EDWARDS ORTHOPEDICS
Advanced Orthopedic Surgery, Close to Home.
Dr. Chad Edwards, Orthopedic Surgeon

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POST-OPERATIVE REHABILITATION PROTOCOL

Knee Microfracture

Lesion-specific protection from load and shear while motion and quadriceps control are restored

PATIENT	SURGERY DATE	SIDE / PROCEDURE NOTES
_____	_____	_____

HOW TO USE THIS PROTOCOL Time frames are guides, not deadlines. Progress only when the phase criteria are met and the knee/arm is not reacting with increased pain or swelling. Dr. Edwards' written instructions always take priority.

SCOPE Weight-bearing, brace, and ROM restrictions depend on lesion location and size. Femoral-condyle and patellofemoral lesions must follow the location-specific operative order.

STOP AND CALL: fever/chills, increasing redness or drainage, uncontrolled pain, new or worsening numbness/weakness, calf pain/swelling, chest pain, or shortness of breath. Call 911 for an emergency.

KEY RESTRICTIONS AT A GLANCE

TIME	PROTECTION / WEIGHT BEARING	MOTION / LOADING
0-6 weeks	Crutches; restricted weight bearing; brace if ordered	Early ROM/CPM as prescribed; protect the lesion from shear
6-12 weeks	Progress weight bearing only with clearance	Normalize gait and begin protected closed-chain strength
12-18 weeks	No impact	Advance strength, balance, stairs, and endurance
4-9+ months	Running and sport only after clearance	Criterion-based impact and sport progression

PHASE-BY-PHASE PLAN

Phase 1 | Cartilage protection (0-6 weeks)

- **Priorities:** Protect the marrow clot; control swelling; obtain full extension and progressive flexion; prevent quadriceps inhibition.
- **Protection:** Femoral-condyle lesions: typically toe-touch/non-weight bearing with crutches. Patellofemoral lesions: brace settings and weight bearing are lesion-specific; avoid active knee extension through the articulating zone.

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- **Protection:** Do not change weight-bearing status without Dr. Edwards. Use CPM only if prescribed and follow the ordered hours and range.
- **Therapy focus:** Pain-free passive/assisted ROM, patellar mobility, extension positioning, quad sets/NMES, straight-leg raise without lag, hip/core strength, ankle pumps, and low-resistance bike when motion allows.
- **Therapy focus:** Typical ROM goal is 0-120 degrees by 6 weeks, modified by lesion location.

Phase 2 | Progressive loading (6-12 weeks)

- **Priorities:** Restore a non-antalgic gait, normal patellar mobility, and full ROM.
- **Protection:** Advance weight bearing gradually only after surgeon clearance. Wean crutches when gait is normal; discontinue brace only with a lag-free straight-leg raise.
- **Therapy focus:** Pool gait, bike, mini-squat and leg press 0-60 degrees, forward step-ups, hip/core strength, calf work, and balance.
- **Therapy focus:** Avoid pain, effusion, and reciprocal stair descent until quadriceps control is adequate.

Phase 3 | Strength and function (12-18 weeks)

- **Priorities:** Improve strength/endurance and controlled stair descent; return to normal daily activity.
- **Protection:** No running or impact until sufficient strength and surgeon clearance.
- **Therapy focus:** Progress squat/leg press, eccentric step-down, hamstring/hip strength, proprioception, elliptical, and graded low-impact conditioning.
- **Therapy focus:** Advance with full ROM, no reactive effusion, sound single-leg control, and at least 85% strength symmetry where tested.

Phase 4 | Impact and sport (4-9+ months)

- **Priorities:** Restore power, agility, and sport-specific tolerance without joint reaction.
- **Protection:** Impact timing varies substantially by lesion size and location.
- **Therapy focus:** Begin graded running, then plyometrics and agility only after clearance. Increase volume before speed and direction.
- **Therapy focus:** Return requires no pain/effusion, full ROM, confident sport-specific movement, and at least 90% functional symmetry for pivoting sport.

GENERAL PROGRESSION RULE A mild exercise ache that resolves is acceptable. Back down and contact the care team if pain is sharp, swelling increases, motion is lost, gait/mechanics worsen, or symptoms remain elevated the next day.