



PCL Reconstruction

General Principles:

This protocol was designed to provide the rehabilitation professional with a guideline of postoperative care. It should be stressed that this is only a protocol and should not be a substitute for clinical decision making regarding a patient's progression. Actual progression should be individualized based upon your patient's physical examination, progress, and presence of any complications.

NOTE: Protocol may need to be modified if multiple ligaments are involved.

Ligament testing should only be performed by the physician throughout the protocol.

PHASE I: (Immediate)

Week 1 - 6

Orthotics-

1. Knee brace should be worn, locked in full extension at all times except for exercise
2. Brace to be worn during exercise, but may be opened for ROM allowed per protocol

Weight Bearing-

1. Non-Weight Bearing at all times if multiple ligaments are involved
2. If Isolated PCL reconstruction:
 - a. Toe Touch for **Week 1-2**, 25% at **Week 3**, 50% at **Week 4**, 75% at **Week 5**,
 - b. Full Weight Bearing at **Week 6** with normal gait

Modalities (PRN)-

1. Ice, Electrical Stimulation
2. Compression and elevation as needed for control of pain and swelling
3. Ice for 10-20 minutes following exercises throughout protocol
4. May use Electrical stimulation if needed to assist with Quad firing
5. Moist heat and/or pulsed Ultrasound after 48 hours

ROM-

1. Week 1-2: Passive ROM from 0° to 90° of flexion
Week 3-4: Passive ROM from 0° to 110° of flexion
Week 5-6: Passive ROM from 0° to 120° of flexion
***** Knee flexion ROM to be performed in open chain only to avoid posterior stress on graft**

2. NO active or resisted knee flexion

Exercises-

1. Quad Sets
2. Ankle Pumps, Ankle Strengthening w/ t-band
3. Hamstring Stretching, Towel Calf Stretching, Prone Hangs
4. Straight Leg Raises in all planes (May brace must be locked in full extension)
 - a. No resistance
 - b. May need to avoid other planes if multiple ligaments are involved



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5. Standing Hip strengthening
 - a. Knee brace locked in full extension
 - b. Resistance kept above the knee
6. Prone Quad isometrics at 30° and 60°

PHASE II: (Intermediate)

Week 7 - 12

Orthotics-

1. Continue PCL brace for daily activity and exercises
2. Brace to be gradually opened up to full ROM as muscular control improves

Weight Bearing-

1. Multiple ligament injury: Progress gradually to Full Weight Bearing
2. Isolated PCL reconstruction: Should be Full Weight Bearing with normal gait

Modalities (PRN)-

1. Continue Phase I modalities as needed

ROM-

1. Passive Knee ROM to full as tolerated. May now perform with patient seated or supine
2. Active hamstring exercises from 0 to 60°

Exercises-

1. Stationary Bike
2. Isometric Quads at 60, 40, and 20°
3. Shuttle / Leg Press from 90° to full extension
 - a. Bilateral only
 - b. Progress resistance as tolerated
4. Calf Raises
5. Wall Squats / Mini-Squats to 45°
6. Active hamstring curl 0 to 60°
7. Open Chain Knee Extension
 - a. Short arc progressing to Long arc
 - b. Progress to resistance as tolerated
8. Multi-Hip Machine
 - a. Resistance kept above the knee joint
9. Standing balance / proprioception

PHASE III (Strengthening)

Week 13 – 16

Orthotics-

1. Continue PCL brace for daily activity and exercises

Weight Bearing-



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1. Full Weight Bearing as tolerated

Modalities (PRN)-

1. Continue Phase I modalities as needed

ROM-

1. Active and Passive knee ROM progressing to full as tolerated

Exercises-

1. May progress to Elliptical runner
2. Begin Unilateral Shuttle / Leg Press
3. Step Ups, progress height of step as tolerated
4. Initiate LIGHT resisted knee flexion
 - a. Short arc, progressing to Long arc
 - b. Progress resistance as tolerated
 - c. May progress to weight machine hamstring curls as appropriate
5. Isokinetics
 - a. High speeds only (240-300 degrees per second)

PHASE IV (Advanced Strengthening)

Week 17 – 20

Orthotics-

1. May discontinue brace for daily activity
2. Continue use of brace for rehabilitation, sport, and high-risk activity

Modalities (PRN)-

1. Continue only as needed

ROM-

1. Maintain full active and passive knee ROM

Exercises-

1. Progress to aggressive strengthening of the quad and hamstrings
2. Progress Isokinetics
 - a. 180 to 300 degrees per second
3. Initiate straight ahead jogging

Week 21+

Orthotics-

1. Continue use of PCL brace for high risk activity and exercise until notified by physician

Exercises-

1. Progress exercises as tolerated
2. Initiation of light sports activity
 - a. Plyometrics



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- b. Shuttle Bounding
 - c. See Interval Golf and Running programs
3. Isokinetic Test at 180, 240, and 300 degrees per second for MD review and full release to sport activity