

Patella Autograft Anterior Cruciate Reconstruction Rehabilitation Guidelines

	Goals	Weight Bearing and Brace Use	Therapeutic Exercises	Modalities	Home Exercises
Phase I Week 1	<ul style="list-style-type: none"> ●Restore full passive knee Extension ●Restore patella mobility ●Re-establish quad control ●Independent ambulation ●Diminish joint swelling and pain ●Knee flexion 90 degrees by post op day 7. 	Brace locked in full extension during ambulation. Weight bearing as tolerated with crutches	<ul style="list-style-type: none"> ●Multi-angle isometrics at 90 and 60 degrees (quadriceps) ●Knee Extension 90-40 degrees ●Overpressure into extension (knee extension should be at least 0 degrees) ●Patellar mobilization ●Ankle pumps ●Straight leg raises (3 directions) ●Mini squats and weight shifts (0-30 degrees) ●Quadriceps isometric setting ●Glut Sets ●Standing hamstring curls ●Proprioception/Balance sets 	<ul style="list-style-type: none"> ●Electrical stimulation to quadriceps during quadriceps exercises ●Cryotherapy 20min every hour with knee elevation and full extension. 	Home ice and elevation with knee in full extension. Knee must be above heart and prop ankle up. Range of motion/patella exercises 4-6 times a day out of brace. CPM 0-90 as tolerated.
Criteria to Progress: Quad Control, full passive knee extension, PROM 0-90, patella mobility, independent ambulation (1-2 crutch), minimal swelling/effusion					
Phase II Week 2-4	<ul style="list-style-type: none"> ●Maintain extension ●Protect Graft ●Prevent quad atrophy ●Decrease swelling ●Control of external knee forces ●Wean crutches by 7-10 days post op ●Flex 115 degrees by week 4 	Brace locked in extension for ambulation. Unlock brace for ambulation week 3. WBAT. Wean crutches.	<ul style="list-style-type: none"> ●Muscle stim to quadriceps exercises ●Isometric quad sets (90-60-30 degrees) ●Straight leg raises in 4 planes ●Leg press 0-60 degrees ●Knee extension 90-40 degrees ●Half squats 0-40 degrees ●Weight shifts ●Stretch hamstring and calf ●Standing hamstring curls ●Bicycle ●Proprioception training ●Overpressure into extension ●PROM 0-115 ●Patellar mobilization ●Progressive extension resistance (1lb/wk) ●Eccentric quad 40-100 degrees (isotonic) ●Front step down/lateral step-over 	<ul style="list-style-type: none"> ●Electrical stimulation to quadriceps ●Ice, compression, elevation 4-6 times a day 	Home ice and elevation with knee in full extension. Keep knee above heart and prop ankle only. Range of motion/patella exercises 4-6 times daily out of brace. Progress to stationary bike, stairmaster, or Nordic Track as tolerated
Criteria to Progress to Controlled Ambulation: AROM 0-115, Quadriceps strength 60% of well knee (isometric at 60 degrees), Minimal effusion					
Phase III Week 4-7	<ul style="list-style-type: none"> ●Restore full knee flexion ROM 130 degrees by 4 weeks ●Restore leg strength ●Improve balance, and neuromuscular control ●Control walking forces 	No Brace or Immobilizer. Knee sleeve for swelling and support OK.	<ul style="list-style-type: none"> ●Continue Phase II program ●PROM 0-130 degrees ●Begin step up Program at 2inches and increase as tolerated ●Closed kinetic chain rehab and proprioception training 	Ice, compression as needed	Home program 4-5 times daily using other leg to assist in ROM. Stationary bicycle, Nordic Track, and stair stepper for endurance.
Criteria to Progress to Moderate Protection: AROM 0-125, Quadriceps strength 60% of well knee, No patellofemoral complaints					
Phase IV Week 7-12	<ul style="list-style-type: none"> ●Normalize quad strength ●Enhance power and endurance ●Improve neuromuscular control 	No Brace or Immobilizer. Knee sleeve for swelling and support OK	<ul style="list-style-type: none"> ●Eccentric quad exercise ●CKC exercise ●Step ups ●Minisquats ●Leg press ●Knee extension 90,40 degrees ●Hip abd/add strength ●Hamstring curls/stretch ●Calf raises ●Bicycle ●Pool running ●Walking program ●Initiate isokinetic work 100, 40 degrees 		As per phase three
Criteria to Progress to Light Activity: AROM 0-130, Quadriceps strength 70% of well knee, Flex/Extension strength ratio 70% or better, No/minimal effusion					
Phase V Week 10-14	<ul style="list-style-type: none"> ●Develop strength and endurance 	No Brace or Immobilizer. Knee sleeve for swelling and support OK	<ul style="list-style-type: none"> ●Initiate running program ●Initiate plyometric program ●Initiate agility drills ●Progress sport specific program ●Continue strengthening 		
Criteria to Progress to Sports: Proprioceptive test 100% of well leg, Quadriceps 80% of well knee					
Phase VI Week 14+	<ul style="list-style-type: none"> ●Gradual return to sports ●Improve coordination and endurance 		<ul style="list-style-type: none"> ●CKC strengthening program ●Strengthening program ●Plyometric program ●Running drills ●Agility drills ●Sport specific training 		