



Osteoarticular Transfer Rehabilitation

Phase I: Immediate postoperative phase (days 1–7)

Goals

- Full passive extension
- Restore patellar mobility
- Reestablish active quadriceps contraction
- Toe touch weight-bearing only

Brace/Modalities

- Postop knee brace set at 0°–90° flexion
- Cryotherapy
- Myostimulation

Exercises

- Ankle pumps, straight leg raises
- ROM: Gentle progressive passive range of motion aiming for 0° – 90° at 1 week; patellar mobilization
- Quad and hamstring isometrics progress to light closed kinetic chain exercises
- Independent exercises above to be performed 4 times / day

Phase II: Early Phase (weeks 2–6)

Goals

- Work toward passive extension
- Restore patellar mobility
- Reestablish active quadriceps contraction
- Maintain toe-touch weight-bearing – increase to 25% at 6 weeks

Brace/Modalities

- Postop knee brace set at 0°–120° flexion
- Myostimulation

Exercises

- Ankle pumps, straight leg raises
- ROM: Gentle progressive passive range of motion aiming for 0° – 100° at 4 weeks; 0° – 120° at 6 weeks; self-directed heel slides
- Quad and hamstring isometrics progress to light closed kinetic chain exercises
- Independent exercises above to be performed 4 times / day
- Stationary cycling with low resistance – begin at 4 weeks

Phase III: Intermediate Phase (weeks 7–12)

Goals

- Restore full ROM
- Full weight-bearing

- Improved strength
- Enhance proprioception/balance
- Improve muscular endurance
- Add core strengthening

Exercises

- Ankle pumps, straight leg raises, hip strengthening
- Stationary bike with gradual increase in resistance
- Gradual progressive resistive exercises for quad, hamstring, and hip strengthening from 0°–90°; partial squats at 8 weeks
- Neuromuscular proprioception: Tilt or, squats, light plyometrics at week 8–10

Phase IV: Functional Phase (weeks 13–20)

Goals

- Normalize strength
- Enhance power and endurance
- Improve neuromuscular control
- Begin running program on treadmill at 16 weeks

Exercises

- Progressive resistive exercises as tolerated for knee, hip, and ankle
- Progress running program as tolerated
- Sport specific drills at 20 weeks
- Initiate agility exercises

Phase V: Return to participation (weeks 21–24)

Criteria:

- Minimal pain
- No swelling
- Full range of motion
- Quad / hamstring strength greater than or equal to 85% of normal side
- Clearance by Dr. Angelo