



Indiana University Health

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Knee Microfracture and Osteochondral Autograft Transfer / Osteochondral Allograft Transplantation (OATs)

(Updated 9/2025)
General Post Op Instructions

Wound Care	<ul style="list-style-type: none"> ✓ Dressings can be removed 2 days after surgery, or they can be removed at the first physical therapy appointment ✓ If desired, incisions may be covered with simple dressings (band-aids)
Swelling	→ Swelling and bruising are to be expected after a surgical procedure
Ice and Elevate	<ul style="list-style-type: none"> ✓ Ice 20 minutes on 20 minutes off, several times a day to help with swelling ✓ Do not place ice or cold back directly onto the skin ✓ Elevate the limb above the heart when able
Showering	<ul style="list-style-type: none"> → Do not soak incisions in water until after stitches are removed → You may begin to shower 2 days after surgery after dressings are removed <ul style="list-style-type: none"> ○ Allow soapy water to run over the incision but do not scrub ○ Dry, apply band-aids if needed
Driving	<ul style="list-style-type: none"> ✓ Dr. Call does not release people to drive at a specific date or week post op ✓ It is unlawful to drive under the influence of opioid (strong pain) medications ✓ Must be able to safely apply the brakes before returning to drive ✓ Driving in a brace/sling/boot is not recommended
Brace	→ May be removed for hygiene and physical therapy

Weight Bearing Restrictions and Brace Use

	Microfracture (Patella or Trochlea)	Microfracture (Femoral Condyle)	OATs
Week 1-2	<ul style="list-style-type: none"> ✓ WBAT with crutches ✓ Brace locked in extension for ambulation and sleep 	<ul style="list-style-type: none"> ✓ NWB ✓ Brace locked in extension for ambulation and sleep ✓ Brace open 0-90 degrees otherwise 	<ul style="list-style-type: none"> ✓ Flat foot weight bearing (leg weight only on the ground) ✓ Brace locked in extension for ambulation and sleep ✓ Brace open 0-90 degrees otherwise
Weeks 3-4	<ul style="list-style-type: none"> ✓ WBAT with crutches if needed ✓ Brace locked in extension for ambulation and sleep 	<ul style="list-style-type: none"> ✓ NWB ✓ Brace open to achievable range of motion ✓ DC brace at night if patient has full extension 	<ul style="list-style-type: none"> ✓ Flat foot weight bearing (leg weight only on the ground) ✓ Brace locked in extension for sleep, open to achievable ROM otherwise
Weeks 5-6	<ul style="list-style-type: none"> ✓ WBAT ✓ Brace completely unlocked 	<ul style="list-style-type: none"> ✓ NWB (larger lesions) ✓ PWB up to 50% (smaller lesions) ✓ Brace completely unlocked 	<ul style="list-style-type: none"> ✓ Flat foot weight bearing to 25% PWB ✓ DC brace at night if patient has full extension



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			✓ Brace open to achievable ROM
Weeks 7+	✓ WBAT ✓ DC brace when good quad control and normal gait	✓ WBAT ✓ DC brace when good quad control and normal gait	✓ Progress from PWB to WBAT ✓ After week 8: DC brace when good quad control and normal gait

Immediate Post Operative Phase (up to week 4)

Overall Goals	✓ Protection of healing tissue from load and shear forces ✓ Decrease pain and effusion ✓ Restoration of full passive knee extension ✓ Gradual improvement of knee flexion ✓ Regaining quadriceps control
Cautions	→ Follow weight bearing restrictions
Range of Motion	✓ Patella or trochlea lesions <ul style="list-style-type: none"> ○ Week 1: 0-30 degrees ○ Week 2: 0-45 degrees ○ Week 3: 0-60 degrees ○ By end of week 4: 0-90 degrees ✓ Femoral condyle <ul style="list-style-type: none"> ○ Week 1: 0-90 degrees ○ By end of week 4: 0-120 degrees
Therapeutic Suggestions	→ Ankle pumps to reduce lower leg edema and prevent DVT → Quad isometric sets, gluteal sets, adductor sets in supine → SLR 4 ways → Can use vasopneumatic pump and cryotherapy to decrease swelling → Patella mobs → Biofeedback and/or electrical muscle stimulation can be used to facilitate quadriceps contraction → Long sit hamstring stretch → Gastroc stretch with towel → Heel slides → Week 3: can start stationary bike
Progression Ready to Next Phase	✓ Range of motion achieved ✓ Tolerating exercises <i>If not all goals are met, patient may progress to the next phase with intervention plan in place to address deficiencies</i>

Intermediate Rehabilitation Phase (Weeks 5 – 8)

Overall Goals	✓ Improve quad strength and endurance ✓ Normalize gait pattern
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	✓ Focus on neuromuscular control
Cautions	→ Follow weight bearing restrictions
Range of Motion	✓ Progress to 0-120+ degrees ✓ Achieve full ROM by week 8
Therapeutic Suggestions	→ Begin quad and hamstring closed chain strengthening once full weight bearing → Seated heel raise → Standing bilateral heel raise → Weight shift-laterally, diagonally and forward → Gradually add resistance for SAQ's → Closed chain gluteal exercises → Balance training → Gait training
Progression Ready to Next Phase	✓ Full ROM ✓ Tolerating therapeutic exercises

Advance Strengthening Phase (Weeks 9 – 12)

Overall Goals	✓ Good quad control ✓ No effusion or swelling ✓ Normalize activities of daily living
Cautions	→ Patients should be WBAT or nearly WBAT
Range of Motion	✓ Full ROM
Therapeutic Suggestions	→ Wall sits and mini squats when full weight bearing → Progress stationary bike → Begin proprioception and balance drills
Progression Ready to Next Phase	✓ Painless ROM ✓ Progressing well with therapeutic exercises

Late Rehabilitation and Strengthening Phase (Week 13 – 24+)

Overall Goals	✓ Maintain motion ✓ Improve balance
Cautions	→ None
Range of Motion	✓ Full ROM
Therapeutic Suggestions	→ Continue progressing balance exercises → Leg Press 0-60 degrees



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- Bilateral squats (0-60 degrees)
 - Unilateral step-ups (2-4-6-8 inches)
 - Forward lunges
 - Begin walking program on the treadmill
 - Bicycle
 - Swimming
 - Elliptical
 - Core and trunk strengthening
 - Approaching month 5:
 - Lateral shuffle/Carioca
 - Agility Ladder
 - Sport Cord Jogging
 - Reduced Impact Treadmill Jogging or Aquatic Jogging

Return to	✓	OATs: after 6 months
Sports	✓	Microfracture: after 4-5 months
