

PARTIAL MENISECTOMY / CHONDROPLASTY

Phase I: 0-2 weeks	Immediate post-operative phase
Goals	<ul style="list-style-type: none"> • Minimize knee joint effusion • Gradually increase ROM per tolerance • Encourage quadriceps function • Gradual progression of therapeutic exercises for strengthening, stretching, and balance • Normalization of gait pattern
ROM	<ul style="list-style-type: none"> • wk 0-1: 0 – 90 degrees • wk 1-2: Gradually increase as tolerated. Goal of full ROM by 4-6 wks.
WB	<ul style="list-style-type: none"> • WBAT with use of crutches until attains full knee extension, good quadriceps activation and control (QS SLR without a lag), and a normal heel-to-toe pattern.
Modalities	<ul style="list-style-type: none"> • Cryotherapy 15 minutes in duration 3x/day • IFC for pain/effusion if needed • NMES quadriceps if needed
<p>Treatment Recommendations</p> <p>Guidelines for progression based on tolerance</p>	<ul style="list-style-type: none"> • Active warm-up through ROM as tolerated (ie Bike, Nu Step) • Gentle stretching to increase ROM. Emphasis on full return of knee extension ASAP with gradual improvement for knee flexion ROM based on patient tolerance. <ul style="list-style-type: none"> Low-load long duration stretching for extension with heat if needed (1st TERT= Total End Range Time) Patellar mobilizations AROM / AAROM / PROM • Scar tissue massage • Flexibility exercises for hamstring, gastoc-soleus • Gentle strengthening exercises: Exercise in a pain-free manner. Respect patellofemoral joint reaction forces. Initiate functional CKC exercises with strengthening from terminal extension to mid-range flexion, respecting patellofemoral joint reaction forces which increase with higher knee flexion angles during CKC exercises. Initiate gentle sub-max OKC exercises from mid-range flexion to 0. Incorporate total leg strengthening. <ul style="list-style-type: none"> Biofeedback QS, SLR, CKC knee extension Multi-angle isometrics quadriceps/hamstrings at 20 degree increments Gentle short arc 0-30 quadriceps with biofeedback (if no chondrosis) Hamstring isotonics 0-90 CKC exercises: weight shifting, partial wall squats, leg press, step-ups Hip 4 way SLR, sidelying ER Gastroc soleus strengthening • Balance/proprioception exercises double leg stance progressing to single leg • CV conditioning, Core stability • Upper body exercises if desired • IFC for pain/effusion, NMES for quadriceps activation and control as needed • Ice (in stretch for extension if needed) 2nd TERT • HEP for 3rd TERT

Phase II: 2-4 weeks	Minimal protective phase
Goals	<ul style="list-style-type: none"> • Minimize knee joint effusion • Return of full range of motion • Improve muscle strength and endurance • Progression of therapeutic exercises for strengthening, stretching, and balance
ROM	<ul style="list-style-type: none"> • Gradually progression to with goal of full ROM by wks 4-6
WB	<ul style="list-style-type: none"> • No limitations. Work on normalization of gait pattern if not already achieved.
Modalities	<ul style="list-style-type: none"> • Cryotherapy 15 minutes in duration 1-2x/day • IFC for pain/effusion if needed • NMES quadriceps if needed
Treatment Recommendations Guidelines for progression based on tolerance	<ul style="list-style-type: none"> • Active warm-up: Bike, Elliptical Runner, Nu Step, Treadmill walking • Stretching for full ROM Low-load long duration stretching with heat if needed (1st TERT= Total End Range Time) Patellar mobilizations AROM / AAROM / PROM • Scar tissue massage • Flexibility exercises for hamstring, gastroc-soleus • Strengthening and endurance exercises: Exercise in a pain-free manner. Progress to full ROM exercises per tolerance. Respect patellofemoral joint reaction forces which increases with knee flexion angles during CKC exercises, increases with terminal extension angles with OKC exercises. Incorporate total leg strengthening. Incorporate functional strengthening. Biofeedback QS, SLR, CKC knee extension Quadriceps OKC isotonic short arc with progression to full ROM (if no chondrosis) Hamstring isotonic 0-90 degrees CKC exercises: Progress from mid ROM to full ROM – leg press, multi-directional step-ups, lateral step-overs, partial multi-directional lunges (wk 2) progress progress to full lunges (wk 3), sidestep with T-band, partial squats progress to 90 degree squats Hip 4 way SLR, sidelye ER Gastroc soleus exercises Total leg strengthening Euroglide (wk 3) • Balance/proprioception: single leg stance activities • CV conditioning, Core stability • Ice (in stretch if needed) 2nd TERT • HEP for 3rd TERT if needed
Phase III 4+weeks	Return to activity phase
Goals	<ul style="list-style-type: none"> • Progress muscle strength, endurance, and balance activities • Progress to higher level activities depending on functional demands and MD approval • Return back to vocational, recreational, and sport activities
Modalities	<ul style="list-style-type: none"> • Cryotherapy 15 minutes 1x/day or after strenuous activity
Treatment Recommendations	<ul style="list-style-type: none"> • Active warm-up: Bike, Elliptical Runner, Nu Step, Treadmill walking • Continue with stretching and flexibility exercises as needed

Phase III 4+weeks	Return to activity phase
Treatment Recommendations continued	<ul style="list-style-type: none"> • Strengthening and endurance exercises: Advance as tolerated with emphasis on functional strengthening <ul style="list-style-type: none"> Total leg strengthening Hip strengthening Heel raises Hamstring full ROM isotonics Quadriceps isotonics in ROM without chondrosis Isokinetic quadriceps/hamstrings in ROM without chondrosis CKC exercises: Leg press, multi-directional lunges and step-ups, squats, sideshuffle with T-band, Gastroc soleus strengthening Stairmaster, Euroglide • Dynamic balance exercises • Impact activities if 75% strength on CKC testing: sub-max agility drills progressing to full intensity agility drills, running program, plyometrics • Sports-specific activities • CV conditioning and core stability
Testing at 4-6 weeks	<ul style="list-style-type: none"> • Linea CKC testing • Biodex knee flex/ext 0-90 if indicated • Functional testing when appropriate
Return to sport/work guidelines	<ul style="list-style-type: none"> • Based on MD approval, minimal pain at rest or with activity, no knee joint effusion, full pain-free ROM, isokinetic strength and functional testing at 90 % compared to uninvolved side, good performance on functional testing (90% compared to normative data or contralateral extremity) and adequate performance on sport-specific drills • Anticipated return to full activity between 5-6 weeks