

Rehabilitation Guidelines after Multiple Ligament Knee Reconstruction

UPMC Sports Medicine

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The rehabilitation guidelines are presented in a criterion based progression program. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status, rehab compliance, tissue quality and injury severity. Specific time frames, restrictions and precautions may also be given to protect healing tissues and the surgical repair/reconstruction.

General guidelines immediately after surgery:

- WBAT for PCL or ACL/PCL injuries
- o NWB for combined MCL reconstruction for 3 weeks, then PWB for 3 weeks, then FWB at 6 weeks
- No active hamstring activity for 8 weeks after PLC reconstruction
- No hamstring strengthening for 16 weeks after PLC reconstruction

PHASE I (0-2weeks)

REHAB GOALS	
REHAD GOALS	Control inflammation and pain
	• Full active extension
	Achieve quadriceps control
BRACE	Locked in extension for ambulation for 4 weeks for
1	ACL/PCL and/or MCL reconstructions, then unlocked for
	ambulation for 2-4 weeks until normal gait is established
	Locked in extension for ambulation for 12 weeks for PCL
	reconstruction
	May remove for ROM exercises
	 Keep brace locked in extension for SLRs for 6 weeks to
	prevent posterior sag, may remove when quad control is
	good enough to prevent extension lag
WEIGHTBEARING STATUS	WBAT with crutches for ACL/PCL
	NWB for 3 weeks, PWB for 3 weeks, then FWB for MCL
	NWB for 6 weeks, PWB for 6 weeks, then FWB for PLC
SUGGESTED	SLR in all planes (brace locked in extension)
THERAPEUTIC	Calf pumps, quadriceps sets
EXERCISE	Electrical stimulation as needed
	Patellar mobilizations
	Balancing activities on a stable platform with eyes open and closed

PHASE II (2-6 weeks)

CRITERIA	Good quad set and SL with braceFull extension
REHAB GOALS	 No active inflammation Achieve 90 degrees of flexion Protect graft fine in
BRACE AND WEIGHTBEARING	 Protect graft fixation As above in Phase I
SUGGESTED THERAPEUTIC EXERCISE	 Begin ROM (Prone passive knee flexion to 90 degrees with care to avoid posterior tibial sag) Wall slides then progress to mini squats (0-45 degrees) when quad control is good (AVOID if PLC reconstruction was performed for 8 weeks)
	 Pool walking to restore normal gait pattern Toe raises Gastrocnemius stretches Ankle strengthening with sports tubing (Theraband)

PHASE III (6-12 weeks)

CRITERIA	Who fly
	Knee flexion to 90 degrees
	No active inflammation
REHAB GOALS	Good quadriceps control
TOTALD GOALS	• Achieve full flexion
	• Establish normal gait
DDAGE AND	Progress with strengthening and endurance
BRACE AND	• FWB with brace unlooked
WEIGHTBEARING	• FWB with brace unlocked, may discontinue brace when
STATUS	normal gait is established for ACL/PCL and/or MCL reconstructions
	• PWR with broad 1 - 1
SUGGESTED	PWB with brace locked in extension for PLC reconstruction
THERAPEUTIC	Desiliactive knee flexion at 6 weeks for A CT (Der
manage control and the state of	Techetmotion
EXERCISE	Degin the following at 6 weeks for ACT more
	The recollstruction
	O Stationary bike (low resistance high sent with
	clipsso as to prevent hamstring contraction)
	o Mini-squats to 45 degrees
	Leg press to 60 degrees
	O Stairmaster
	o Elliptical trainer
	o Proprioception
	I William Standing
	Unstable platform (BAPS) with eyes open and
	0.0300
	 Standing ball throwing and catching

PHASE IV (3-6 months)

CRITERIA	 Full, pain-free range of motion No patellofemoral irritation Sufficient strength and proprioception to progress to functional activities
REHAB GOALS SUGGESTED	 Normal gait Improve strength and proprioception Maintain FROM
THERAPEUTIC EXERCISE	 Progress with flexibility and closed-chain strengthening program Swimming (no breast stroke) Stationary bike (may increase resistance)
	Box steps (6 and 12 inches) Jogging, straight ahead, may be started around 4-5 months when quad strength is 90% of contralateral side

CRITERIA Full, pain-free motion No effusion Sufficient hamstring and quadriceps strength to progress to agility exercises REHAB GOALS Progress with closed chain quadriceps and hamstring strengthening Stair goging Box jumps (6 to 12-inch heights) Lateral slide board Ball throwing and catching on unstable surface Functional Training RehAB GOALS REHAB GOALS REHAB GOALS Progress with closed chain quadriceps and hamstring strengthening Lateral slide board Box jumps (6 to 12-inch heights) RehAB GOALS REHAB G	PHASE V (6-9 months)	
No effusion	CRITERIA	Full, pain-free motion
REHAB GOALS Return to all recreational and sporting activities by 9 months Maintain full, painless motion Progress with strengthening, agility, and endurance Progress with closed chain quadriceps and hamstring strengthening Progress with closed chain quadriceps and hamstring strengthening. Proprioception Progress with closed chain quadriceps and hamstri		No effusion
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Increase heights for plyometric conditioning		
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RELEASE TO SPORTS	 Usually occurs at 9-12 months post-op Full, painless range of motion No effusion Quadriceps and hamstring strength 90% of contralateral side No apprehension with all sports specific drills
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