

Meniscal Allograft Transplantation

Rehabilitation Protocol

IMMEDIATE POSTOPERATIVE PHASE (Week 0-2)

Goals: Reduce swelling, inflammation and pain
Gradually increase ROM
Reestablish patellar mobility
Restore voluntary quadriceps control
Protect healing tissues

- Week One
- Cryotherapy elevation and compression
- Brace: knee immobilizer (sleep in brace)
- Weight bearing: toe touch (less than 25%)
- Range of motion: full passive knee extension gradually progress to 90 degrees flexion

(*Use of CPM if necessary)

- Exercises: Patellar mobilization
 - Heel slides to gain flexion
 - Quadriceps setting
 - Straight leg raises (flexion)
 - Knee extension (active assisted)
 - Ankle pumps
 - Hamstrings, gastroc-soleus stretches

- Week Two

- Continue all exercises listed above
- Use ice before and after exercise

- PROTECTION PHASE (Weeks 3-8)

Goals: Protect healing tissue
Gradually restore RIOM (flexion)
Maintain full passive extension
Progress weight bearing
Restore quadriceps muscle strength

Criteria to progress to Phase II:

- Mild effusion
- Good patellar mobility
- ROM minimal 0-95 degrees
- Active quadriceps contraction

- Weeks 3-4
 - Brace: continue use of knee immobilizer (sleep in brace for 4 weeks)
 - Weight bearing: increase to 50% at week 3 and 75% at week 4
 - Range of motion: passive ROM 0-105 week 3
 - Exercises: Patellar mobilizations
 - Scar mobilization (if needed and closed incision)
 - Passive knee ROM
 - Quad setting
 - Multi-angle knee extension 30 degrees, 60 degrees
 - Straight leg raise (flexion)
 - Hip abd/adduction
 - Knee extension (90-30 degrees)
 - Hamstrings, gastroc, soleus stretching
 - Electrical muscle stimulation to quads
 - UBE for aerobic conditioning
- Cryotherapy: continue use of ice and compression

- Weeks 5-6
 - Brace: continue use of knee/immobilizer
 - Weight bearing gradually progress to FWIB week 6
 - Range of motion: Passive ROM 0-120 week 5
 - Passive ROM 0-135 week 6
 - Exercises: continue all strengthening exercises listed above
 - Pool exercise program
 - Initiate bicycle
- Cryotherapy: continue use of ice and compression

- Weeks 7-8
 - Brace: discontinue use of brace at week 7-8
 - Weight bearing: full without brace
 - Range of motion: passive ROM 0-135 degrees
 - Exercises: Straight leg raises (flexion)
 - Hip abd/adduction
 - Knee extension (90-30 degrees)
 - CKC mini-squats (0-40 degrees)
 - CKC leg press (0-60 degrees)
 - Bicycle
 - Pool program and swimming
 - Continue stretching hamstrings and gastroc

Proprioception and balance training
Cup walking
*No resisted hamstrings

- MODERATE PROTECTION PHASE (Weeks 9-12)

Goals: Protect healing tissue (deep squats)
Maintain full ROM
Normalize strength and proprioception

Criteria to progress to Phase III:

- Range of motion 0-135 degrees
- Minimal pain and effusion
- Quadriceps strength 4/5
- Good patellar mobility
- Symmetrical gait

▪ Weeks 9-12

1. Exercises: Stretch hamstrings and gastroc muscles
Progress strengthening exercises listed above
Initiate following:
Walking program
Swimming
Lateral step-ups
Wall squats (no deep)
Progress proprioception training

- MINIMAL PROTECTION PHASE (Weeks 13-22)

Goals: Increase strength, power and endurance
Begin gradual return to function

Criteria to progress to Phase IV:

- Full non-painful ROM
 - Minimal to no effusion
 - Normal gait
 - Strength 4 to 4+/5
- Weeks 13-22
- Exercises: Leg press 0-100 degrees
Wall squats 0-60 degrees
Lateral step-ups (6") height
Front step-downs (6") height
Knee extension 90-30 degrees
Hip abd/adduction
Vertical squats
Bicycle

Toe-calf raises
Stairmaster
Pool running/jobbing program
Walking longer distance

- May return to work depending on job demands (physician decision)
- Week 20
- Continue all exercises listed above

- RETURN TO ACTIVITY PHASE (Weeks 23-52)

Goals: Gradual return to functional activities

Criteria for progress to Phase V:

- Full non-painful ROM
 - No swelling
 - Normal patellar mobility
 - Strength: isokinetics test – satisfactory result 10-15% of appropriate leg
 - Week 23 and Beyond
- I. Exercises: continue all exercises listed above
 - II. Initiate light jobbing (if appropriate and physician clearance)
 - III. May return to light aerobic conditioning
- Week 26-30
 - Return to recreational sports (physician decision)