

Knee ACL/PCL/MCL Reconstruction Physical Therapy Protocol



Dr. Christopher Ellingson

Weeks 1-2

GOALS

- Post-op brace to maintain full extension

WEIGHT BEARING

- Brace locked in extension
- TTWB with crutches and brace

RANGE OF MOTION

- Passive range of motion exercises:
- Limits: 0° to 40°

THERAPEUTIC EXERCISES

- Quad sets & SLR (brace on) with no lag
- Ice or Cryocuff Unit on knee for 20-30 minutes every hour
- No active knee flexion or open chain knee flexion
- No hamstring workouts

Weeks 3-6

GOALS

- Supervised physical therapy 2-3 times per week

WEIGHT BEARING

- No weight bearing with knee in flexed position
- TTWB with brace locked in full extension
- May unlock for sitting and sleeping with limit 0°-90°
- May not remove brace for HEP

RANGE OF MOTION

- 0°-90°

THERAPEUTIC EXERCISES

- Continue SLR's in brace with foot straight up
- Quad isometric sets
- Ankle pumps
- Heel slides
- Patellar mobilization exercises
- No active hamstring workouts

Week 7

GOALS

- Perform scar massage aggressively

WEIGHT BEARING

- No weight bearing with knee in flexed position
- Continue TTWB with brace locked in full extension

RANGE OF MOTION

- Advance range of motion as tolerated with brace on
- No limits

THERAPEUTIC EXERCISES

- Continue with all of the above exercises and ice treatments
- Stationary bike for range of motion (short crank or high seat, no resistance)
- Ok to remove brace for bike

*If you have any problems or questions,
please call your doctor's office (8am-5pm).
Answering service for after hours.*

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- Progressive SLR program for quad strength with brace on
- Start with 1 lb, progress 1-2 lbs per week
- Hamstring active knee flexion
- Seated leg extension (90°-40°) against gravity with no weight
- Hip adductor and flexor strengthening

Week 8

WEIGHT BEARING

- WBAT with brace locked in extension
- No weight bearing with knee in flexed position
- D/C crutches when stable

THERAPEUTIC EXERCISES

- Continue with all of the above exercises
- Flexion exercises seated AAROM
- AAROM (using good leg to assist) exercises (4-5x/day) with brace on
- Continue range of motion stretching and overpressure into extension
- SLR's - with brace on
- Leg press 0°-70° arc of motion

Week 9

WEIGHT BEARING

- WBAT with brace locked in extension

RANGE OF MOTION

- Self range of motion 4-5x/day using other leg to provide range of motion
- Advance range of motion as tolerated - no limits, may remove brace for range of motion

THERAPEUTIC EXERCISES

- Continue with all of the above exercises
- Hamstring and calf stretching
- Regular stationary bike if flexion > 115°
- Heel raises with brace on
- Hip/core strengthening and proprioceptive training

Week 10

THERAPEUTIC EXERCISES

- Continue with all of the above exercises
- Unlock brace for ambulation when quad control adequate
- Mini squats (0°-60°) and quad strengthening
- 4-inch step ups
- Isotonic leg press (0°-90°)
- Lateral step out with therabands
- Hip strengthening

Week 11

WEIGHT BEARING

- D/C brace if quad control adequate

RANGE OF MOTION

- Advance range of motion
- Goal: 0 to 115°, walking with no limp

THERAPEUTIC EXERCISES

- Add ball squats
- Initiate retro treadmill with 3% incline (for quad control)
- Increase resistance on stationary bike
- Mini-squats and weight shifts
- Sport cord (bungee) walking
- 8-inch step ups
- 4-inch step downs

Week 12

THERAPEUTIC EXERCISES

- Begin resistance for open chain knee extension
- Swimming allowed
 - Flutter kick only
 - No whip kicks

- Bike outdoors
- Level surfaces only
- Progress balance and board throws
- Plyometric leg press
- 6–8-inch step downs
- Start slide board
- Jump downs (double stance landing)
- Progress to light running program and light sport specific drills if:
 - Quad strength > 75% contralateral side
 - Active range of motion 0 to > 125°
 - Functional hop test >70% contralateral side
 - Swelling < 1cm at joint line
 - No pain
 - Demonstrates good control on step down

Month 12+

- Functional hop test > 90% contralateral side
- Doctor visit

Week 12-22

THERAPEUTIC EXERCISES

- Stairmaster machine
- If full range of motion, quad strength > 80% contralateral side, functional hop test >85% contralateral side, satisfactory clinical exam
- Progress to home program for running
- Progress to hops, jumps, cuts and sports-specific drills. Begin to wean from supervised therapy
- Walk to run program

Month 6-12

CRITERIA TO PROGRESS TO RETURN TO SPORTS

- Full active range of motion
- Quadriceps >90% contralateral side
- Satisfactory clinical exam