



Mid-America Orthopedics

Dr. John Babb

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MICROFRACTURE PROTOCOL

Day 1-41 Post-op (1-2 Visits/week)

- 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, re-cover 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:** 6 weeks
 - At home: locked in extension when up, may unlock to do exercises
 - In PT clinic: can be out of brace for therapy
 - NWB
 - No weight with leg flexed
- **ROM:**
 - AROM as tolerated with goal of Full ROM by 4-5 wks post-op
 - Patella Mobilization
 - Ankle pumps (PF with band)
 - Gastroc, Soleus, Ham Stretches
 - High repetition NWB knee ROM (>1000 reps/day)
- **Strengthening:**
 - SLR (all planes)
 - Quad sets
 - Knee Ext (AA)
 - Use Russian/Biofeedback to achieve good quad contraction

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

- **Brace:** Unlocked. May wean out when strength is 80% of contralateral LE
- **Ambulation:** Progress 25% every 2-3 days until full
- **ROM:** 0-135
- **Exercise:**
 - Stationary bike
 - Low level TG squats/calf raises- 0-60 deg.

7 Weeks Post-op (1-2 Visits/week)

- **Ambulation:**
 - continue to progress 25% every 2-3 days until full
- **ROM:** Active 0°-135°
- **Strengthening:**
 - Ham Curls (active 0°-90°)
 - Total Gym/ Leg Press (0-90°)
 - Continue progressing previous strengthening activities
- **Closed chain (Sagittal Plane):** Wall sits, Mini squats 0-45 deg
- **Aerobic Conditioning:** Stationary bike

8 Weeks Post-op (1-2 Visits/week)

- **WB:** Should be full
- **Strengthening:**
 - Lateral Step-Ups (2-4" block), etc.
 - Anterior Step-ups
 - Continue to progress quad strengthening
 - Mini squats: 0-60 deg.
 - Front lunges
 - Toe/calf raises
- **Balance training:** SLS, Cup walking
- **Aerobic Conditioning:**
 - Water walking
 - Swimming (straight leg kicking)
 - Walking
 - Stair machine (low resistance and stroke)
 - Ski machine (short stride and level, low resistance)

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

- **Strengthening:**
 - Continue progressing previous strengthening/balance/proprioceptive activities
- **Straight ahead jogging- may be delayed until 5 months post-op depending on size of lesion:**
 - 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.**
 - **Teach deceleration techniques with landings (step n sticks)**

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

- **May be delayed per MD decision based on size/location of lesion**
- **Gentle lateral movements:**
 - Defensive slide
 - Floor ladder

- Figure 8's
- Carioca's
- **Transverse plane movements:**
 - Pivots
 - Steps with rotation
- **Low level plyometrics:**
 - stationary jumps
 - hops
 - skipping rope
 - Refer also to MAO plyometric program

6-8 Months Post-op (1-2 Visits/week)

- **Swimming** (full kicking),
- **Cutting drills**
- **Advance sport specific drills:**
 - Soccer: Hard kicks if surgery leg is kick leg, do not plant on surgery leg
 - Basketball: lay ups and jump shots, no scrimmaging or one on one
 - Softball/Baseball: Throwing, hitting, running bases
 - Racquet sports: low level hitting against backboard
- **Increase running program**
 - Speed
 - Rounded turns
 - Backpedal
 - Low level direction changes
- **Aggressive agility drills:**
 - Jump
 - Hop
 - Plyometric activities
- **Teach deceleration and injury prevention techniques:**
 - Rounded turn
 - Bent knee landings
 - 3-step stops
- **Criteria for return to sport:**
 - Isometric quad/hamstring testing on surgery leg $\geq 95\%$ of non-surgery leg
 - Functional hop testing (broad jump, single leg hop, single leg triple hop with control, single leg triple hop with crossover) on surgery leg $\geq 95\%$ of non-surgery leg

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.