

MISHA Protocol

Phase 1: 0-4 weeks post-operative

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| Goals | <ul style="list-style-type: none"> Minimize pain Minimize swelling Begin active range of motion of knee as tolerated Initiate quad strengthening |
| Precautions/ Crutch Use | <ul style="list-style-type: none"> Weight bearing as tolerated using crutches Use of crutches week 0-2; wean from crutches once ambulating without a limp |
| Range of Motion | <ul style="list-style-type: none"> Progress ROM as tolerated – notify surgeon if patient has not achieved 90 degrees of knee flexion by week 4 |
| Strengthening | <ul style="list-style-type: none"> Restore quadriceps recruitment through strengthening exercises |
| Home Instructions | <ul style="list-style-type: none"> Keep surgical dressings clean and dry Can bathe on the 5th day after surgery (do not scrub, soak, or submerge the incisions) Continue DVT prophylaxis (prevention for blood clots) as instructed by your surgeon |
| Suggested Exercises | <ul style="list-style-type: none"> Quadriceps sets Straight leg raises 4-way hip strengthening Ankle pumps Heel slides Glute squeezes Encourage full knee extension Patella mobilizations Gentle hamstring stretching |

Phase 2: 4-8 weeks post-operative

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| Goals | <ul style="list-style-type: none"> Restore normal gait Maintain full extension, progress to full ROM Initiate return to light strength activities |
| Precautions/ Crutch Use | <ul style="list-style-type: none"> Progress to full weight-bearing, normal gait |
| Range of Motion | <ul style="list-style-type: none"> Restore full active ROM |
| Strengthening | <ul style="list-style-type: none"> Progress strengthening exercises Progress to closed-chain exercises with resistance |
| Home Instructions | <ul style="list-style-type: none"> Independence with functional tasks/ADLs |
| Suggested Exercises | <ul style="list-style-type: none"> Biking Elliptical (6 week) Leg press Closed chain terminal knee extension Full squats to 90 only Step ups and downs (front to back and lateral) 4-way standing hip exercise Balance training Aquatic activities (Pool walking, lap swim w/ no flip turns or butterfly kick) – may begin week 4 pending healed incision |

Phase 3: 8-12 weeks post-operative

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| Goals | <ul style="list-style-type: none">• Progress strength, endurance and proprioception• Maintain full ROM• Initiate and progress aerobic conditioning |
| Crutch Use | <ul style="list-style-type: none">• Full weight-bearing |
| Range of Motion | <ul style="list-style-type: none">• Maintain full ROM |
| Home Instructions | <ul style="list-style-type: none">• Restore normal activities of daily living |
| Strengthening and Suggested Exercises | <ul style="list-style-type: none">• Progress to activity-specific strengthening/resistance exercises• Begin plyometric/jumping exercises – low impact, monitoring for reactive edema• Encourage and initiate kneeling activities on foam pad• Progress swimming strokes |

Phase 4: 12+ weeks post-operative

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| Goals | <ul style="list-style-type: none">• Restore pre-operative activity level• Enhance muscular strength/endurance |
| Crutch Use | <ul style="list-style-type: none">• Full weight-bearing |
| Range of Motion | <ul style="list-style-type: none">• Maintain full ROM |
| Home Instructions | <ul style="list-style-type: none">• Restore pre-operative activity level |
| Strengthening | <ul style="list-style-type: none">• Progress activity-specific strengthening exercises• Progress plyometric/jumping exercises• Progress running program• Advance proprioceptive activities to initiate agility activities• Maintenance program for strength and endurance with a gradual return to sports/work |

General Guidelines for returning to sport:

- 4 to 6 weeks before swimming, cycling, or golfing
- 2 to 3 months before jogging
- 3 to 6 months before playing racquet sports
- At least 6 months before skiing
- High impact tasks per MD discretion