

Brian P. Davis, MD Sports Medicine, Shoulder, Knee, & Elbow Surgeon office: 303.449.2730

## MENISCECTOMY AND DEBRIDEMENT (DJD) POST OPERATIVE PROTOCOL

	Time Frame (Weeks)	Guidelines	Goals
MAXIMUM PROTECTION	0 to 1	CRUTCHES: 50% partial weight bearing x 1 week EXERCISE PROGRESSION • Gait training • Extension - heel props for full extension as needed • Flexion - off table or wall slides • Quadriceps setting using NMES as needed • Multi-plane straight leg raises • Bilateral calf raises • Ankle pumps CARDIOVASCULAR EXERCISE • Stationary biking RECOMMENDED LOAD • Short but frequent bouts of ROM, quad activation 3+x/day	<ul> <li>Reduce inflammation</li> <li>Normalize patella mobility</li> <li>full extension; passive/active</li> <li>Good quadriceps control</li> <li>No extension lag</li> <li>100°-120° of knee flexion</li> </ul>
	1 to 2	<ul> <li>EXERCISE PROGRESSION <ul> <li>Continue with 0-1 week program</li> <li>Extension – heel props or add prone hangs (as needed)</li> <li>Flexion – wall or heel slides</li> <li>Ball bridge and/or isometric hamstring activation</li> </ul> </li> <li>CARDIOVASCULAR EXERCISE <ul> <li>Stationary biking</li> <li>Short walks using a crutch as needed</li> </ul> </li> <li>RECOMMENDED LOAD <ul> <li>Short but frequent bouts of ROM, quad activation 2-3x/day</li> <li>Stationary bike 1x/day, 10-20 minutes</li> </ul> </li> </ul>	<ul> <li>Reduce inflammation</li> <li>Begin to transition off crutches</li> <li>Full knee extension/hyperextension</li> <li>No extension lag</li> <li>120°+ of knee flexion</li> </ul>
PHASE II	2 to 4	<ul> <li>EXERCISE PROGRESSION</li> <li>Extension—heel props and prone hangs as needed</li> <li>Flexion—continue with end range heel slides</li> <li>Bilateral mini squats progression or partial range leg press focus on proper alignment with very gradual progression in depth and resistance.</li> <li>Multi-plane open and closed kinetic chain hip strengthening. Limit repetitions with more severe DJD</li> <li>Step-up progression – minimal step height, slow progression</li> <li>Hamstring activation with bridge on floor, ball or box</li> <li>Proprioception drills</li> <li>CARDIOVASCULAR EXERCISE</li> <li>Stationary biking</li> <li>Treadmill/outdoor walking, focus on proper gait mechanics</li> <li>RECOMMENDED LOAD</li> <li>ROM: 2-3x/day</li> <li>Strength: 1x/day open chain; 3x/week closed chain</li> <li>Cardiovascular: 20 minutes/day with low intensity</li> </ul>	<ul> <li>Progress off crutches</li> <li>Full knee extension/hyperextension</li> <li>Knee flexion to full as tolerated</li> <li>Normalize gait mechanics</li> <li>Normalize patellofemoral joint and scar mobility</li> </ul>

	Time Frame (Weeks)	Guidelines	Goals
PHASE II (continued)	4 to 6	<ul> <li>EXERCISE PROGRESSION</li> <li>Controlled movement series - warm-up</li> <li>Leg press, hamstrings curls, calf raises</li> <li>CARDIOVASCULAR EXERCISE</li> <li>Increase intensity/duration</li> <li>Stationary biking</li> <li>Treadmill/outdoor walking, focus on proper gait mechanics</li> <li>Arc trainer or elliptical as tolerated</li> <li>RECOMMENDED LOADING</li> <li>ROM: 2x/day</li> <li>Strength: 3x/week on closed chain loading</li> <li>Cardiovascular: 20-30 minutes/day with low to moderate intensity</li> </ul>	<ul> <li>Reduce inflammation</li> <li>Full ROM</li> <li>Normal gait</li> </ul>
PHASE III	6 to 12	<ul> <li>MOVEMENT PREP</li> <li>Foam roller</li> <li>Controlled movement series</li> <li>EXERCISE PROGRESSION</li> <li>Bilateral and unilateral closed chain progression as appropriate based on articular surfaces</li> <li>Leg press and hamstring curls</li> <li>Monster walks</li> <li>Core program as appropriate</li> <li>CARDIOVASCULAR EXERCISE</li> <li>Stationary biking</li> <li>Treadmill/outdoor walking, focus on proper gait mechanics</li> <li>Arc trainer or elliptical</li> <li>Swimming</li> <li>ACTIVITY PROGRESSION</li> <li>OUTDOOR BIKING: week 6</li> <li>GOLFING: Interval golf progression</li> <li>RECOMMENDED LOADING</li> <li>ROM: 1-2x/day</li> <li>Strength: 2-3x/week maximum with closed chain loading</li> <li>Cardiovascular: 20-45 minutes 5x/week, moderate intensity</li> </ul>	<ul> <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>
PHASE IV	12 to 16	<ul> <li>MOVEMENT PREP</li> <li>Foam roller</li> <li>Controlled movement series</li> <li>EXERCISE PROGRESSION <ul> <li>Increasing loads from phase III</li> <li>Core program: Increase load as appropriate</li> </ul> </li> <li>NON-IMPACT CARDIOVASCULAR EXERCISE</li> <li>Stationary biking</li> <li>Arc trainer or elliptical</li> <li>Swimming</li> </ul> <li>ACTIVITY PROGRESSION <ul> <li>GOLFING: <u>as appropriate</u></li> <li>MINIMAL IMPACT SPORTS: <u>as appropriate</u></li> <li>SKIING: <u>avoid bumps</u></li> </ul> </li> <li>MODIFIED SPORTS TEST AND PHYSICAN FOLLOW-UP</li> <li>Follow-up examination with physician</li> <li>RECOMMENDED LOADING</li> <li>ROM: global stretching</li> <li>Strength: 2-3x/week with increasing resistance</li> <li>Cardiovascular: 20-45 minutes 3-5x/week.</li>	• Establish RTA