



Mid-America Orthopedics

Dr. John Babb

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OSTEOCHONDRAL AUTOGRAFT TRANSPLANTATION (OATS) PROTOCOL

Day 1-41 Post-op

- PT removes bandages on POD #3, keep steri-strips intact until Dr Babb can remove them.
- No ointments, betadine etc should be used on the incisions or portals.
- If any drainage/oozing is present, recover with 4x4's, and notify Dr Babb (may need antibiotics).
- **NO ice bags** on any oozing or open wounds without being covered first with a bandage.
- If any wounds are oozing delay range of motion until wounds are closed and healed.
- **NO water on wounds** for 2 weeks (including showers) even if covered, no submersion of wounds in water (baths) until wounds are scars.
- **Brace:**
 - Locked at 0 deg during weight-bearing activities
 - Sleep in locked brace for 2-4 weeks
- **Weightbearing:**
 - **Toe Touch Weight Bearing (25%) for 6 weeks**
- **Range of Motion:**
 - Immediate motion exercises day 1
 - Full passive knee extension immediately: Stretch hamstrings & calf
 - Patellar mobilization (4-6 times per day)
 - Motion exercises throughout the day
 - Passive knee flexion ROM at least 2-3 times daily
 - PROM as tolerated
 - Day 1-13 Post-op: 0-90 deg
 - Day 14-20 Post-op: 0-105 deg
 - Day 21-28 Post-op: 0-125 deg
 - Day 28-41 Post-op: Full ROM
- **Strengthening:**
 - Ankle pump using rubber tubing
 - Quad sets
 - Multi-angle isometrics (co-contractions Q/H)
 - Electrical muscle stimulation &/or biofeedback during quadriceps exercises
 - SLR's 4 directions
 - **NO closed kinetic chain exercises for femoral condyle lesions**
- **Strengthening beginning at 4 weeks:**
 - Active knee extension 90-40 deg for femoral condyle lesions if not articulation

- Stationary bicycle when ROM allows - low resistance
- Isometric leg press at Week 4 (multi-angle)
- **NO closed kinetic chain exercises for femoral condyle lesions**
- **Functional Activities:**
 - Gradual return to daily activities
 - If symptoms occur, reduce activities to reduce pain & inflammation
 - Extended standing should be avoided
- **Swelling Control:**
 - Ice, elevation, compression, & edema modalities as needed to decrease swelling

6-12 Weeks Post-op

- **Brace:**
 - Discontinue brace at 6 weeks
- **Weight Bearing:**
 - Increase WB 25% every 2-3 days until FWB. Do not progress to increased WB if current WB status is painful.
- **Range of Motion:**
 - ROM should be full by 8 weeks
 - Maintain full passive knee extension
 - Continue patellar mobilization & soft tissue mobilization as needed
 - Continue stretching
- **Strengthening: Beginning at week 6**
 - Initiate weight shifts at Week 6 for femoral condyle lesions
 - Initiate low level vigor gym squats (less than 25% BW) at week 6: 0-90 degrees
 - Continue electrical muscle stimulation &/or biofeedback as needed
 - Continue use of pool for gait training & exercise
 - Balance & proprioception drills
 - Vigor Gym at or below 25% of body weight
- **Strengthening: Begin closed kinetic chain exercises at Week 8 – No weight machines or free weights until 3 months**
 - Mini squats 0-45 deg
 - Lunges (sagittal plane)
 - Step ups
 - Wall squats
- **Functional Activities:**
 - Gradual increase functional activities as pain & swelling diminish
 - Gradually increase standing & walking

3-6 Months Post-op

- **Range of Motion:**
 - No restrictions
- **Strengthening:**
 - Continue progressing exercises
 - Leg press 0-90 deg
 - Bilateral squats (0-60 deg)
 - Unilateral step-ups progressing from 2" to 8"
 - Lunges

- Begin walking program on treadmill
- Bicycle
- Stairmaster
- Elliptical
- **Teach deceleration techniques with landings (step n sticks)**
- **Straight ahead jogging:**
 - Start with 100 yds at half speed on soft level surface
 - Add 100 yds every other day
 - Work up to 1 mile or 1760 yds
- **Begin low level, double leg jumps.**
- **Functional Activities:**
 - As patient improves, increase walking distance, cadence, incline, etc.
- **Maintenance Program:**
 - Initiate at Weeks 16-20 Post-op
 - Bicycle - low resistance
 - Progress walking program
 - Pool exercises for entire lower extremity
 - SLR 4 ways
 - Leg press
 - Wall squats
 - Lunges
 - Stretch quadriceps, hamstrings, gastroc

6 Months Post-op (1-2 Visits/week)

- **Swimming** (full kicking)
- **Cutting:** Lateral, carioca, figure 8'. Need to teach cutting and deceleration techniques. NO cutting until 6 months unless otherwise approved by MD.
- **Functional training:**
 - Plyometric training: box hops, level, double leg.
 - Agility drills
 - Sport specific drills

Patient progression during the time frames along with general modality and exercise choice is left up to the discretion of the treating therapist. If you have any questions regarding this protocol, please contact (316) 630-9300.