

MENISCUS REPAIR

Physical Therapy & Strength and Conditioning

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PHASE I – Maximum Protection (Weeks 0 to 6)

- Weight bearing as tolerated with crutches with brace on in full extension. Wean from crutches as tolerated.
- Hinged knee brace 0-90° for 6 weeks.

Week 0 to 2

- ☐ **Goals**
 - ☐ Reduce inflammation
 - ☐ Normalize patella mobility with manual mobilizations
 - ☐ full extension both passive and active
 - ☐ Good quadriceps activation
 - ☐ No extension lag
 - ☐ 0-90° of knee flexion for 6 weeks
- ☐ **Exercise progression**
 - ☐ Gait training
 - ☐ Wean off crutches
 - ☐ Extension - heel props for full extension as needed
 - ☐ Flexion - off table or wall slides to 90°
 - ☐ Quadriceps setting using NMES as needed
 - ☐ Multi-plane straight leg raises
 - ☐ Bilateral calf raises
- ☐ **Cardiovascular exercise**
 - ☐ Stationary biking
- ☐ **Recommended loading**
 - ☐ Short but frequent bouts of ROM and quadriceps activation 3+x/day

Weeks 2 to 6

- ☐ **Goals**
 - ☐ Reduce inflammation
 - ☐ Full knee extension/hyperextension
 - ☐ Good quadriceps control with no extension lag
 - ☐ 0-90° of knee flexion
- ☐ **Exercise progression**
 - ☐ Continue with 0-2 week program
 - ☐ Extension – continue with heel props or add prone hangs (as needed)
 - ☐ Flexion – wall or heel slides
 - ☐ Ball bridge and/or isometric hamstring activation
 - ☐ Proprioception drills
- ☐ **Cardiovascular exercise**
 - ☐ Stationary biking (knee flexion < 90°)
 - ☐ Short walks using a crutch as needed

PHASE II – Progressive Stretching and Early Strengthening (Weeks 6 to 12)

- ☐ **Goals**
 - ☐ Discontinue knee brace
 - ☐ Full knee extension/hyperextension
 - ☐ Gradual progression to full knee flexion
 - ☐ Normalize gait mechanics
 - ☐ Normalize patellofemoral joint and scar mobility
- ☐ **Exercise progression**
 - ☐ Extension – heel props and prone hangs as needed
 - ☐ Flexion – increasing to full as tolerated
 - ☐ Bilateral squat progression – partial range, focus on proper alignment
 - ☐ Multi-plane open and closed kinetic chain hip strengthening
 - ☐ Step-up progression – focus on alignment, front, lateral step-up, and step up/over (6", 8", 10", 12" progression)
 - ☐ Hamstring activation with bridge on floor, ball or box
 - ☐ Progress to unilateral heel raise off the floor then off a step
 - ☐ Proprioception drills
- ☐ **Cardiovascular exercise**
 - ☐ Stationary biking
 - ☐ Treadmill/outdoor walking with focus on proper gait mechanics
- ☐ **Core Program**
 - ☐ Front plank – full, may advance to alternating leg lift
 - ☐ Bridge – marching or single leg
 - ☐ Quadruped alternating arm/leg

PHASE III – Advanced Strengthening and Endurance Training (Weeks 12 to 16)

- ☐ **Goals**
 - ☐ Control inflammation with increasing loads
 - ☐ Full knee flexion and extension with terminal stretch
 - ☐ Progressive strengthening
 - ☐ Increase muscular endurance
- ☐ **Movement Prep**
 - ☐ Foam roller
 - ☐ Controlled movement series
- ☐ **Exercise progression**
 - ☐ Weighted squat progression – gradually increase depth and resistance
 - ☐ Single leg squat/lunge progression (dips, retro, walk and split), focus on eccentric control and alignment.
 - ☐ Monster walks
- ☐ **Core Program**
 - ☐ Front plank – full, may advance to alternating leg lift
 - ☐ Bridge – marching or single leg
 - ☐ Side plank – full
 - ☐ Dead bug progression
 - ☐ Quadruped alternating arm-leg
- ☐ **Cardiovascular exercise**

- ☐ Stationary biking
- ☐ Treadmill/outdoor walking with focus on proper gait mechanics
- ☐ Arc trainer or elliptical
- ☐ **Sports Specific activity progression**
 - ☐ Basic ladder series
 - ☐ Low amplitude bilateral hops
 - ☐ Skipping
 - ☐ Higher intensity interval work with CV program – week 12-14
- ☐ **Recommended loading**
 - ☐ ROM: 1-2x/day
 - ☐ Strength: 3x/week on closed chain loading
 - ☐ Cardiovascular: 20-45 minutes 5x/week with moderate intensity and intervals.

PHASE IV – Advance Strengthening and Running progression (Weeks 16 to 20)

- ☐ **Goals**
 - ☐ Control inflammation with increasing loads
 - ☐ Progressive strengthening
 - ☐ Increase muscular strength, power and endurance
- ☐ **Movement Prep**
 - ☐ Foam roller
 - ☐ Controlled movement series
- ☐ **Exercise progression**
 - ☐ Increasing loads from phase III
- ☐ **Core Program**
 - ☐ Increasing loads from phase III
- ☐ **Non-impact cardiovascular exercise**
 - ☐ Stationary biking
 - ☐ Arc trainer or elliptical
 - ☐ Swimming
- ☐ **Running progression**
 - ☐ Advanced ladder series
 - ☐ Walk/jog interval
 - ☐ Linear acceleration/deceleration
 - ☐ Sprinting
 - ☐ Change of direction and lateral agility
- ☐ **Jumping progression (*gradual progression)**
 - ☐ Low amplitude bilateral single response jumps
 - ☐ Bilateral multiple response jumps
 - ☐ Unilateral single response jumps
- ☐ **Sports Specific activity progression**
 - ☐ Non-contact and non-reactive field/court progression 16-20 weeks
- ☐ **Sports test and follow-up with physician**
 - ☐ Follow-up examination with the physician
 - ☐ Sports test for return to competition at 5-6 months