



## Arthroscopic Marrow Stimulation Patella and/or Trochlea Rehab Protocol

**Description of Procedure:** Accessing the bone marrow through the subchondral plate either by abrading, drilling or microfracture.

**Safety Warning:** Avoid stairs and inclines for six months.

	<b>Weight Bearing</b>	<b>Brace</b>	<b>ROM</b>	<b>Therapeutic Exercise</b>
<b>Phase I: 0 to 6 Weeks</b>	Full weight bearing in full extension	<b>0 to 4 Weeks:</b> Locked at 0 to 30° (remove for exercise); brace is worn until independent straight leg raise can be performed without extension lag	<b>0 to 4 Weeks:</b> Patient should gain at least 90° by week 4 and 120° to 130° by week 6	Quad sets, SLR, hamstring isometrics - complete exercises in brace if quad control is inadequate; core proximal program; normalize gait; FES biofeedback as needed
<b>Phase II: 6 to 12 Weeks</b>	Progress to full weight bearing if normal gait	None	Full active range of motion	Progress bilateral strengthening using resistance less than patient's body weight, progress to unilateral closed chain exercises; continue opened chain knee strengthening (no squats, wall slides, lunges or knee extension exercises)
<b>Phase III: 12 Weeks to 9 Months</b>	Full, with a normalized gait pattern	None	Full and pain-free	<b>12 Weeks to 6 Months:</b> Advance bilateral and unilateral closed chain exercises with emphasis on concentric/eccentric control, continue with biking, elliptical and treadmill, progress balance activities; form exercises for desired sport if no pain or effusion  <i>**Avoid stairs and inclines for 6 months</i>  <b>6 to 9 Months:</b> Advance strength training, initiate light jogging - start with 2 minute walk/2 minute jog, emphasize sport-specific training

	<b>Weight Bearing</b>	<b>Brace</b>	<b>ROM</b>	<b>Therapeutic Exercise</b>
<b>Phase IV: 9 to 24 Months</b>	Full, with a normalized gait pattern (allow stairs and inclines if no knee pain or effusion)	None	Full and pain-free	Continue strength training: Emphasize single leg loading, begin a progressive running and agility program - high impact activities (basketball, tennis, etc.) may begin at 12 to 24 months if pain-free

*If pain or swelling occurs with any activities, they must be modified to decrease symptoms.*

