



ACL Reconstruction with Meniscus Repair Rehabilitation Protocol

Phase 1 (0-6 weeks post-op)

Rehabilitation Goals

- Protect surgical repair
- ROM: full knee extension, 90° knee flexion
- Regain adequate quadriceps control

PRECAUTIONS

- Wear brace at all times (even while sleeping)
- ***NO** bending knee with load applied (i.e., squat, leg press, etc.)
(Note: bending knee & partial weight bearing are allowed, BUT not at the same time)
- ***ROM 0-70° wks 1-4 for posterior horn repairs²**
- ***No resisted knee flexion wks 1-4 (due to hamstring attachment to meniscus)²**

Crutches

Begin with foot-flat non-weight bearing; progress gradually only when wearing brace locked at 0°

Radial/complex tear:

- Weeks 1-6: Non weight bearing to foot-flat non-weight bearing only

Bucket-handle, vertical, longitudinal tear:

- Weeks 1-2: Partial weight bearing @ 0-25% body weight
- Weeks 3-4: Partial weight bearing @ 25-50% body weight
- Weeks 5-6: Partial weight bearing @ 50-75% body weight

Brace

- Locked at 0° extension for 6 weeks while walking; may unlock once able to do SLR with no extension lag

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 3-7 days: unilateral use thereafter as needed Suture/staple removal @ 10-14 days per Ortho/PT

Dr. Mark Slabaugh

Orthopedics and Joint Replacement | Mercy Medical Center

410-539-2227 410-539-2240

301 St. Paul Pl. Baltimore MD 21202





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Rehabilitation

- Frequent use of cryocuff and/or ice with lower extremity elevated
- Begin patellar mobilizations after suture/staple removal
- Begin scar massage after incision site sloughs/scar is formed ~Weeks 1-2 Calf pumping with tubing
- Heel slides - assisted as needed: within the limits of 0-90°
- Static quad sets (with estim until patient able to do 10 SLRs without extension lag)
- SLRs: All directions - may add light weight when pain free
- Supine passive extension with towel under heel
- Gentle hamstring stretching

Weeks 3-4

- Short arc quads - may add light weights as tolerated

Weeks 3-4

- Leg press 0-60 deg (when ROM > 85)
- Hamstring Curls - light weight in a painless ROM
- Beginning level pool exercises: only gait training & deep water jogging (No "whip" kicking)

Follow-Up

- Physical Therapy: Weekly
- Ortho: ~6 weeks post-op
- Supervised rehab: 2-3 x per week



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Phase 2 (2-4 months post-op)

Rehabilitation Goals

- Full knee ROM and minimal or no effusion
- Hop without pain using good form

PRECAUTIONS

- ***NO** open kinetic chain strengthening exercises for 12 weeks*
- ***NO** running until 4 months post-op*

Crutches

Progress gradually to full weight-bearing during weeks 7-8 post-op

Brace

- No brace; encourage normal gait mechanics
- Fit for custom sports brace at > 12 weeks.

Rehabilitation

- Continue phase I exercises as needed
- 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)

Weeks 7-8

- Stationary bike for conditioning
 - Gait training (cone walking, marching, retrowalking, exercise band, etc.)
 - Beginning level pool exercises - primarily sagittal plane exercises (No "whip" kicking)
 - General LE stretching (calf, HS, quads, HF, hip adductors)
 - Neuromuscular training (BOSU squats, single leg body blade/rebounder)
- (progress in duration, intensity)1

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Weeks 9-12

- Progressive pool program as tolerated
- Elliptical and/or stairmaster
- Progressive strengthening (lunge, leg press, squat, RDL, etc)
- Neuromuscular training (single leg RDL, star balance training, core stability)⁴

Weeks 13-16

- Progressive strengthening (lunge, leg press, squat, RDL, etc)
- (OKC knee extension limited to 40-90 deg range)⁵
- Plyometric training: shuttle jumps (double to single leg)
- Neuromuscular training (unstable surfaces single leg RDL, star balance training)^{4,5}

Testing

- Strength: single leg squat max reps
- Y-balance testing: month 3 & 4

Follow-Up

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



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Phase 3 (4-6 months post-op)

Rehabilitation Goals

- Jog at own pace and distance without pain
- Hop test and Y-balance limb symmetry > 90%^{1,5}
- Isokinetic testing limb symmetry > 85%^{1,5}

PRECAUTIONS

- ***NO** participation in contact/collision sports or military schools^{*1,3,5}

Brace

None

Rehabilitation

- Continue other phase II exercises as needed
- Progress in duration and intensity of exercise
(no increase in knee pain or effusion since the previous exercise session)
- Progressive strengthening
(lunge, leg press, squat, RDL, knee ext/flex, etc)
- Plyometric training (shuttle jumps progressing to box jumps)^{4,5}
- Neuromuscular and plyometric training progression⁴
(single leg anterior and lateral jumps, tuck/box/depth jumps)
- Agility training progression (directional jogging, cariocas, shuffles, etc.)
- Progressive jogging program (increase time and/or distance no more than 10-20% per wk)

Testing

- Biodex isokinetic testing: month 6, then as needed until > 85% symmetry^{1,5}
- Hop tests: month 6, then as needed until > 90% symmetry^{1,5}
- Y-balance test: month 6, then as needed until > 90% symmetry^{1,5}
- Dynamic movement quality (video analysis, LESS & single leg hop): months 5 & 6, then as needed^{1,5}

Follow-Up

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



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Phase 4 (6-9 months post-op)

Rehabilitation Goals

- Hop test and Y-balance limb symmetry > 90%^{1,5}
- Full return to sports/athletics without limitations

Rehabilitation

- Progress phase III exercises as needed
- Sport-specific training (as needed)



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