

KNEEbraska
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Knee & Shoulder Reconstruction
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POSTOPERATIVE REHAB PROTOCOL: KNEE TIBIAL TUBERCLE TRANSFER/FULKERSON OSTEOTOMY

I. IMMEDIATE POST-OPERATIVE PHASE (Day 1 - Day 5)

Goals: Diminish swelling/inflammation (control hemarthrosis)
Diminish post-operative pain
Initiate voluntary quadriceps control
Independent Ambulation

Brace: Brace for ambulation only (POD 1 - Week 4)

Weight Bearing: As tolerated two crutches (approx. 50% WB)

Swelling/Inflammation Control: Cryotherapy
Compression Bandage
Elevation & Ankle Pumps

Range of Motion: Full passive knee extension
Flexion to 45 degrees (Day 1 to 4)
Flexion to 60 degrees (Day 5)
PROM and gentle AAROM only

Muscle Retraining: Quadriceps setting isometrics
Straight Leg Raises (Flexion)
Hip Adduction/Abduction
* NO active Knee Extension

Flexibility: Hamstring and Calf Stretches
PROM/AAROM within ROM limitations

II. ACUTE PHASE (Week 2-4)

Goals: Control swelling and pain
Promote healing of realignment tibial tuberosity
Quadriceps Strengthening

Brace: Continue brace for ambulation only
Discontinue brace (week 4)

Weight Bearing: Progress WBAT (2 crutches for 4 weeks)

Swelling/Inflammation: Continue use of cryotherapy
Compression bandage
Elevation

Range of Motion: PROM/AAROM exercises
Range of Motion 0-75 degrees (Week 1-3)
Range of Motion 0-90 degrees (Week 4)

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POSTOPERATIVE REHAB PROTOCOL: KNEE TIBIAL TUBERCLE TRANSFER/FULKERSON OSTEOTOMY
ACUTE PHASE - Continued:

Muscle Retraining: Electrical muscle stimulation to quads
 Quad Setting Isometrics
 Straight Leg Raises (flexion)
 Hip Adduction/Abduction
 Hip Extension
 Gentle submaximal isometric knee extension (multi-angle)

Week 4: Light Leg Press
 Vertical Squats (no weight)

Flexibility: Continue Hamstring, Calf Stretches

III. SUBACUTE PHASE - "MOTION" PHASE (Week 5-8)

Goals: Gradual improvement in ROM
 Improve muscular strength and endurance
 Control forces on extension mechanism

Weight Bearing: One crutch (week 4-6)
 Discontinue crutch week 6

Range of Motion: PROM 0-115 degrees (week 5)
 PROM 0-125 degrees (week 6)
 PROM 0-125/135 degrees (week 8)

Exercises: Continue electrical muscle stimulation to quadriceps
 Quadriceps setting isometrics
 Hip adduction, abduction, and extension
 Vertical Squats
 Leg Press
 Knee Extension Light (0-60 degrees)
 Bicycle (week 6-8)
 Pool Program [walking, strengthening (when able)]

Flexibility: Continue all stretching exercises for LE

IV. STRENGTHENING PHASE (Week 9-16)

Goals: Gradual improvement of muscular strength
 Functional activities/drills

Criteria To Progress to Phase IV:

1. ROM at least 0-115 degrees
2. Absence of swelling/inflammation
3. Voluntary control of quads

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Exercises:

- ☐ Vertical Squats (0-60 degrees)
- Wall Squats (0-60 degrees)
- Leg Press
- Forward Lunges
- Lateral Lunges
- Lateral Step-ups
- Knee Extension (60-0 degrees)
- Hip Adduction/Abduction
- Bicycle
- Stairmaster®

V. RETURN TO ACTIVITY PHASE

Goal: Functional return to specific drills

Criteria to Progress to Phase V:

1. Full Non-Painful ROM
2. Appropriate Strength Level (80% or greater of contralateral leg)
3. Satisfactory clinical exam

Exercises:

- Functional Drills
- Strengthening Exercises
- Flexibility Exercises