

ANDREW L. MERRITT, MD — PROLIANCE ORTHOPEDIC ASSOCIATES

YOUR PARTIAL KNEE REPLACEMENT RECOVERY

A GUIDE TO PHYSICAL THERAPY

THE ROLE OF PHYSICAL THERAPY IN YOUR RECOVERY

Partial knee replacement replaces only the damaged compartment of your knee — the inside or outside — while preserving everything else, including your ligaments. Recovery is faster than a total knee replacement, but the first ten days deserve the same respect. Swelling is the enemy of quad function, and quad function is the engine of your recovery. Ice every two hours, elevate the leg, and squeeze the quad every hour in those early days. Most patients are walking without a cane by Week 3–4.

Important: Full knee straightening is the #1 priority from Day 1. Never rest with a pillow under your knee — use it under your heel/calf to keep the leg flat and straight.

YOUR RECOVERY TIMELINE

PHASE	TIMEFRAME	PT VISITS	WHAT YOU'RE WORKING ON
1	Days 1–10	2–3× per week	• Walk right away with a rolling walker — full weight as tolerated • Ice every 2 hours while awake — swelling control is everything early on • Quad sets and ankle pumps every hour • Target ~80–90° bending and full straightening by end of this phase
2	Weeks 2–6	2× per week	• Advance to a cane by Week 2, then no device by Week 3–4 • Stationary bike, step-ups, and progressive strengthening • Stair training with normal step-over-step pattern • Return to driving and everyday activities
3	Weeks 6–12	1× per week then as needed	• Full return to walking, cycling, golf, pickleball, and hiking • Progressive strengthening to match the other leg • Most patients reach their activity goals by 2–3 months • Dr. Merritt clears return to specific activities at follow-up

Questions about your PT progress? Call our office or bring them to your next appointment. We are always glad to coordinate with your therapist.

Great goals after partial knee replacement: walking, cycling, swimming, elliptical, golf, pickleball, and hiking.

UNICOMPARTMENTAL (PARTIAL) KNEE ARTHROPLASTY PHYSICAL THERAPY PROTOCOL

Patient Name: _____ **Surgeon:** Andrew L. Merritt, MD
Date of Surgery: _____ **PT Start Date:** _____

Overview & General Principles

- THE QUIET KNEE PRINCIPLE applies fully to UKA — first 7–10 days: aggressive cryotherapy (20 minutes every 2 hours), minimize PT intensity, control inflammation before pursuing ROM. The principles are the same as TKA; the recovery timeline is faster.
- UKA recovery is faster than TKA — do not artificially slow progress once milestones are met. The preserved ACL/PCL provides proprioceptive input that accelerates neuromuscular recovery. When milestones are met early, advance early.
- FULL EXTENSION IS PRIORITY from Day 1. No pillow under the knee — pillow under the calf/heel. Extension lag reflects quad inhibition and must be addressed aggressively from the start.
- QUAD ACTIVATION begins Day 1 with quad sets, NMES, and BFR. AMI affects UKA less than TKA but remains the primary early barrier to functional recovery.
- WBAT from Day 1. Most UKA patients advance to a cane by Week 2 and no device by Week 3–4.

PHASE (Days 1–10 (Week 1))

INFORMATION FOR THE PATIENT — What to Expect This Phase

Partial knee replacement recovers faster than a full replacement — but the first 10 days still deserve the same respect. Ice every 2 hours, keep the leg elevated and straight. Do your ankle pumps and quad squeezes. You'll be moving well sooner than you expect, but only because you controlled swelling from the start.

Goals:

- Control post-operative inflammation and swelling — cryotherapy every 2 hours mandatory
- Establish quad activation from Day 1: quad sets, ankle pumps
- Safe functional mobility: transfers, household ambulation with rolling walker
- Target active knee flexion ~80–90° and extension <5° lag by end of Phase 1

Weight-Bearing Status:

WBAT from Day 1 with rolling walker. Most UKA patients advance to a cane by Week 2.

Bracing:

None required.

Exercises:

- Quad sets: 3 × 15 reps every 1–2 hours while awake
- Ankle pumps: 3 × 20 reps every hour — DVT prophylaxis

- Heel slides (supine, gravity-assisted): 3 × 10 reps — no forcing
- SLR: when quad control present and lag <10° — 3 × 10 reps
- Seated active knee flexion/extension in chair: 3 × 10 reps
- Transfer training: supine-to-sit, sit-to-stand
- Gait training with rolling walker; advance to cane when safe
- Non-reciprocal stair training with assistive device
- Cryotherapy: 20 minutes every 2 hours while awake — mandatory
- NMES to quadriceps (if available): 20-minute sessions 2–3×/day

Progression Milestones:

- Active knee flexion ~80–90°; extension <5° lag
- Pain controlled; swelling manageable
- Safe independent transfers and household ambulation
- Discharged home Day 0–1 post-op (UKA is typically same-day or 23-hour stay)

PRECAUTIONS — Phase 1

- No pillow under the knee — pillow under the calf only to keep leg straight and protect extension.
- Aggressive cryotherapy mandatory: 20 minutes every 2 hours while awake.
- Avoid prolonged dependent positioning — elevate when resting.
- Do not force ROM — UKA patients often achieve early flexion quickly; early gains are not permission to push harder. Respect the healing soft tissue envelope.

Rationale: Despite less bone and soft tissue resection than TKA, UKA generates significant synovial inflammation in the first post-operative week. Effusion causes AMI and quad inhibition by the same mechanism as TKA. The Quiet Knee approach applies the same first-week rules: minimize loading, maximize cryotherapy, protect full extension. The only difference from TKA is that the quiet period may pass more quickly.

PHASE (Weeks 2–6)

INFORMATION FOR THE PATIENT — What to Expect This Phase

This is where partial knee replacements shine — you'll gain motion and strength faster than a full replacement. Keep icing after every PT session. Work on full straightening and bending, normalize your walk, and progress to stairs. Most patients are off the cane by end of this phase, often earlier.

Goals:

- Achieve active knee flexion >110° and full extension (0°) — often faster than TKA
- Eliminate assistive device — most UKA patients achieve this by Week 3–4
- Normalize gait; progress to reciprocal stair negotiation
- Quad strength: SLR without lag; step-up/down progression
- Independent with all ADL

Weight-Bearing Status:

Full weight-bearing. Advance from walker to cane to no device as quad control and gait allow. UKA patients typically advance 2–4 weeks faster than TKA.

Bracing:

None.

Exercises:

- PROM/AROM flexion and extension: heel slides, wall slides, seated ROM progression
- Passive extension stretching: prone hang or seated heel elevation — maintain 0°
- SLR all planes with progressive resistance
- Quad and hamstring stretching
- Step-up/step-down: begin 2–4 inches, advance with strength
- Patella mobilization when incision is stable
- Cycle ergometry: short crank if <90°; full crank when >110° — 15–20 min
- NMES or EMG biofeedback for quad reeducation if lag present
- BFR training: quad sets, SLR, mini-squats with limb cuff
- Gait training: heel strike, full knee extension at loading response, reciprocal arm swing
- ADL training: sit-to-stand, car transfers, tub/shower entry

Progression Milestones:

- Active flexion >110°; extension = 0°
- No quadriceps lag on SLR
- Ambulates without assistive device with normal gait
- Ascends 6-inch step with good control
- Independent with all ADL; swelling minimal after activity

PRECAUTIONS — Phase 2

- Continue cryotherapy after every PT session through Week 6.
- Do not rush assistive device weaning — prioritize gait quality over speed.
- Criterion-based advancement: because UKA patients often progress quickly, resist skipping steps. Soft tissue healing biology does not accelerate with implant size.

Rationale: UKA patients frequently advance faster than expected in Phase 2. The temptation is to skip the progression steps — resist this. The same collagen remodeling and ligament adaptation biology applies. Criterion-based advancement protects the preserved compartment and native cruciate ligaments from overload during the soft tissue remodeling window.

PHASE (Weeks 6–12)**INFORMATION FOR THE PATIENT — What to Expect This Phase**

By this phase, most patients are approaching their pre-arthritic functional level. Strengthen consistently, return to walking, cycling, and recreational activities. UKA patients can often return to more active pursuits than TKA.

Goals:

- Achieve active flexion >120° and full extension maintained
- Restore symmetrical lower extremity strength
- Return to recreational and community activities
- Discharge to independent HEP

Weight-Bearing Status:

Full weight-bearing. No restrictions.

Bracing:

None.

Exercises:

- Leg press: bilateral → unilateral → eccentric loading
- Step-up/step-down: advance to 6–8 inches
- Functional squats (wall, ball, bodyweight)
- Retro treadmill → forward treadmill → elliptical — 20–30 min
- Cycle ergometry with progressive resistance — 20–30 min
- Balance and proprioception: single-leg stance on flat and foam, dynamic challenges
- BFR maintenance: unilateral leg press, terminal knee extension
- Kinetic chain strengthening: hip, hamstring, calf as needed

Progression Milestones:

- Active flexion >120°; extension = 0° maintained
- LE strength ≥4+/5; symmetrical quad function
- Descends 8-inch step without pain or deviation
- TUG ≤12 seconds
- No significant swelling with community-level activity

PRECAUTIONS — Phase 3

- Avoid high-impact activities (running, jumping) — risk of contralateral compartment overload and early degeneration.
- Persistent effusion after activity warrants load reduction and evaluation.

Rationale: UKA preserves the opposite compartment and both cruciate ligaments, producing kinematics closer to a native knee than TKA. Low-impact recreational activity is generally well-tolerated. However, high-impact loading risks progressive degeneration of the preserved compartment, accelerating the need for revision to TKA. Activity guidance should be individualized by Dr. Merritt based on patient age, alignment, and activity goals.

DISCHARGE & RETURN TO ACTIVITY CRITERIA**Surgeon Notes / Special Instructions:**