



OSTEOCHONDRAL ALLOGRAFT / BIOCARTILAGE / CARTIFORM REHABILITATION PROTOCOL

This protocol is a general outline. "As tolerated" refers to no increased sharp pain, swelling, or other undesirable factors. If any of these occur, decrease activity level and ice. Progression and return to sport may vary between individual patients, and will be guided by your provider's team (physician, physician assistant, athletic trainer, and therapist) input and appropriate testing.

PHASE I: WEEKS 0-4

Weight-bearing:

- Weight-bearing as tolerated (WBAT) with crutches
- Toe-touch weight bearing for 4 weeks followed by partial weight bearing for 2 weeks
- Toe-touch weight bearing for 2 weeks, then WBAT for 4 weeks locked in extension
- Non-weight bearing 6 weeks

Brace:

- Knee Immobilizer until first post-op visit
- No brace

Range of Motion (ROM):

- Progress as tolerated
- Maintaining full knee extension

Therapeutic Exercises:

- Strengthening/Neuromuscular training:
 - Quad, glute, hamstring sets,
 - Open chain hip strengthening
 - core strengthening

Manual Therapy and Modalities:

- Scar, soft tissue, and patellar mobilizations
- Cryotherapy (ice), compression, e-stim

Stationary Bike:

- Begin immediately if WBAT
- Begin postop week 4 if TTWB
- Begin at postop week 6 if NWB

Progression Criteria:

- Full passive knee extension
- Minimal joint effusion

PHASE II: WEEKS 4-8

Weight-bearing:

- Follow Phase I restrictions

Range of Motion (ROM):

- Progress to full ROM

Therapeutic Exercises:

- Gait & balance training following weight bearing restrictions
- Eccentric quad strengthening
- Hip/glute strengthening (4-way SLR, band walks, step ups, step downs, bridges, etc.)
- Core strengthening
- Stationary bike following Phase I guidelines

Manual Therapy and Modalities:

- Scar, soft tissue, and patellar mobilization
- Cryotherapy, compression, e-stim as needed

Progression Criteria:

- ROM 0-125°
- Minimal joint effusion
- No pain
- No limp
- Good quad strength

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PHASE III: WEEKS 8-16

Weight-bearing:

- Full weight bearing

Range of Motion (ROM):

- Full ROM

Therapeutic Exercises:

- Progress/maintain full ROM and flexibility
- Continue hip, glute, quad, core strengthening exercises
- Initiate closed chain activities: balance training, mini-squats, single leg stance, wall sits, etc.
- Stationary Bike
- NO impact activities

Manual Therapy and Modalities:

- Scar, soft tissue, and patellar mobilizations
- Cryotherapy and compression as needed

PHASE IV: WEEKS 16-24

Weight-bearing & ROM:

- Full

Therapeutic Exercises:

- Continue hip, glute, quad, core strengthening exercises
- Lunges with slow pain free progression
- Step ups, lateral step ups, etc.
- Continue single leg balance training

Manual Therapy & Modalities:

- As needed

Precautions:

- Avoid post activity swelling, reduce activities if swelling occurs
- Activity level should be modified if increased pain, catching or swelling occurs

PHASE V: MONTH 6-10

Therapeutic Exercises:

- Impact activities
 - May begin impact activities based on surgery location.
 - Patellofemoral – 4 months
 - Tibiofemoral – 6 months
- Dynamic movement control exercises, beginning with low velocity, single plan activities and progressing to higher velocity, multi plane
- Double leg plyometrics to single leg. Continue single leg functional strengthening