



PCL RECONSTRUCTION TREATMENT GUIDELINES

Last Updated: Oct 2012

PHASE	Goal	EXERCISE/METHODS
Phase 1 Preoperative	Decrease swelling	Cryo/Cuff with elevation (10-15 min)
	Restore full terminal knee extension and flexion	Extension: prone hangs or heel props (7-10/min) Flexion: heel slides, active assist flexion
	Normalize gait	Weight bearing as tolerated Treadmill: forward/backward (5-10 min)
	Normalize strength	Closed chain: leg press, total gym (10-50 deg), toe raises Open chain: Quad machine (90-30 deg), hamstring machine 4-way SLR. All exercises 3-5 sets, 12-15 reps Electrical stimulation for VMO PRN
	Maintain aerobic fitness	Low-impact activities (bike, treadmill walking)
	Home program	Ice/elevation: 20 min on/60 min off Passive extension/flexion activities Lower extremity strengthening as indicated All activities 3-4 times/day or as indicated
Phase 2 Postoperative Days 1-7	Control swelling	Ace wrap with elevation-ankle pumps (20 min)
	Ensure soft tissue healing (wound care)	Monitor wound site for severe redness and drainage
	Passive ROM -- Obtain full passive extension of knee	Hands on stretching. Towel stretch (towel around foot –knee straight)
	Normalize gait	Weight bearing as tolerated in locked brace
	Increase strength	SLR, Hip ABD/ADD, quad sets
Home program	As above 4-5 times/day	
Phase 3 Postoperative Days 8-20	Control swelling	Ace wrap with elevation-ankle pumps (20 min)
	Restore full terminal knee extension and flexion to 70 deg	Extension: Quad Sets for home. Hands on PRN Passive Flexion: heel slides with belt or towel
	Normalize gait	Weight bearing as tolerated

		Treadmill: forward (5-10 min) Calf, hamstring, hip flexor stretching (3 times, 30 sec hold) *emphasize heel to toe gait*
	Increase strength	SLR, Hip ABD/ADD,quad sets, Electrical muscle stimulation PRN (15 min)
	Home program	Ice/elevation: 20 min on/60 min off Extension/flexion activities as instructed. Lower extremity strengthening as indicated All activities 3-4 times/day or as indicated *avoid prolonged lying with pillow under knee*
Phase 4 Postoperative Weeks 3	Control swelling	Ice PRN. Ace wrap PRN.
	Full passive knee extension and flexion (0-125 by 4 wks)	Extension: Hands on (PRN) Flexion: heel slides, active assist flexion, and chair stretch
	Normal ambulation	Treadmill: forward/backward (5-10 min) Increase grade with treadmill as tolerated Calf, hamstring, hip flexor stretching (3 times 30 sec hold)
	Pain-free strengthening	Continue all previous exercises
Phase 5 Postoperative Weeks 4-5	Improve Strength	Total gym (30-40 deg) , leg press (30-40deg), single - leg toe raises, step ups, 4-way SLR with tubing (steamboats), rebounder, Hip Extension – prone. Mini squats, single-leg toe raise, wall sit. All exercises 3-5 sets, 12-15 reps
	Aerobic Fitness	Cycling, swimming, stairmaster
Phase 6	Brace Fitting	You will be fit with a functional PCL brace (can remove while sleeping).
	Driving	If FWB and can perform all previous phases CKC exercises, then patient can drive a car.
	Strength	Continue previous exercises/rehab program
Phase 7 Postoperative Weeks 7-15	Criteria for progression to Phase 7	No effusion Painless full ROM Minimal crepitus

Improve strength

Closed chain: leg press (10-50 deg),
toe raises. Total gym level 8-10 without
pain. Trampoline – hopping/jogging,
Treadmill – lateral walking, lunges -
clockface, bodyblade (single-leg with BB
in opposing hand). Open chain: Quad
machine (90-30 deg),
All exercises: 3 sets 15-20 each

**Phase 8
Postoperative
Weeks 16**

Implement running program if indicated

Walk/jog cycles (in straight line)
3-5 min warm-up (walk)
*10-30 sec jog/60 sec walk for 10-20 min
3-5 min cool-down (walk)
*increase jog time and decrease walk time
based upon patient response.

**Phase 9
Postoperative
Weeks 17-23**

Improve strength

Open chain: Hamstring machine,
3 sets 15-20 each. Skiers Edge, Lateral
shuffles/braiding

**Phase 10
Postoperative
Weeks 24**

Implement sport specific activity

*Progression program of strength training
And agility/speed drills ie., jumping rope
*Program should be based upon specific
patient needs. Biodex Test.

Discharge Criteria
(Return to Sports)

Score great than 90 on Lysholm with no
locking or instability.
Ratio of 80% involved to uninvolved on
isokinetic test at 6 months post-op.
Ratio of 80% on one-legged jump.



Jason K. Lowry, MD