



Osteochondral Autograft Transplant (OATS procedure)

Phase I (1 – 5 days post-op.)

- Wound: Observe for signs of infection
- Gait: NWB
- Modalities: prn for pain and inflammation (ice, IFC)
- Brace: locked in full extension week 1
- ROM: CPM use for 6 – 8 hours per day beginning 0 – 40 degrees, 1 cycle/minute. Increase 5 – 10 degrees daily per patient comfort.
- Exercises: Quad sets, ankle pumps, hamstring stretching

Phase II (5 days – 4 weeks post op.)

- Wound: Continue to monitor for signs of infection and begin scar management techniques when incision is closed
- Gait: Initiate WB at toe touch (20 – 30 lbs) at 4 weeks
- Modalities:
 - Ice on regular basis to control swelling
 - E-stim to increase quad contraction
 - sEMG for VMO activation
- Brace: Gradually open brace in 20 degree increments as quad control is gained.
- ROM: Continue Phase I. Goal 0 – 90 degrees at week 4
 - Bike for ROM
- Strengthening
 - Isometric quad, SLR, hamstring, hip ab/adduction, and gluteal sets
 - Bilateral proprioceptive activities
- Mobilization/Stretching
 - PROM/AAROM to knee to meet goal
 - Patellar mobs

Phase III (4 – 10 weeks post-op)

- Wound: Continue scar management techniques
- Gait: Increase WB 25% per week; FWB at 8 weeks
- Modalities: Continue e-stim or sEMG as needed; Ice for reduction of exercise induced swelling
- Brace: Wean from brace at 6 weeks with D/C at 8 weeks
- ROM: Goal full AROM at week 8 – 10



- Strengthening
 - Initiate closed chain strengthening (mini squat, light leg press, wall sit, toe rises)
 - Step-up/ lateral stepups initiate at 2 inches and increase gradually
 - Open chain hamstring strengthening
 - Unilateral proprioceptive activities
 - Walk on treadmill
 - Stepper

Phase IV (10+ weeks post-op)

- Gait: Full with normalized gait
- ROM: Full AROM
- Strengthening:
 - Continue to advance strengthening with increasing weight and challenge proprioception
 - Jogging starting at 12 weeks
 - Plyometric activities starting at 14 weeks
 - Sport specific training starting at 18 weeks (cutting, running etc.)

Initiate work conditioning for job related injuries. Follow up with school athletic trainer to continue sport specific training and skills.

Adapted from:

- 1) Cole BJ. Osteochondrol Autograft Transplant Rehabilitation Protocol. 2003
- 2) Brotzman SB, Wilk KE. Clinical Orthopedic Rehabilitation Second Edition. Philadelphia: Mosby; 2003
- 3) Reinold MM, Wilk KE et al. Current Concepts in the Rehabilitation Following Articular Cartilage Repair Procedures in the Knee. J Orthop Sports Physical Therapy 2006;36