



Sports Medicine • Joint Reconstruction • Hand Surgery • Spine Surgery

AUTOGENOUS CHONDROCYTE IMPLANT REHAB PROTOCOL

Phase I 0-6 Weeks Protective Phase

- NWB x 2 weeks, then TDWB
- Brace locked at full extension during WB activities
- Sleep in locked brace x 4 weeks
- Optional: CPM beginning at 0-40° day 2 and progressing 5-10° per day
- Patellar mobs
- Passive knee flexion (Goal: 90° by week 2, 105° by week 4 and 120° by week 6)
- Hamstring and Heel Cord stretches
- Ankle exercises with Thera-band
- Multi angle isometrics (co-contractions)
- Active knee extension 90-40° (no resistance)
- 4 way SLR
- Stationary bike when ROM allows
- Gradually return to daily activities
- D/C brace at 4-6 weeks

Criteria to progress to Phase II

- Full passive knee extension
- Knee flexion > 115°
- Minimal pain and swelling

Phase II 6-12 Weeks Transition Phase

- Progress WB as tolerated
- Discontinue crutches at 8-9 weeks
- Maintain full passive knee extension
- Progress knee flexion to 125°
- Initiate closed chain exercises 0-45°, then gradually progress (mini squats, leg press, fwd and lat step-ups)
- Heel raises for calf strengthening
- Standing 4-way hip exercises (resistance above knee)
- Stationary bike
- Treadmill walking program
- Balance and Proprioception drills

Criteria to progress to Phase III

- Full ROM
- Able to walk 2 miles and bike for 30 minutes

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Phase III

12-26 Weeks Maturation Phase

- Leg Press (0-90°)
- Bilateral Squats (0-60°)
- Forward Lunges
- Lateral Step-ups (progressing to 8" step)
- Walking Program
- Bicycling
- Stair Master / ARC
- Swimming
- Nordic Trac
- Light running can be initiated toward the end of phase

Criteria to progress to Phase IV

- Full, pain free ROM
- Strength within 90% of contralateral extremity
- Balance and/or stability within 70% of contralateral extremity
- No pain, inflammation, or swelling

Phase IV

26-52 Weeks Functional Activity Phase

- Progress resistance as tolerated
- Progress agility and balance drills
- May return to various sports activities as progression in rehab and cartilage healing allows

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