



## 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:<br/>0 to 6<br/>Weeks</b>               | Full weight bearing in full extension          | <b>0 to 4 Weeks:</b><br>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><br>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:<br/>6 to 12<br/>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:<br/>12 Weeks<br/>to 9<br/>Months</b> | Full, with a normalized gait pattern           | None  | Full and pain-free  | <b>12 Weeks to 6 Months:</b><br>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<br><br><i>**Avoid stairs and inclines for 6 months</i><br><br><b>6 to 9 Months:</b> Advance strength training, initiate light jogging - start with 2 minute walk/2 minute jog, emphasize sport-specific training |

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|---|--|--------------|--------------------|---|
| <b>Phase IV:<br/>9 to 24<br/>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.*