

Meniscal Allograft Transplantation Rehabilitation Protocol

I. 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

A. Week One

1. Cryotherapy elevation and compression
2. Brace: knee immobilizer (sleep in brace)
3. Weight bearing: toe touch (less than 25%)
4. Range of motion: full passive knee extension gradually progress to 90 degrees flexion (*Use of CPM ok if necessary)
5. Exercises: Patellar mobilization
Heel slides to gain flexion
Quadriceps setting
Straight leg raises (flexion)
Knee extension (active assisted)
Ankle pumps
Hamstrings, gastroc-soleus stretches

B. Week Two

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

II. MAXIMAL PROTECTION PHASE (Weeks 3-8)

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

Criteria to progress to Phase II:

1. Mild effusion
2. Good patellar mobility
3. ROM minimal 0-95 degrees
4. Active quadriceps contraction

A. Weeks 3-4

1. Brace: continue use of knee brace (sleep in brace for 4 weeks)
2. Weight bearing: increase to 50% at week 3 and 75% at week 4
3. Range of motion: passive ROM 0-105 week 3
4. 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
5. Cryotherapy: continue use of ice and compression

B. Weeks 5-6

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

C. Weeks 7-8

1. Brace: discontinue use of brace at week 7-8
2. Weight bearing: full without brace
3. Range of motion: passive ROM 0-135 degrees
4. 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**

III. 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:

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

A. 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

IV. MINIMAL PROTECTION PHASE (Weeks 13-22)

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

Criteria to progress to Phase IV:

1. Full non-painful ROM
2. Minimal to no effusion
3. Normal gait
4. Strength 4 to 4+/5

A. Weeks 13-22

1. 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

2. May return to work depending on job demands (physician decision)

B. Week 20

1. Continue all exercises listed above

V. RETURN TO ACTIVITY PHASE (Weeks 23-52)

Goals: Gradual return to functional activities

Criteria for progress to Phase V:

1. Full non-painful ROM
2. No swelling
3. Normal patellar mobility
4. Strength: isokinetics test – satisfactory result 10-15% of appropriate leg

A. Week 23 and Beyond

1. Exercises: continue all exercises listed above
2. Initiate light jobbing (if appropriate and physician clearance)
3. May return to light aerobic conditioning

B. Week 26-30

1. Return to recreational sports (physician decision)