

Partial Meniscectomy/Chondroplasty/HTS Rehabilitation Guideline

This rehabilitation program is designed to return the individual to their activities as quickly and safely as possible. It is designed for rehabilitation following partial meniscectomy or hypertrophic synovium. Modifications to this guideline may be necessary dependent on physician specific instruction, location of injury, concomitant injuries or procedures performed. This evidence-based rehabilitation guideline is criterion-based; time frames and visits in each phase will vary depending on many factors- including patient demographics, goals, and individual progress. This guideline is designed to progress the individual through rehabilitation to full sport/ activity participation. The therapist may modify the program appropriately depending on the individual's goals for activity following surgery.

This guideline is intended to provide the treating clinician a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post-operative care based on exam/treatment findings, individual progress, and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

General Guidelines/Precautions:

- Immediate post-operative precautions expected
- PROM expectations & timeframe
- Bracing expected & timeframe instructions
- Precautions to certain exercises and timeframes listed for those (IE: Running, squatting, elliptical, swimming, overhead throwing)
- Reasons for possible slower progression indicated
- Return to sport timeframe expected

Partial Meniscectomy Rehabilitation Guideline (6 weeks)

| PHASE | SUGGESTED INTERVENTIONS | GOALS/MILESTONES FOR PROGRESSION |
|--|--|--|
| <p>Phase I <i>Immediate Post-Op Phase</i></p> <p>1-3 Days</p> <p>1-2 Expected Visits</p> | <ol style="list-style-type: none"> 1. Home Program Exercises-Ankle pumps, Quad Sets, SLR, Heel slides, AAROM Knee Flexion and Extension, Seated HC stretches, Patellar mobs, hip abd/add/extension against gravity 2. Minimize swelling with RICE and instruct the patient in proper ACE wrapping 3. Remove drain if present and change dressing. Remove pain pump within the first 72 hours post-op 4. Gait training with appropriate assistive devices (2 crutches → 1 crutch → 0 crutches) on level surfaces and stairs. 5. Estim for edema HV IFC edema, and e-stim for quad functioning 6. Cycle w/minimal resistance | <p>Goals of Phase:</p> <ol style="list-style-type: none"> 1. Control of post-operative swelling. 2. Ambulation on level surfaces with assistive device as needed with minimal to no gait deficits. 3. Range of motion <ul style="list-style-type: none"> • Passive full extension and active flexion to 90 degrees by week 1 (physician appointment) • 5 degree increase in flexion each day post-op 4. Restore patella mobility 5. Neuromuscular control of quadriceps muscle with minimal extensor lag 6. Minimize pain levels with ADL's <p>Criteria to Advance to Next Phase:</p> <ol style="list-style-type: none"> 1. Normal gait 2. Minimal effusion |

(continued on next page)

Partial Meniscectomy Rehabilitation Guideline (6 weeks)

| | | |
|---|--|---|
| <p>Phase II Controlled Movement Phase 3-14 Days 4-6 Expected Visits</p> | <p><i>(continued from previous page)</i></p> <p>Specific Instructions:</p> <ol style="list-style-type: none"> 1. Decrease swelling to trace 2. No ROM limitations 3. Maintain minimal edema <p>Suggested Treatments:</p> <p>Modalities as indicated: Edema controlling treatments, ROM: Passive and AAROM w/in tolerance, no ROM limitations Manual: Continue with patellar mobilizations as indicated</p> <p>Exercise Examples:</p> <ul style="list-style-type: none"> • Quad sets with NMES as needed • SLR in 4 directions • Knee extensions in pain-free range • Stationary bike for ROM stimulus, need physician authorization to be used for routine exercise. Limited to high seat with no or minimal resistance • Open chain quad strengthening limited to pain free range 0 - 45° with lower resistance and higher reps • Standing t-band TKE, Mini squat or wall sit • SL balance activities: varying surfaces based on level of control <p>Other Activities:</p> <ul style="list-style-type: none"> • Low impact cardiovascular activities • Weight shifts with progression to unilateral stance activities • Heel raises, hamstring stretches, standing gastroc-soleus stretches, other mobility work as needed | <p>Goals of Phase:</p> <ol style="list-style-type: none"> 1. Provide environment of proper healing of repair site 2. Prevention of stiffness through ROM program 3. FWB without A/D with minimal gait deviations on level surfaces - stress proper gait mechanics 4. Independent SLR with 0° extension lag 5. Suture removal between days 7-10 if present 6. Begin patient education regarding post-op activity restrictions necessary to maintain joint integrity <p>Criteria to Advance to Next Phase:</p> <ol style="list-style-type: none"> 1. Control of post-operative pain 2. Resolution of post-operative effusion (trace to 1+) 3. Restoration of full extension (compared to contralateral side) 4. PROM 0-120 degrees 5. Normal gait on all surfaces 6. SL balance greater than 15 seconds |
| <p>Phase III Progressive Strengthening Phase 2-4 Weeks 4-9 Expected Visits</p> | <p><i>(continued from previous page)</i></p> <p>Specific Instructions:</p> <ul style="list-style-type: none"> • Continue with previous exercise program • Begin aerobic activity program <p>Suggested Treatments:</p> <p>Manual Therapy: continue with Patellar mobilizations as indicated</p> <p>Exercise Examples:</p> <ul style="list-style-type: none"> • Progress closed-chain exercises for appropriate patients - progressive step ups, TKEs, wall sits, stool scoots, heel raises • Multi-angle quad isometrics • Open chain knee extensions (90-0 degrees) with no resistance • Clamshells, fire hydrants <p>Other Activities:</p> <ul style="list-style-type: none"> • Progress proprioception exercises - star drills, balance with eyes closed • Well leg exercises including biodex if appropriate <p style="text-align: right;"><i>(continued on next page)</i></p> | <p>Goals of Phase:</p> <ol style="list-style-type: none"> 1. ROM symmetrical to unaffected leg 2. Normal Stair ambulation without pain 3. Improving strength and confidence through LE <p>Criteria to Advance to Next Phase:</p> <ol style="list-style-type: none"> 1. ROM symmetrical to opp leg, or 0-135 deg 2. Strength w/in 80% of opp side <p>(Some patients may be appropriate for DC at the end of this phase depending on activity level)</p> |

Partial Meniscectomy Rehabilitation Guideline (6 weeks)

| | | |
|---|---|---|
| <p>Phase IV Return to Activity Phase 4+ Weeks 9+ Expected Visits</p> | <p>(continued from previous page)</p> <p>Specific Instructions:</p> <ul style="list-style-type: none"> Continue previous hip and quad strengthening exercises Progress to lower rep, high load with CKC exercise as tolerated Continued aerobic activity <p>Suggested Treatments: Modalities: ROM: Progression of ROM program – (Bike for ROM only) with stimulus as needed</p> <p>Exercise Examples:</p> <ul style="list-style-type: none"> Squat and lunge progression- DL to SL, may add resistance Higher level step ups, step downs-working on eccentric control Advanced hip strengthening- lateral walk, monster walk Dynamic balance activities- using rebounder, airex, rocker board, BAPs board Plank progression for core strength and stabilization <p>Other Activities:</p> <p>- Return to Run program: (see appendix) Needs to demonstrate proper strength by SL squat x 90 sec and symmetrical y-balance (w/in 6 cm all directions) in order to begin</p> | <p>Goals of Phase:</p> <ol style="list-style-type: none"> Progression of ROM program to near full motion Improve muscular strength and endurance Control of forces on extensor mechanism Normalized single leg static balance with proper proximal control (no valgus and hip medial rotation) Trace to no swelling Complete development of HEP including restrictions or activity modifications Minimal to no pain with return to daily activities including work <p>Criteria to Advance to Next Phase:</p> <ol style="list-style-type: none"> Strength within 80% of unaffected side Symmetrical Y-balance (w/in 6 cm in all directions) SL squat test x 90 sec (demonstrating proper form) |
| <p>Phase V Advanced Plyometric/Agility Phase (for those returning to sport) 5-6+ Weeks 10+ Expected Visits</p> | <p>Specific Instructions:</p> <ul style="list-style-type: none"> Continue with previous exercise program <p>Suggested Treatments: ROM: Progression of closed and open chain quad strengthening (0-90 degrees)</p> <p>Exercise Examples: Plyometric progression</p> <ul style="list-style-type: none"> DL to SL jumping- level ground, box jump up then down Lateral hopping Dynamic control with advanced balance exercises <p>Other Activities:</p> <ul style="list-style-type: none"> Sport specific training | <p>Suggested Criteria for Discharge:</p> <ol style="list-style-type: none"> <10% strength deficit in all LE musculature Limb similarity index of 90% or greater on functional hop tests 45/50 on Biomechanical functional assessment tests (if performed) No pain or complaints of instability with functional progression of sport specific skills > 90% on Outcome measures |

****NOTE:** Progression of functional activities should be performed only as pain and proper biomechanics allow. Emphasis should be on proper shock absorption and control of dynamic valgus stress at knee (hip medial rotation with knee valgus) with each task performed. Progression to single limb based tasks (deceleration, hopping, and cutting) should not be performed until double limb activities have been mastered. Activities requiring dynamic control of rotational stress at the knee (cutting, multiple plane lunges/jumps/hops) should not be performed until sagittal and frontal plane control has been mastered. Return to sport may occur at any time during this stage as cleared by physician and as progress and goal achievement occurs.

REFERENCES:

- Dias, JM, et al (2013). The Effectiveness of Postoperative Physical Therapy in Patients Who Have Undergone Arthroscopic Partial Meniscectomy: Systematic Review With Meta-analysis. JOSP, 43(8), 560-576.
- Ericsson YB, et al (2009). Effects of Functional Exercise Training on Performance and Muscle Strength After Meniscectomy: A Randomized Trial. Scand J Med Sci Sports, 19, 156-165.
- Kellin BM, et al (2009). Effect of Early Active Range of Motion Rehabilitation on Outcome Measures After Partial Meniscectomy. Knee Surg Sports Traumatol Arthroscop, 17, 607-616.
- Logerstedt DS, et al (2018). Knee pain and mobility impairments: Meniscal and Articular Cartilage Lesions Revision 2018. JOSP, 48(2), A1-A50.
- Reid D, et al. (2012). The Effectiveness of Post-Operative Rehabilitation Following Partial Meniscectomy of the Knee. Physical Therapy Reviews, 17(1), 45-54.