

Allograft Anterior Cruciate Reconstruction Rehabilitation Guidelines

	Goals	Weight Bearing and Brace Use	Therapeutic Exercises	Modalities	Neuromuscular Training	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 (knee extension) 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 Quadriceps isometric setting Proprioception/balance Standing hamstring curls 	<ul style="list-style-type: none"> Electrical stimulation to quadriceps during voluntary quadriceps exercises Cryotherapy 20min every hour with knee elevation and full extension. 	<ul style="list-style-type: none"> Open chain passive and active joint repositioning at 90,60 degrees Closed chain squats/weight shifts with repositioning 	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 use as tolerated.
Criteria to Progress: Quad Control, full passive knee extension, PROM 0-90, patella mobility, independent ambulation, minimal swelling/effusion						
Phase II Week 2-4	<ul style="list-style-type: none"> Maintain extension Gradual knee flexion Neuromuscular control Restore proprioception Normalize patellar mobility Minimize swelling and pain Wean crutches by 14 days Wean Brace by 21 days 	Brace locked in extension for ambulation. Weight bearing as tolerated. Wean crutches.	<ul style="list-style-type: none"> Muscle stim to quadriceps exercises Isometric quad sets Straight leg raises in 4 planes Leg press 0-60 degrees Knee extension 90-40 degrees Half squats 0-40 degrees Weight shifts Front/Side lunges Standing hamstring curls Bicycle Proprioception training Overpressure into extension PROM 0-100 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 	<ul style="list-style-type: none"> Open chain passive/active joint repositioning 90,60,30 degrees Closed chain joint repositioning during squat/lunge Tilt board 	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 as tolerated
Criteria to Progress: AROM 0-115, Quadriceps strength 60% of well knee (isometric at 60 degrees), Minimal effusion, No joint line or patellofemoral pain						
Phase III Week 4-10	<ul style="list-style-type: none"> Restore full knee flexion ROM 125 degrees by 4 weeks Restore leg strength Improve balance, and neuromuscular control Restore confidence and function 	No Brace or Immobilizer. Knee sleeve for swelling and support OK.	<ul style="list-style-type: none"> Isometric strengthening Leg press 0-100 Knee extension 90-40 Hamstring Curls (isotonic) Hip adduction/adduction and flexion/extension Lateral step-over, lunge, and step-up Front step downs Wall and vertical Squats Toe calf raises Bicycle Stair stepper machine Pool program (backward running, hip, leg) Progress at week 6 to agility drills, tilt board balance, ball throw, pool forward running Progress at week 8 to plyometric leg press, tilt board squatting, single leg press 	Ice, compression as needed	<ul style="list-style-type: none"> Tilt board squats (perturbation) OKC passive/active reposition CKC repositioning on tilt board CKC lunges 	Home program 4-5 times daily using other leg to assist in ROM. Stationary bicycle and stair stepper for endurance.
Criteria to Progress: AROM 0-125, Quadriceps strength 75% of well knee, Knee Flex/Extension strength ratio 70%, No pain, Hop test 80% of well knee						
Phase IV Week 10-16	<ul style="list-style-type: none"> Normalize strength Enhance power and endurance Improve neuromuscular control Sport specific drills 	No Brace or Immobilizer. Knee sleeve for swelling and support OK	<ul style="list-style-type: none"> Begin running program week 10-12 (straight ahead) Initiate light sport program (example: golf) Continue all strengthening drills Progress to lateral agility drills at week 14 		<ul style="list-style-type: none"> Lateral step-over cones Lateral lunges Tilt board drills 	
Criteria to Progress: Full ROM, Quadriceps strength 80% of well knee, Flex/Extension strength ratio 70% or better, Proprioceptive test 100% vs well knee						
Phase V Week 16+	<ul style="list-style-type: none"> Gradual return to full sports Normalize strength and control 	No Brace or Immobilizer. Knee sleeve for swelling and support OK	<ul style="list-style-type: none"> Continue strengthening, neuromuscular, and plyometric drills Progress sport specific program (running, cutting, agility) 			

