

Phase 1 (Surgery to 6 weeks after surgery)

*Framework may change depending on defect size.

Appointments	<ul style="list-style-type: none"> Rehabilitation appointments begin within 3-5 days after surgery and meet about one per week
Rehabilitation Goals	<ul style="list-style-type: none"> Protection of the post-surgical knee Restore normal knee range of motion and patellar mobility Eliminate effusion (swelling) Restore leg control
Weight Bearing	<ul style="list-style-type: none"> Week 1-3: non-weight bearing Week 4-6: Touchdown to 25% weight bearing 0-6 weeks: locked extension lock splint brace
Range of Motion Exercises	<ul style="list-style-type: none"> Full knee extension <ul style="list-style-type: none"> Knee extension on a bolster Prone hangs Passive knee flexion <ul style="list-style-type: none"> Supine wall slides Assisted heel slides Continuous passive motion machine Week 1-2: 0-90 degrees Week 3-4: 0-110 degrees Week 5-6: 0-125 degrees Biking (week 4): use contralateral leg to create ipsilateral passive range of motion Swimming weeks 3-4 <p>NOTE: range of motion exercises should be carried out frequently throughout the day with high repetitions to help remodel and contour the healing cartilage. The optimal goal during the first 6 weeks is to do 4-6 hours of range of motion exercises per day.</p>
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> Quadriceps sets Straight leg raises Four way leg lifts in standing with brace on for balance and hip strength Patellar mobilizations Soft tissue mobilization
Cardiovascular Exercise	<ul style="list-style-type: none"> Upper body circuit training or upper body ergometer
Progression Criteria	<ul style="list-style-type: none"> Patients may progress to Phase 2 if they are 6 weeks post-operative, have met the above stated goals, have trace to no effusion and full knee extension

PHASE II (begin after meeting Phase I criteria, usually 7 to 12 weeks after surgery)

Appointments	<ul style="list-style-type: none"> • Rehabilitation appointments are once a week
Rehabilitation Goals	<ul style="list-style-type: none"> • Single leg stand control • Normalize gait • Good control and no pain with functional movements, including step up/down, squat, partial lunge (staying less than 60 degrees of knee flexion and avoiding excessive weight bearing at position of the lesion)
Precautions	<ul style="list-style-type: none"> • Minimize post-activity swelling • Avoid loading knee a deep flexion angles • No impact activities until 12 weeks after surgery
Weight Bearing	<ul style="list-style-type: none"> • Begin progressive weight bearing as tolerated with axillary crutches and no brace
Suggested therapeutic Exercise	<ul style="list-style-type: none"> • Weight shifting • Increase pool program – gait drills and initiation of protected weight bearing strengthening exercises • Double leg balance and proprioceptive drills • Stationary bike • Gait drills (start with pool) • Protected weight bearing hip and core strengthening • Stretching for patient specific muscle imbalances • Quadriceps strengthening – closed chain exercises short of 60 degrees knee flexion
Cardiovascular Exercise	<ul style="list-style-type: none"> • Non-impact endurance training, swimming (stuff knee flutter kick), deep water run, upper body circuits
Progression Criteria	<ul style="list-style-type: none"> • Patients may progress to Phase II if they have: <ul style="list-style-type: none"> ○ Normal gait on level surfaces ○ Full range of motion ○ Minimal effusion ○ Ability to carry out functional movements without unloading affected leg or pain while demonstrating good control ○ Single leg balance greater than 15 seconds

PHASE III (begin after meeting Phase II criteria, usually about 4 months)

Appointments	<ul style="list-style-type: none"> • Rehabilitation appointments 1 time every 1-2 weeks
Rehabilitation Goals	<ul style="list-style-type: none"> • Good control and no pain with sport and work specific movements, including impact
Precautions	<ul style="list-style-type: none"> • Post-activity soreness should resolve within 24 hours • Avoid post-activity swelling • Avoid knee pain with strengthening
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Functional leg strengthening <ul style="list-style-type: none"> ○ Squats ○ Lunges – all three planes ○ Step backs ○ Retro step ups ○ Single leg leg press • Single leg balance and proprioception progression <ul style="list-style-type: none"> ○ Hip and core strengthening ○ Mini band drills ○ Physio ball • Stretching for patient specific muscle imbalances
Cardiovascular Exercise	<ul style="list-style-type: none"> • Non-impact activities, stationary bike, elliptical, Nordic track, swimming
Return to Sport/Work Criteria	<ul style="list-style-type: none"> • Dynamic neuromuscular control with multi-plane activities, without pain or swelling

PHASE IV (begin after meeting Phase III criteria, about 6 months after surgery)

Appointments	<ul style="list-style-type: none"> Rehabilitation appointments 1 time every 1-2 weeks
Rehabilitation Goals	<ul style="list-style-type: none"> Good control and no pain with sport and work specific movements, including impact
Precautions	<ul style="list-style-type: none"> Post-activity soreness should resolve within 24 hours Avoid post-activity swelling Avoid knee pain with impact
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to other and then 1 foot to same foot Movement control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities Sport/work specific balance and proprioceptive drills Hip and core strengthening Stretching for patient specific muscle imbalances
Cardiovascular Exercise	<ul style="list-style-type: none"> Replicate sport or work specific energy demands
Return to Moderate Impact Sport Criteria (Jogging, Aerobics)	<ul style="list-style-type: none"> 8 months post-surgery AND Good dynamic neuromuscular control with multi-plane activities, without pain or swelling
Return to High Impact Sport Criteria (Basketball, Soccer)	<ul style="list-style-type: none"> 10 months post-surgery AND Good dynamic neuromuscular control with multi-plane activities, without pain or swelling