active</li> <li>• 0° to 30° range of motion</li> </ul>
	2 to 4	<b>EXERCISE PROGRESSION</b> <ul style="list-style-type: none"> <li>• Gait training</li> <li>• Knee flexion - off table to 60°</li> <li>• Quadriceps activation</li> <li>• Multi-plane straight leg raises</li> <li>• Bilateral calf raises</li> <li>• Hamstring isometrics</li> <li>• Straight leg ball bridges</li> </ul> <b>RECOMMENDED LOAD</b> <ul style="list-style-type: none"> <li>• Short but frequent bouts of ROM, quad activation 3x/day</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce inflammation</li> <li>• Full knee extension/hyperextension</li> <li>• WBAT, progress off crutches</li> <li>• 0° to 60° range of motion</li> </ul>
	4 to 6	<b>EXERCISE PROGRESSION</b> <ul style="list-style-type: none"> <li>• Knee flexion– off table to 90°</li> <li>• Open and closed multiplane hip strengthening</li> <li>• Proprioception drills</li> <li>• Heel raises</li> </ul>	<ul style="list-style-type: none"> <li>• FWB</li> <li>• 0° to 90° range of motion</li> </ul>
<b>PHASE II</b>	6 to 12	<b>EXERCISE PROGRESSION</b> <ul style="list-style-type: none"> <li>• Extension – heel props and prone hangs as needed</li> <li>• Flexion – end range heel slides and quadriceps stretching</li> <li>• Bilateral squat / leg press progression – focus on proper alignment with gradually increasing depth</li> <li>• Multi-plane open and closed kinetic chain hip strengthening</li> <li>• Step-up progression – proper alignment, eccentric control</li> <li>• Controlled movement series</li> <li>• Hamstring activation with bridge on floor, ball or box</li> <li>• Hamstring curls on machine or single leg RDL's</li> <li>• Progress to unilateral heel raise off the floor then off a step</li> <li>• Proprioception drills</li> </ul> <b>CARDIOVASCULAR EXERCISE</b> <ul style="list-style-type: none"> <li>• Stationary biking</li> <li>• Treadmill/outdoor walking; focus on proper gait mechanics</li> <li>• Arc trainer</li> <li>• Elliptical</li> <li>• Swimming – light flutter kick</li> </ul> <b>RECOMMENDED LOAD</b> <ul style="list-style-type: none"> <li>• ROM: 2-3x/day</li> <li>• Strength: 5x/week on open chain; 3x/week closed chain</li> <li>• Cardiovascular: 20-30 minutes/day low/moderate intensity</li> </ul>	<ul style="list-style-type: none"> <li>• Full knee extension/hyperextension</li> <li>• Knee flexion progress gradually to full</li> <li>• Normalize gait mechanics</li> <li>• Normalize patellofemoral joint and scar mobility</li> </ul>

	Time Frame (Weeks)	Guidelines	Goals
<b>PHASE III</b>	12 to 16	<p><b>MOVEMENT PREP</b></p> <ul style="list-style-type: none"> <li>• Foam roller</li> <li>• Controlled movement series</li> </ul> <p><b>EXERCISE PROGRESSION</b></p> <ul style="list-style-type: none"> <li>• Weighted squat progression</li> <li>• Single leg squat/lunge progression (dips, retro, walk and split), focus on eccentric control and alignment.</li> <li>• Monster walks</li> <li>• Core program integrated with LE program</li> </ul> <p><b>CARDIOVASCULAR EXERCISE</b></p> <ul style="list-style-type: none"> <li>• Stationary biking</li> <li>• Treadmill/outdoor walking with proper gait mechanics</li> <li>• Arc trainer or elliptical</li> </ul> <p><b>ACTIVITY PROGRESSION</b></p> <ul style="list-style-type: none"> <li>• Outdoor biking – week 12</li> <li>• Shallow water pool running – week 16</li> <li>• Higher intensity interval work with CV program – wk 12-16</li> </ul> <p><b>RECOMMENDED LOADING</b></p> <ul style="list-style-type: none"> <li>• ROM: 1-2x/day</li> <li>• Strength: 3x/week on closed chain loading</li> <li>• Cardiovascular: 20-45 minutes 5x/week with moderate intensity and intervals.</li> </ul>	<ul style="list-style-type: none"> <li>• Control inflammation with increasing loads</li> <li>• Full knee flexion and extension with terminal stretch</li> <li>• Progressive strengthening</li> <li>• Increase muscular endurance</li> </ul>
<b>PHASE IV</b>	16 to 24+	<p><b>EXERCISE PROGRESSION</b></p> <ul style="list-style-type: none"> <li>• Movement Prep from phase III</li> <li>• Increase loads from phase III</li> </ul> <p><b>CARDIOVASCULAR EXERCISE</b></p> <ul style="list-style-type: none"> <li>• Stationary bike</li> <li>• Arc trainer or elliptical</li> <li>• swimming</li> </ul> <p><b>JUMP PROGRESSION</b></p> <ul style="list-style-type: none"> <li>• Low amplitude bilateral single response jumps - wk 20</li> <li>• Bilateral multiple response jumps - wks 20-24</li> <li>• Unilateral single response jumps - wk 24</li> </ul> <p><b>RUNNING PROGRESSION</b></p> <ul style="list-style-type: none"> <li>• Basic ladder series - wk 16</li> <li>• Skipping - wk 16</li> <li>• Linear acceleration/deceleration - wks 20-24</li> <li>• Sprinting - wk 20-24</li> <li>• Change of direction and lateral agility - wk 24</li> </ul> <p><b>SPORT SPECIFIC ACTIVITY PROGRESSION</b></p> <ul style="list-style-type: none"> <li>• Non-contact &amp; non-reactive field progression - week 20-24</li> <li>• Interval golf program - wk 20</li> </ul> <p><b>SPORTS TEST AND RETURN TO FULL ACTIVITY</b></p> <ul style="list-style-type: none"> <li>• Follow-up examination with physician</li> <li>• Sports test for return to competition: <b>6-9 MONTHS</b></li> </ul> <p><b>RECOMMENDED LOADING</b></p> <ul style="list-style-type: none"> <li>• ROM: global stretching 2-3x/week</li> <li>• Strength: 2-3x/week with increasing resistance</li> <li>• Cardiovascular: 20-45 minutes 5x/week. Alternate impact and non-impact days using sound recovery principles.</li> </ul>	<ul style="list-style-type: none"> <li>• Control inflammation with increasing loads</li> <li>• Increase muscular strength, power and endurance</li> <li>• Establish RTA</li> </ul>