



TOTAL KNEE ARTHROPLASTY POST-OPERATIVE GUIDELINES

Acute Care Phase (Week 1)

PRECAUTIONS

- Weight bearing as tolerated with assistive device until gait normalized
- ROM flexion and extension as tolerated
- Do not put a pillow under the knee – keep extended when resting

TREATMENT RECOMMENDATIONS

- Transfer training: in and out of bed and sit to stand (chair, toilet)
- Gait training with appropriate device on level surfaces and stairs
- ADL training
- Cryotherapy
- Promotion of knee extension activities
- Therapeutic exercise with focus on A/AAROM, active quadriceps contraction, and muscle pumping, e.g. ankle pumps
- Initiate and emphasize importance of home exercise program

CRITERIA FOR ADVANCEMENT

- Active flexion ~80° in sitting and extension < 10 ° in supine
- Ambulates safely with appropriate assistive device safely on stairs and uneven surfaces
- Independent with transfers
- Independent with home exercise program



TOTAL KNEE ARTHROPLASTY POST-OPERATIVE GUIDELINES

Post-Operative Phase 1 (Weeks 2-5)

PRECAUTIONS

- Weight bearing as tolerated with assistive device until gait normalized
- ROM flexion and extension as tolerated
- Do not put a pillow under the knee – keep extended when resting

TREATMENT RECOMMENDATIONS

- ROM/Stretching
- Strengthening: SLR in all planes (when TKE is achieved)
- Endurance: Cycle ergometry: Short crank if $> 90^\circ$, Normal crank if $> 110^\circ$ ROM at the knee
- Modalities
 - Cryotherapy/elevation/modalities may be used to help control swelling and pain
 - Electrical stimulation or biofeedback may be used for quadriceps reeducation
- Patella mobilization when incision is stable
- Forward step up and step-down progression starting at 4"
- Balance training progression from bilateral to unilateral
- Gait training with/without cane with emphasis on active knee flexion and extension, heel strike, reciprocal pattern, symmetrical weight bearing
- ADL training to continue such as sit to stand, in/out of tub/shower, car transfer

MINIMUM CRITERIA FOR ADVANCEMENT

- AROM $> 110^\circ$ of knee flexion, 0° of extension
- No quadriceps lag
- Ambulate on level surface with/without assistive device with normal gait pattern
- Ascend 4"-8" steps with good control
- Sit to stand transfers independent with even weight bearing through bilateral lower extremities
- Independent with ADL
- Independent with home exercise program



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Post-Operative Phase 2 (Weeks 6-11)

PRECAUTIONS

- Avoid high impact activities such as running, jumping, plyometric activity and vibration platforms

TREATMENT RECOMMENDATIONS

- Continuation of phase 1 manual/exercise treatments as needed
- Leg press: bilateral → unilateral → eccentric
- Progressive resistance exercises
- Low impact cardiovascular conditioning, e.g. retro treadmill, forward treadmill, elliptical, cycle ergometry
- Continue step up/step down progression (6-8")
- Ball/wall/functional squats
- Transfer training from floor to stand
- Gait training on flat and uneven surfaces
- Progress unilateral and bilateral balance and low impact agility exercises
- Aquatic exercise if accessible when incision healed and cleared by MD

CRITERIA FOR DISCHARGE (OR ADVANCEMENT TO PHASE 3 IF RETURNING TO SPORT)

- Active flexion > 120° in sitting, knee extension = 0°
- Bilateral ankle dorsiflexion > 40°
- Ability to transfer to and from floor
- Independent with lower extremity ADL such as tying shoelaces and donning/doffing socks
- Independent ambulation with normal gait pattern
- Negotiate 8" steps with reciprocal pattern with minimal pain or deviation
- Lower extremity strength 4+/5, control, and flexibility for high level ADL activities
- Independent with full home exercise program
- Discharge OR move onto Phase 3 if the goal is to return to sport or advanced functional activities (as cleared by MD)



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Post-Operative Phase 3 (Weeks 12-18)

Begin only if returning to sport with MD clearance

TREATMENT RECOMMENDATIONS

- Activity specific training
- Endurance training, e.g. elliptical, power walking
- Low impact agility drills
- Dynamic balance activities

CRITERIA FOR DISCHARGE

- Symmetrical LE strength
- Ability to perform repetitive single leg squats without pain or deviation
- Ability to perform 20 single heel raises with good control
- Strength, ROM, flexibility throughout kinetic chain to meet sports specific demands
- Transition plan from Rehabilitation to sports activities, e.g. personal trainer, performance coach, gym