

## KEVIN M. ROTH, MD

Orthopedic Sports Medicine / Fracture Care 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 until adequate quad control	As tolerated	<ul> <li>Flexion: wall slides, heel slides to patient tolerance</li> <li>Extension: Passive knee extension using towel roll, prone hangs</li> <li>Strengthening: Quad setting with knee support, hamstring digs with knee support, plantarflexion/dorsiflexion, eversion/inversion strengthening</li> </ul>
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°	<ul> <li>Flexion: wall slides, heel slides, sitting flexion</li> <li>Extension: Passive knee ext using towel roll, prone hangs</li> <li>Bike</li> <li>Open kinetic chain: straight leg raise, Hip abd/adduction, hip extension, hamstring set or prone hamstring curl</li> <li>Closed Kinetic Chain: Heel raises, leg press with minimal resistance, weight shifting onto single leg</li> <li>Trunk stabilization</li> <li>Manual Interventions: patellar mobs, tibiofemoral mobs into extension, soft tissue as indicated</li> </ul>



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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     Achieve and maintain full passive and active extension	<ul> <li>Open Kinetic Chain: Straight leg raises into flexion with emphasis on endurance of quadriceps and full knee extension</li> <li>Open Kinetic Chain: Hip strengthening and hamstring curls</li> <li>Open Kinetic Chain: Short arc quadriceps extension</li> <li>Closed Kinetic Chain: leg press (increasing resistance, progress to single leg), partial squat to 60°, step ups, heel raises progressing to single leg</li> <li>Manual interventions, modalities and trunk stabilization exercises</li> </ul>
WEEKS 4- 6:	Gradually discontinue crutch use	• None	Full active and passive extension     Flexion within approx. 10° of uninvolved leg	<ul> <li>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</li> <li>Functional Goals: reciprocal stair ascending, walking with normal gait pattern</li> </ul>
WEEKS 6-8:	Full weight bearing	• None	Full active and passive extension and flexion ROM	<ul> <li>Progress intensity of strengthening program incorporating single leg activities</li> <li>Cardio activities: elliptical, treadmill, stair climber, walking outdoors, or uneven surfaces</li> <li>Closed Kinetic Chain: step downs, lateral step/down, sustained squat side stepping</li> </ul>
WEEKS 8-12:	Full weight bearing	• None	Full and pain free range of motion	<ul> <li>Jumping activities on gravity eliminated shuttle (progress to single leg)</li> <li>Jogging on trampoline</li> <li>Dynamic single/double leg functional exercises as anticipated for sport activity</li> </ul>



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• Full weight bearing  • None  • Full and pain free range of motion  • Progress to running when: 9 quadriceps strength as meast 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 exerce  • Lateral and cutting maneuve	rises
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### Long term goals:

#### Return to agility sport

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