



Multiple Knee Ligament Reconstruction Rehabilitation Protocol

Curtis A Bush
871-878-5300

The intent of this protocol is to provide the therapist and patient with guidelines for the post-operative rehabilitation course after surgery. It is by no means intended to serve as a substitute for one's clinical decision making regarding the progression of a patient's post-operative course. It should serve as a guideline based on the individual's physical exam/findings, progress to date, and the absence of post-operative complications. If the therapist requires assistance in the progression of a post-operative patient they should consult with Dr. Bush.

Progression to the next phase based on Clinical Criteria and/or Timeframes as appropriate.

ACL/PCL/MCL Reconstruction

●= Do exercise for that week

	Week													
Initial Exercises	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Flexion/Extension – prone with brace	●	●	●	●	●	●	●	●	●	●	●			
Flexion/Ext – seated/calf assisted							●	●	●	●	●			
Patella/Tendon mobilization	●	●	●	●	●	●	●	●						
Quad series	●	●	●	●	●	●	●	●						
Hamstring sets												●	●	●
Sit and reach for hamstrings (no hypertex)					●	●	●	●						
Ankle pumps	●	●	●	●	●	●	●	●	●					
Crutch weaning							●	●	●					
Toe and heel raises								●						
Balance series								●	●	●	●	●	●	●
Cardiovascular Exercises	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Bike with both legs – no resistance						●	●	●	●					
Bike with both legs - resistance									●	●	●	●	●	●
Aquajogging											●	●	●	●
Treadmill – walking 7% incline									●	●	●	●	●	●
Swimming with fins – light flutter kick									●	●	●	●	●	●
Elliptical trainer											●	●	●	●
Rowing											●	●	●	●
Stair stepper												●	●	●
Weight Bearing Strength	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Double knee bends									●	●	●	●	●	
Double leg bridges									●	●				
Reverse lunge – static holds									●	●				
Beginning cord exercises									●	●	●			
Balance squats											●	●	●	●
Single leg deadlift											●	●	●	●
Limited Leg press (max 70° knee flexion)								●	●	●	●	●	●	●
Sports Test exercises														●
Agility Exercises	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Running progression														●
Initial – single plane														●
Advance – multi directional														●

Functional sports test															●
High Level Activities	1	2	3	4	5	6	7	8	9	10	12	16	20	24	
Golf progression															●
Outdoor biking, hiking, snowshoeing															●
Skiing, basketball, tennis, soccer after 7-9 months															

*Avoid posterior tibial sag, avoid tibial external rotation x 4 months.

*Hold open chain hamstring exercise x 4 months.

Multiple Knee Ligament Reconstruction Rehabilitation Protocol

1 week Post-Op

- * Non weight bearing x 4 weeks
- * CPM at home 4-6 hours per day, ROM as tolerated
- * Progressive ROM as tolerated in PT
- * Begin formal physical therapy
- * Aggressive patella mobilization and quad strengthening
- * AVOID posterior tibial stress- all ROM exercises should be done prone to avoid posterior stress on the tibia
- * **Do Not do wall slides**, this causes posterior translation of the tibia.
- * **Always support against posterior translation of the tibia.** Use a towel under the proximal tibia or manually hold.
- * **No active hamstrings** are used for the first 8-10 weeks to avoid forced posterior translation of the tibia.
- * Soft tissue work can be useful in relaxing the hamstrings and decreasing swelling.
- * Control pain & Minimize swelling
- * Practice appropriate wound care
- * Hinged knee immobilizer (posterior support with PCL reconstruction)
- * Ambulate with crutches – strict non-weight bearing
- * Ice & Elevation

2-4 Weeks Post - Op

- * Control swelling
- * Hip & ankle ROM
- * Ambulate with crutches – strict non-weight bearing
- * AVOID posterior tibial stress- all ROM exercises should be done prone to avoid posterior stress on the tibia

- * Titrate down on narcotic usage
- * Quadriceps re-education
- * Aggressive patellar mobilization.
- * Stationary bicycle at 6 weeks
- * Cryotherapy (ice)
- * Continue with home knee exercises

4-8 Weeks Post - Op

- * Stop narcotics
- * Gait training
- * Leg press in 90 - 40° arc, closed chain exercises
- * Straight leg raise
- * No open-chain hamstring strengthening
- * Calf raises
- * Patellar mobilization
- * Partial weight bearing 50% at 6 weeks

8-12 Weeks

- * Advance weight bearing as tolerated
- * Gait training – brace open to 60 degrees
- * Continue strength training
- * Fit for functional brace
- * Patellar Mobilization
- * Progress ROM as tolerated
- * Advance to elliptical
- * Swimming program

3-6 Months Post-Op

- * Progress multi-plane closed chain exercises (full arc)
- * Begin functional exercises
- * Proprioception
- * in-line treadmill at 6 months

9-12 Months Post-Op

- * In-line jogging
- * Return to sport
 - 80% Quad & Hamstring strength
 - Full ROM
 - No swelling or effusion
 - Stability
 - Completion of running program

