

Rehabilitation Protocol for Arthroscopic Partial Meniscectomy

This protocol is intended to guide clinicians through the post-operative course for Arthroscopy Partial Meniscectomy. This protocol is time based (dependent on tissue healing) as well as criterion based. Specific intervention should be based on the needs of the individual and should consider exam findings and clinical decision making. The timeframes for expected outcomes contained within this guideline may vary based on surgeon's preference, additional procedures performed, and/or complications. If a clinician requires assistance in the progression of a post-operative patient, they should consult with the referring surgeon.

The interventions included within this protocol are not intended to be an inclusive list. Therapeutic interventions should be included and modified based on the progress of the patient and under the discretion of the clinician.

Post-operative considerations

Post-operative considerations If you develop a fever, intense calf pain, excessive drainage from the incision, uncontrolled pain or any other symptoms you have concerns about you should call your doctor.

PHASE I: IMMEDIATE POST-OP (Day 0-7 AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none"> • Reduce swelling, minimize pain • Restore knee range of motion (ROM) • Re-establish quadriceps activation • Patient Education: <ul style="list-style-type: none"> ◦ Keep your knee straight and elevated when sitting or laying down. Do not rest with a towel placed under the knee ◦ Avoid painful activities ◦ Limit excessive walking
Weight Bearing	<p><i>Walking</i></p> <ul style="list-style-type: none"> • Weight bearing as tolerated with crutches • Weaning from crutches may occur in the first several days depending on appropriate resolution of edema, achievement of excellent quad activation (evidenced by ability to perform SLR), and proper gait pattern under the guidance of the physical therapist • When climbing stairs, lead with non-surgical limb and when going down the stairs, lead with the surgical limb
Interventions	<p><i>Swelling Management</i></p> <ul style="list-style-type: none"> • Ice, compression, elevation • Ankle pumps • Retrograde massage <p><i>Range of motion/Mobility</i></p> <ul style="list-style-type: none"> • Patella mobilizations: superior/inferior and medial/lateral • Heel slides with towel • Low intensity, long duration extension stretches: prone hang, heel prop • Supine passive hamstring stretch • Stationary bike <p><i>Strengthening</i></p> <ul style="list-style-type: none"> • Calf raises • Quad sets • Hip abduction • Straight leg raise • Sidelying Clamshell

	<i>NMES high intensity (2500 Hz, 75 bursts), with quad sets and functional exercises as appropriate. Consider home unit distributed immediate post op if poor quad activation</i>
Criteria to Progress	<ul style="list-style-type: none"> • Knee ROM of 0->90 deg • Ability to perform SLR (straight leg raise) with appropriate quadriceps activation

PHASE II: INTERMEDIATE POST-OP (Day 8 - WEEK 2 AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none"> • Achieve full pain free ROM • Restore muscular strength and endurance • Gradual return to functional activities while monitoring symptoms response • Restore normal gait without assistive device • Improve balance and proprioception
Weight Bearing	<ul style="list-style-type: none"> • Weight bearing as tolerated <ul style="list-style-type: none"> ◦ Goal to discharge assistive devices
Additional Interventions <i>*Continue with Phase I Interventions</i>	<p><i>Range of motion/Mobility</i></p> <ul style="list-style-type: none"> • Stretching of all muscle groups including: prone quad stretch, standing quad stretch, standing hip flexor stretch, Supine active hamstring stretch <p><i>Strengthening</i></p> <ul style="list-style-type: none"> • Standing hamstring curls • Step ups and step ups with march • Ball squats, wall slides, mini squats from 0-60 deg • Lumbopelvic strengthening: bridge & unilateral bridge, bridges on physioball, bridge on physioball with roll-in, bridge on physioball alternating <p><i>Balance/proprioception</i></p> <ul style="list-style-type: none"> • Single leg standing balance (knee slightly flexed) static progressed to unsteady surface
Criteria to Progress	<ul style="list-style-type: none"> • Full and pain free knee ROM • No swelling (Modified Stroke Test) • Symmetrical, non-antalgic gait pattern without assistive device

PHASE III: LATE POST-OP (2-8 WEEKS AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none"> • Maintain full and pain free knee ROM • Enhance muscle strength and endurance • Avoid post exercise pain/swelling • Promote proper movement patterns
Weight Bearing	Full Weight Bearing
Additional Interventions <i>*Continue with Phase I-II Interventions</i>	<p><i>Cardio</i></p> <ul style="list-style-type: none"> • 4-6 weeks, as tolerated: Elliptical, stair climber, flutter kick swimming, pool jogging <p><i>Strengthening</i></p> <ul style="list-style-type: none"> • Gym equipment: leg press machine, seated hamstring curl machine, hip abductor and adductor machine, hip extension machine, roman chair, seated calf machine <p>**The following exercises to focus on proper control with emphasis on good proximal stability.</p> <ul style="list-style-type: none"> • Squat to chair • Lateral lunges • Romanian deadlift and single leg deadlift • Single leg progression: single leg press, slide board lunges: retro and lateral slide board lunge, split squats, lateral step-ups, step downs, single leg wall slides, single leg squats <p>Progress intensity (strength) and duration (endurance) of exercises as appropriate</p> <p><i>Balance/proprioception</i></p>

	<ul style="list-style-type: none"> • Progress single limb balance including perturbation training • Lower quarter reaches (<u>Y-Balance</u> and <u>Star drill</u>) <p>**When Quadriceps index > 80% strength:</p> <ul style="list-style-type: none"> • Interval running program <ul style="list-style-type: none"> ◦ Return to Running Program • Progress to plyometric and agility program <ul style="list-style-type: none"> ◦ Jump and Plyometric Progression ◦ Phase I Plyometrics and Agility and Phase II Plyometrics and Agility
Criteria to Progress	<ul style="list-style-type: none"> • No swelling/pain after exercise • Ability to perform ADLs pain free <p>**If patient is returning to impact activities:</p> <ul style="list-style-type: none"> • 10 repetitions single leg squat proper form through at least 60 deg knee flexion • Drop vertical jump with good control • Completion of jog/run program without pain/swelling • <u>Functional Assessment</u> <ul style="list-style-type: none"> ◦ Quadriceps index >80%; HHD mean preferred (isokinetic testing if available) ◦ Hamstring, glute med, glute max index ≥80%; HHD mean preferred (isokinetic testing for HS if available) ◦ Single leg hop test ≥75% compared to contra lateral side

PHASE IV: UNRESTRICTED RETURN TO SPORT (9-12 WEEKS AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none"> • Maintain full ROM • Safely progress strengthening • Promote proper movement patterns • Avoid post exercise pain/swelling • Return to all necessary and desired functional activities, work duties, and athletic activities
Additional Interventions <i>*Continue with Phase I-III Interventions</i>	<ul style="list-style-type: none"> • Multi-plane sport specific plyometrics and agility program <ul style="list-style-type: none"> ◦ Phase III Plyometrics and Agility Program • Include hard cutting and pivoting depending on the individuals' goals • Include dual-task activities including cognitive dual-task activities
Criteria for Discharge	<ul style="list-style-type: none"> • Last stage, no additional criteria
Return-to-Sport	<ul style="list-style-type: none"> • <u>Functional Assessment</u> <ul style="list-style-type: none"> ◦ Quadriceps index >95%; HHD mean preferred (isokinetic testing if available) ◦ Hamstring, glut med, glut max index ≥95%; HHD mean preferred (isokinetic testing for HS if available) ◦ Single leg hop test ≥95% compared to contra lateral side with proper landing mechanics • <u>KOOS-sports questionnaire</u> >90%, or other PRO as indicated

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Contact	Please email MGHSportsPhysicalTherapy@partners.org with questions specific to this protocol
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References:

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