

Lisa Kaplin, DO

OATS/Osteochondral Allograft Transfer Procedure of the Knee - Postoperative Rehab Protocol

Weight bearing protocol:

- MUST USE CRUTCHES to maintain TOE TOUCH/HEEL TOUCH weight bearing x 4 weeks.
- ADVANCE TO PARTIAL WB AT 4-6 WEEKS.
- WBAT AT 8-12 WEEKS

Postoperative Phase I:

Early Protection Phase (Weeks 0 to 8)

Goals

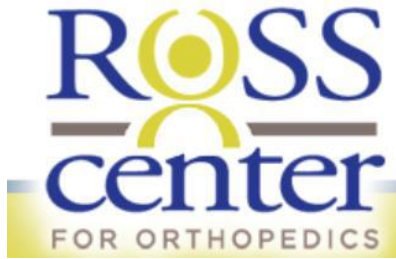
- Protect healing tissue from load and shear forces
- ROM 0 to 120 degrees
- Prevents quad inhibition
- Control postoperative pain/swelling
- Normal proximal muscle strength
- Independence with home exercise program

Precautions:

- Maintain weight bearing restrictions:
 - postoperative brace locked at 0°
 - TTWB in brace with crutches for first 4 weeks
 - Advance to partial weight bearing at 4-6 weeks with progressive advancement to WBAT at 8-12 weeks.

Treatment Plan

- AAROM exercises (pain-free range of motion)
- Towel extensions
- Patellar mobilization
- Quadriceps reeducation (quad sets +/- E-stim)
- Straight leg raises (all planes)



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- Stationary bike when ROM allows (week 3 to 4) - low resistance. May “Rock for Range” using well leg immediately.
- Upper extremity cardiovascular exercises
 - Hip progressive resistance exercises
- May start Alter-G and Pool ambulation for gait training at 50% body weight at 6 weeks, progression per MD (Assure wound is completely healed/scar prior to beginning pool therapy).

Criteria for Progression to Phase II

- MD direction for progressive weight-bearing (week 6)
- Proximal muscle strength 5/5
- ROM 0 to 120°
- Supine SLR without an extension lag

Postoperative Phase II (Weeks 8 to 12)

Goals

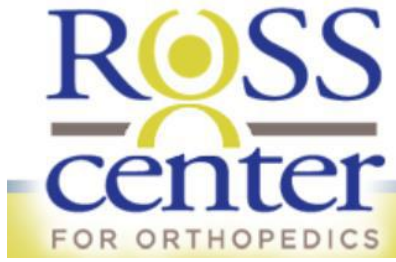
- ROM 0 to within normal limits
- Normal patellar mobility
- Restore normal gait
- Ascend 8 inch stairs with good control and without pain

Precautions

- Avoid descending stairs reciprocally until adequate quadriceps control
- Avoid pain with therapeutic exercise and functional activities

Treatment Plan

- Progressive weight-bearing / gait training with crutches
- Discontinue crutches when gait is non-antalgic
- Discontinue brace once able to SLR 20 repetitions without a lag
- Continue pool exercises and gait training via Alter-G
- AAROM exercises
- Leg press 0 to 60°
- Mini-squats
- Retrograde treadmill ambulation
- Proprioception training (i.e. balance board)
- Initiate forward step-up program
- SLRs (progressive resistance)
- Lower extremity
- Home exercise program



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Criteria for Progression to Phase III

- ROM 0 to WNL
- Normal gait pattern
- Demonstrated ability to ascend 8 inch step
- Normal patellar mobility

Postoperative Phase III (Weeks 12 to 24)

Goals

- Return to normal ADL
- 85% limb symmetry on isokinetic testing (tibiofemoral lesions)
- Improve lower extremity flexibility
- Demonstrate ability to descend 8 inch stairs with good control and without pain

Precautions

- Avoid pain with therapeutic exercise and functional activities
- Avoid running until adequate strength development and surgeons clearance

Treatment Plan

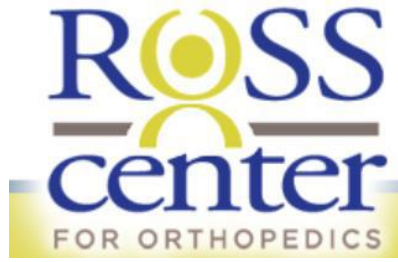
- Progress squat program
- Initiate step down program
- Stairmaster and elliptical
- Leg Press (emphasizing eccentrics)
- Advance proprioception training (perturbations)
- Retrograde treadmill ambulation/running
- Jogging program on Alter-G with gradual increase in body weight at 16 weeks if tolerated
- Hamstring curls/proximal strengthening
- Lower extremity stretching
- Agility exercises (sports cord) at 16 weeks if tolerated
- Home exercise program

Criteria for Progression to Phase IV

- 85% limb symmetry on isokinetic testing (tibiofemoral lesions)
 - Demonstrated ability to descend 8 inch step with good leg control and w/o pain
- Postoperative Phase IV: Return to Sport (Weeks 24 and Beyond)

Goals

- Lack of apprehension with sport-specific movements
- Maximize strength and flexibility to meet demands of individual's sport activity



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- Hop test \geq 85% limb symmetry
 - Precautions
 - Avoid pain with therapeutic exercise and functional activities
 - Avoid sport activity until adequate strength development and surgeons clearance
- Treatment Plan
- Continue to advance lower extremity strengthening, flexibility, and agility programs
 - Forward running
 - Plyometric program
 - Brace for sport activity (MD preference)
 - Monitor patient's activity level throughout course of rehabilitation and adjust accordingly
 - Encourage compliance to home exercise program

Criteria for Discharge

- Lack of apprehension with sport-specific movements
- Hop test \geq 85% limb symmetry
- Flexibility to accepted levels of sports performance
- Independence with gym program for maintenance and progression of therapeutic exercises