



PCL/PLC Reconstruction Rehabilitation Protocol

Phase 1 (0-6 weeks post-op)

Rehabilitation Goals

- Protect surgical graft
- 0-90° Knee ROM_{1,2}
- Regain adequate quadriceps control (SLR in flexion x 10 with no lag)

PRECAUTIONS

- Wear brace at all times (even while sleeping), may remove for rehab only.
- **NO** knee hyperextension. **NO** resisted or AROM knee flexion exercises. Avoid knee varus and tibial external rotation forces.

Crutches

- Non-weight-bearing weeks 0-4 (if PCL only, may begin FFWB as soon as tolerated)
- Touch down weight-bearing beginning week 5

Brace

Locked at 0° x 6 weeks with extension block placed on posterior leg

Wound

- Post-op dressing remains intact until post-op day #3 (~72 hours after surgery)
- May begin showering after post-op day #3 (no need to cover incision site)
- **Do NOT** submerge knee in tub or pool for 4 weeks
- Bilateral compression stockings for 7-10 days: unilateral use thereafter as needed
- Suture/staple removal @ 10-14 days per Ortho/PT



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Rehabilitation

- Frequent use of cryocuff and/or ice with lower extremity elevated
- Begin patellar mobilizations (10 reps each direction TID) after suture/staple removal
- Begin scar massage after incision site sloughs/scar is formed
- Begin the first 4 exercises below and add others gradually as tolerated
- Calf pumping with tubing
- Static quad sets (with e-stim until patient able to do 10 SLRs without extension lag)

PROM/AAROM exercises

- Weeks 1-2: 0-30°
- Weeks 3-4: 0-70°
- Weeks 5-6: 0-90°

STRENGTHENING: (add light wgt when pain free)

- Weeks 1-2: Short arc quads (0-30°)
- Weeks 3-4: Medium arc quads (0-60°)
- Weeks 5-6: Long arc quads (0-90°)

- Gentle hamstring stretching
- Supine passive extension to 0° extension (pillow under calf)
- SLRs (with brace on): All directions (with exception of NO ABD or ADD for PLC repair) – ankle weights may be added to the SLR exercise gradually as tolerated
- Seated bilateral calf raises – progress to seated unilateral calf raises
- Seated ankle disk training
- UBE and/or short-crank leg cycle

Follow-up

- Physical Therapy: Weekly.
- Ortho: Approximately 6 weeks post-op
- Supervised rehabilitation: 2-3 x per week as needed

Documentation

- Precautions, pain level, medications, modalities
- Observation: (incision sites) - Signs/symptoms of infection? Site healing well? Effusion?
- Neurovascular status: Distal pulses, motor and sensation intact? Presence of calf pain? Knee
- ROM & quadriceps function

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PCL/PLC Reconstruction Rehabilitation Protocol

Phase 2 (7-12 weeks post-op)

Rehabilitation Goals

- Normal gait and stair ambulation
- Full Knee ROM

PRECAUTIONS

- **NO** knee hyperextension, varus, or tibial external rotation.1-4
- **NO** resisted knee flexion exercise
- **NO** pool program or swimming

Crutches

- Progress gradually to full weight-bearing

Brace

- Progressively unlock brace for ambulation
- May D/C brace once can do 20 SLR without extension lag

Rehabilitation

- Progress to the following exercises and increase intensity gradually when patient is ready (i.e., no increase in knee pain or effusion since the previous exercise session)
- Note: all exercises should be done with the brace on, using low weights, high repetitions, and in a painless ROM

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PCL/PLC Reconstruction Rehabilitation Protocol

Phase 2 (7-12 weeks post-op)

Weeks 7-8

- Active assisted weight shifts – progress to foam, tandem, and unilateral stance
- Basic gait training as needed to normalize gait
- Stationary bike for ROM - progress to biking for conditioning
- Progressive resisted knee extension 0-60°
- Progressive AAROM knee flexion progressing to AROM as tolerated
- General LE stretching (calf, HS - add quads, HF, hip adductors @ ~Week 9)
- Leg press (0-60°) and/or mini-squats (0-60°) – add weight gradually as tolerated
- Bilateral calf raises

Weeks 9-10

- Forward step-ups – 4” to 8” minimize use of back foot
- Begin step-down exercise when ascending 8” step with good control
- Unilateral calf raises
- Unilateral mini-squats (0-60°)

Weeks 11-12

- Gait training (cone walking, marching, retro-walking, cariocas, etc.)
- Progressive standing balance exercises (body blade, plyo-ball, platform training, etc.) (progress in duration, intensity, double leg to single leg, etc.)
- Elliptical

Follow-up

- PT: Bi-monthly. Ortho: ~12 weeks post-op;
- Supervised rehabilitation: 2-3 x per week as needed

Documentation

- Precautions, pain level, medications, modalities
- Effusion
- Knee ROM & quadriceps function
- Gait

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PCL/PLC Reconstruction Rehabilitation Protocol

Phase 3 (4-6 months post-op)

Rehabilitation Goals

- Jog at own pace and distance without pain
- 80-90% quadriceps and HS strength return
- Symmetrical ROM

PRECAUTIONS

- **NO** participation in sports

Brace

- Hinged knee sports brace (as needed per ortho)

Rehabilitation

- Continue phase II exercises as needed
- Progress in duration and intensity of exercise only if there is no increase in knee pain or effusion since the previous exercise session.

Weeks 13-16

- Aerobic conditioning (biking, elliptical, stairmaster)
- Progressive LE weight lifting (Leg press, squats (0-80°), lunges, single leg squats, calf raises)
- Shuttle bilateral jumps
- Progressive pool program
- Progressive unilateral balance training
- Gradual intro of resisted HS exercise using low weight, high reps – leg curl, RDL, etc.

Weeks 16-26

- Alter-G jogging progression
- Progressive jogging program (Begin jogging for 5-10 minutes TIW - increase time and/or distance no more than 10-20% per wk)
- Straight line jogging (up to 50% speed on treadmill or other level terrain)
- Progressive functional training: Begin at 25-50% intensity and progress gradually (jumping, hopping, directional jogging, cariocas, shuffles, etc.)

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PCL/PLC Reconstruction Rehabilitation Protocol

Phase 3 (4-6 months post-op)

Follow-up

- PT: Monthly. Ortho: ~6 months post-op;
- Supervised rehabilitation: 1-2 x per week as needed

Documentation

- Pain level & medications
- Effusion
- Knee ROM & quadriceps function
- Hop testing, Y-Balance testing, and LESS testing approximately 6 months post-op

Miscellaneous

- After 6 months post-op: Exercises in phase III are continued, gradually increasing intensity & duration as tolerated.
- The recommendation is to wait until 9-12 months post-op to return to contact/collision sports. This time period may be adjusted slightly by the surgeon and therapist according to patient progress.



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