Suezie Kim, MD
Orthopedic Surgeon • Sports Medicine

Procedure: _____

PT PROTOCOL

Osteochondritis Dissecans (OCD) Fixation

Rehabilitation Protocol

Weight-Bearing Status

ONLY IF DIFFERENT FROM PROTOCOL BELOW

Weight-bearing status depends on the specific procedure performed, intraoperative findings, and radiographic healing. Follow the weight-bearing status in the phases below unless a different status is indicated here.

☐ Non-weight-bearing ☐ Toe-touch / partial weight-bearing ☐ Weight-bearing as tolerated

Brace / precautions: _____

1	2	3	4	5	6
Weeks 0–2	**4 Weeks**	**6 Weeks**	**8 Weeks**	**12 Weeks**	**6+ Months**
Protect fixation; touchdown WB in locked brace	Brace flexion advancing to 60°; continue touchdown WB	Partial WB (25%); brace flexion advancing to 90°	Full WB; wean brace & crutches, begin walking program	Begin plyometrics & single-leg strengthening	Return to sport; unrestricted ~7 months

Milestones above are goals, not guarantees; progression is criterion-based.

Phase 1 Weeks 0–2

Weight-Bearing: Touchdown weight-bearing with crutches.

Brace: Always locked in extension. No knee flexion.

Range of Motion: Full terminal knee extension (0°) only; no flexion permitted.

Therapeutic Exercises

- Pain-free quad sets.
- Ankle AROM, all directions.
- Hip abduction, adduction, and extension against gravity.
- Straight leg raise, if able to maintain full terminal knee extension.
- Low-intensity, long-duration extension stretches (prone hang, heel prop); gastroc and hamstring stretch with strap.

Phase 2 Weeks 2–4

Weight-Bearing: Touchdown weight-bearing with crutches.

Brace: Locked in extension for ambulation; removed for ROM exercises only. Flexion limited to <60°.

Range of Motion: Progress flexion to 60° via heel slides and prone knee flexion; maintain full terminal extension with straight leg raise, no lag.

Therapeutic Exercises

- Heel slides, 0–60° flexion.
- Quad sets; multi-angle quad isometrics <60°.
- Prone knee flexion to 60°; AAROM short-arc quad <60°.
- 4-way straight leg raise (hip flexion/extension/abduction/adduction) — do not perform if an extension lag is present.
- Ankle plantarflexion against resistance band.

Phase 3 Weeks 4–6

Weight-Bearing: Partial weight-bearing (~25% body weight) with crutches.

Brace: Locked in extension for ambulation; removed for ROM exercises only. Flexion limited to <90°.

Range of Motion: Progress flexion to 90° by week 6; advance weight-bearing only once cleared by the surgeon at the 6-week follow-up, with no lag on repeated straight leg raise.

Therapeutic Exercises

- Heel slides, 0–90° flexion; stationary bike (semi-revolutions if needed to avoid flexion >90°).
- Quad sets; 4-way SLR with resistance as appropriate.
- AROM knee extension (short-arc) 0–90°, light resistance as tolerated.
- AROM knee flexion to 90°, light resistance as tolerated.

Phase 4 Weeks 6–8

Weight-Bearing: Full weight-bearing with a normalized gait pattern.

Brace: Gradually wean brace and crutches. No impact loading.

Range of Motion: Progress to full knee flexion.

Therapeutic Exercises

- Establish baseline strength measures: glutes, quads, hamstrings.
- Walking program: progress from 15 to 30 minutes over 4 weeks.
- Stationary bike, light to moderate resistance.
- Hamstring curl with band; heel raises, bilateral to unilateral.
- Resisted long-arc quad; wall slides, squats, leg press.
- Balance: tandem stance progressing to single-leg stance once full WB is reached.

Phase 5 Weeks 9–12

Goal: Strengthen glutes/quads/hamstrings to ≥75% limb symmetry index (LSI) vs. the uninvolved side.

Therapeutic Exercises

Please review growth-plate precautions before starting plyometrics in skeletally immature patients.

- Hip strengthening: band walks, monster walks, hip ab/adductor machine.
- Open-chain quad strengthening; bilateral squats, lateral lunges, Romanian deadlifts.
- Single-leg progression: partial-WB single-leg press, step-ups, step-downs, single-leg squats.
- Begin plyometrics: double-leg, straight-plane, progressing toward single-leg/multi-directional.

Phase 6 3–6+ Months

Goal: Return to sport. Strength LSI >90%, hop testing LSI >90%, good landing mechanics before progressing to unrestricted play.

Therapeutic Exercises

- Initiate return-to-running program once functional criteria are met.
- Formal agility and plyometric program, emphasizing movement quality.
- Unrestricted return to sport, including hard cutting/pivoting, at approximately 6–7 months.