

KEVIN M. ROTH, MD

Orthopedic Sports Medicine www.KevinRothMD.com

ACL RECONSTRUCTION REHABILITATION PROTOCOL

(TO BE GIVEN TO PHYSICAL THERAPIST)

	WEIGHT BEARING	BRACE	ROM	THERAPEUTIC EXERCISE
WEEK 1:	Weight bearing to tolerance, unless otherwise specified	 Locked at 0° extension Worn at all times and while sleeping Ok to remove for hygiene and exercise 	As tolerated	 Flexion: wall slides, heel slides to patient tolerance Extension: Passive knee extension using towel roll, prone heel hangs Strengthening: Quad setting with knee support, hamstring digs with knee support, plantarflexion/dorsiflexion, eversion/inversion strengthening, SLR with brace in full extension until quad strength prevents extension lag
WEEK 2:	Weight bearing with assistive devices as needed	Unlock brace when quad control is adequate for knee support	• As tolerated, goal for knee flexion is 90°	 Flexion: wall slides, heel slides, sitting flexion Extension: Passive knee ext using towel roll, prone hangs Open kinetic chain: straight leg raise, Hip abd/adduction, hip extension, hamstring set or prone hamstring curl Closed Kinetic Chain: Heel raises, leg press with minimal resistance, weight shifting onto single leg Trunk stabilization Manual Interventions: patellar mobs, tibiofemoral mobs into extension, soft tissue as indicated



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WEEKS 3-4:	Achieve full weight bearing without assistive device with functional gait	• None	 Increase flexion ROM approx. by 10° per week past 90° Achieve and maintain full passive and active extension 	 Open Kinetic Chain: Straight leg raises into flexion with emphasis on endurance of quadriceps and full knee extension Open Kinetic Chain: Hip strengthening and hamstring curls Open Kinetic Chain: Short arc quadriceps extension Closed Kinetic Chain: leg press (increasing resistance, progress to single leg), partial squat to 60°, step ups, heel raises progressing to single leg Manual interventions, modalities and trunk stabilization exercises
WEEKS 4- 6:	Gradually discontinue crutch use Full weight bearing by end of 4 weeks	• None	Full active and passive extension Flexion within approx. 10° of uninvolved leg	 Bike Closed Kinetic Chain: step downs, single leg balance, terminal active knee extension to 0° against resistance, full squat to 90°, single leg squat, elliptical, treadmill walking if gait pattern is functional Advance hip/core/glutes Functional Goals: reciprocal stair ascending, walking with normal gait pattern
WEEKS 6-8:	Full weight bearing	• None	Full active and passive extension and flexion ROM	 Progress intensity of strengthening program incorporating single leg activities Cardio activities: elliptical, treadmill, stair climber, walking outdoors, or uneven surfaces Closed Kinetic Chain: step downs, lateral step/down, sustained squat side stepping
WEEKS 8-12:	Full weight bearing	• None	Full and pain free range of motion	Dynamic single/double leg functional exercises as anticipated for sport activity



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WEEKS 12+:	Full weight bearing	• None	Full and pain free range of motion	 Progress to running when: 90% of quadriceps strength as measured, single leg squat depth, hop Testing, single leg balance duration Return to running: treadmill walk/run intervals, treadmill running, track running (run straight, walk turns), track running full, road running Agility and plyometric exercises Lateral and cutting maneuvers Jumping activities on gravity eliminated shuttle (progress to single leg) @ 16 weeks Jogging on trampoline @ 16 weeks
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Long term goals:

Return to agility sport

- 9 months for autograft reconstruction
- 12 months for allograft reconstruction