

Dr. Sands Rehabilitation Protocol

Total Knee Replacement

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Total Knee Arthroplasty Rehabilitation Protocol

Phase 1:

Goals

- Decrease Pain and Inflammation
- Regain full Extension (PROM/AAROM)
- Restore normal patellofemoral joint mobility.
- Demonstrate good neuromuscular control for daily functional activities.
Normalize gait with least restrictive assistive device (LRAD)
- Aggressive pursuit of knee extension to 0 and knee flexion to 90 (PROM, AAROM)
- Scar Management

Week 0-2

- ROM Exercises (PROM, AAROM, AROM)
 - Emphasize full extension equal to contralateral knee
 - Knee flexion to at least 90 and extension to zero at 2 week follow up appointment.
- Flexibility exercises:
 - PROM, AAROM exercises with knee flexion and extension
- Quadriceps Exercises:
 - Quadriceps sets and straight leg raises
 - Quadriceps recruitment techniques.
- Gait Training:
 - Weight bearing as tolerated (WBAT) unless noted otherwise.
 - Progress gait pattern to step through with LRAD as tolerated.
 - Maintain upright posture during gait.
- Non-Impact Exercises:
 - Stationary bicycle, recumbent bicycle
- Criteria for Driving:
 - Must remain off the prescribed pain medications during the daytime
 - Demonstrate the necessary AROM to operate motor vehicle in addition to the reaction time required to act in an emergency situation.

Weeks 3-6

- Scar Management:
 - Self daily Bio Oil Applications
- ROM Considerations:
 - Ensure full extension (PROM, AAROM, AROM)
 - Aggressively pursue full knee flexion (PROM, AAROM, AROM).
- Hamstring Exercises:
 - Open chain kinetic strengthening.

- Quadriceps Exercises:
 - Progressive Open and Closed chain kinetic strengthening.
- Proprioception Exercises

Phase 2:

Goals

- Improve strength of affected to that of contralateral side.
- Progress gait training to independent ambulation without assistive device or previous assistive device with step through pattern.
- Mastery of diverse functional activities.

Weeks 7-9

- Strengthening Activities:
 - Increase intensity of open and closed kinetic chain quadriceps exercises.
 - Continue progression with hamstring exercises
 - Generalized lower extremities and trunk training
- Gait Training:
 - Aggressive correction of any remaining gait abnormalities.
- Criteria to begin golf/tennis:
 - Full knee extension
 - No knee effusion
 - Adequate quadriceps neuromuscular control
 - Institute easy controlled pivoting, plyometrics when appropriate neuromuscular control is demonstrated.

Weeks 10-12

- Strengthening Exercises:
 - Increase intensity for open chain kinetic quadriceps exercises.

Phase 3:

Goals

- Approximate muscular strength of contralateral lower extremity.
- Normalize gait pattern.
- Mastery of sport specific activities (If indicated) in preparation for return to sports.

Weeks 13-16

- Intense lower extremity weight training program.
- Institute aggressive sport specific training program (If indicated).

Phase 4:

Goals

- Return to sports is planned for a minimum of 2 months after Total Knee Arthroplasty.