



Knee Pain/Diagnoses- Nonoperative

Phase 1 – MOTION AND MOBILITY

- Patellar mobilizations, including quad & patellar tendon
- Quad set progressing to SLR (with NMES, biofeedback)
- Open- and closed-chain terminal knee extension (TKE)
- Open-chain hip strengthening
- ROM: emphasize full extension, heel/wall slides for flexion
- Bike for motion

Phase 2 – ENDURANCE

- Closed-chain progression (including squat, lunge, step-up, bridge)
- Progress from double leg to single leg; from stable to unstable surfaces
- Balance progression
- Bike for cardiovascular fitness
- **For Athletes:**
 - Check Y-Balance

**Note: Non-athletes may be appropriate for discharge to independent home program at this time if able to complete work and life demands. Check for safety with stair negotiation and ambulation on uneven surfaces.*

Phase 3 – STRENGTH

- Increase sets/duration of closed-chain strengthening in varied proprioceptive environments
- **For Athletes:**
 - Initiate squat jump progression from shuttle to gravity dependent position
 - Check Y-Balance
 - Return to Sport Tests

Phase 4 – AGILITY, POWER, RETURN TO SPORT

- **For Athletes:**
 - Sport-specific movement patterns practiced in supervised and controlled environment
 - Graded re-integration into sport activities with MD and PT clearance
- **Return to Activities**
 - Timelines dependent on symptoms and functional criteria