

**Dr. Ernat's OATS/Osteochondral allograft/MACI/OCD ORIF/Microfracture
Post-Operative Protocol**

May attend up to 1-3 times weekly for 12-16 weeks.

Timing of each phase varies based on individual patient factors, length of time immobilized, strength/ROM status, and expected performance/activity demands.

PHYSICAL THERAPY (PT): May begin 2-3 days after surgery.

RESTRICTIONS: TTWB w crutches for 6 wks. ROM 0-30 for 1-2 days. Will have CPM machine at home.

WB / CRUTCHES: TTWB w crutches for 6 weeks. Wean crutches and progress to FWB at 6 wks.

BRACE: Knee brace will be used for a minimum 6-12 weeks depending on the case.

RANGE OF MOTION: Full extension, ROM 0-30 for 1-2 days then progress flexion/extension as tolerates.
CPM use at home.

STRENGTHENING: Quad sets, e-stim, SLR immediately post-op w brace on. Progress gentle strength.

MODALITIES: Per PT or ATC's discretion. Ice use 3-5 x/day first 10-14 days then 2-3 x/day wks 1-4 as needed.

RETURN TO ACTIVITY: subject to change, based on individual progress.

Planks: 6 weeks

Recumbent bike: 8 weeks

Elliptical: 8 weeks

Swimming: 8 weeks

Road bike outside: 8 weeks

Light jogging: 4 months

Running: 4 months

Golf (chip/putt): 4 months

Golf (full swing): 4 months

Climbing: 4 months

Skiing: 4-6 months

Tennis: 4-6 months

Soccer: 6 months

Basketball: 6 months

Contact sports: 6 months

PHASE I: PROTECTION / RANGE OF MOTION (POST-OP – WKS 1-4)

- Control pain and swelling, decreased effusion, wound healing.
- Rest, ice, compression, elevation 3-5 x/day or more as needed to help decrease pain and swelling.
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- **TTWB/TDWB with crutches 0-6 wks.**

- Normal patellar mobility. Quadriceps activation.
- 1) Gluteal sets, quad sets, SLR, quadriceps/hamstring isometrics.
- 2) Hip abduction and adduction.
- 3) PROM, AAROM full extension and flexion.
 - Scar tissue mobilization, E-stim, modalities.
 - Home exercise program to be performed 2-3 times daily.

PHASE II: RANGE OF MOTION / LIGHT RESISTANCE (*POST-OP WKS: 4-6*)

- Pain management and control of effusion.
- TTWB/TDWB with crutches 6 weeks then progress to FWB.
- Increased range of motion (ROM) - gradual increase in flexion ROM based on pain assessment, flexion as tolerated, full extension.
- Normal patellar mobility, scar tissue mobilization.
- Neuromuscular re-education of quadriceps.
- Cardiovascular training: bike/cycling, underwater treadmill.
- Upper extremity reaches and core, flexibility exercises.
- Modalities per therapist discretion.
- Home exercise program to be performed 2-3 times daily.

PHASE III: STRENGTHENING (*POST-OP WKS: 6-12*)

- Good quad recruitment and normal gait, SLR without lag.
- At 6 weeks, wean from crutches and advance to full WB.
- Absence of pain, no effusion or edema.
- Full passive, active ROM, normal knee ROM.
- Progression of quad strength exercises and closed kinetic chain exercises.
- Closed chain double leg & single leg strength as tolerated, mini-squats, step-ups, toe raises, total gym as tolerated.
- Avoidance of pivoting, agility, twisting.
- Standing balance training. Isokinetic exercises.
- Leg press, step-downs, lateral step-ups.
- Strength, endurance, proprioception and flexibility exercises.
- Swimming, stair master, mini squats, cycling, NordicTrack.
- Improved stability with unilateral stance.
- Equal hip, gluteus and core strength bilaterally.
- Returned to full or near full participation in ADL's.
- Preparation for advanced exercises.

PHASE IV: RETURN TO ACTIVITY (*POST-OP WKS: 12-16+*)

- Initiate running program at around 12 weeks.
- Initiate cutting program at around 16 weeks.
- Increased strength, power, flexibility and endurance.
- Preparation for return to full unrestricted activities.
- Avoid hyperflexion.
- Agility drills, plyometric training and sport-specific drills.
- Satisfactory clinical examination.
- Goal of full confidence in knee and pain free activity by 5 months.
- Functional testing at least 90% of contralateral leg
- Isokinetic testing at least 90% of contralateral leg

KEY FOR PATIENTS:

POST-OP = after your surgery

WB = weight-bearing

ROM = range of motion

PROM = passive range of motion, someone else moves you

AAROM = active assisted range of motion

AROM = active range of motion, you move yourself

RROM = resisted range of motion, motion against resistance, strengthening

SLR = straight leg raise

WNL = within normal limits