ACL Reconstruction with Meniscal Repair Rehabilitation Protocol

- Basic ACL protocol but no passive range of motion (PROM) greater than 90 degrees for four weeks; no squatting, hyperflexion for six months; no deep squats for 6 to 9 months; incorporate meniscal repair protocol

Immediate Post-op
- Toe touch weight-bearing with crutches during first two weeks
- Brace locked in extension except for physical therapy for first two weeks then open brace up, sleep with brace on
- Long-leg hinged brace discontinued when gait normal and good quad control, usually at four weeks
- Cooling device or ice used on knee every two hours for 20 to 30 minutes for first week, then continue as needed for swelling and pain management

Weeks 1 to 2
- **Focus on achieving full extension**: Heel prop and prone hang
- Teach patellar mobilizations: Inferior, superior and medial glides and patellar tilts
- Focus on quad activation (use neuromuscular stim if patient has poor quad contraction)
- Ankle pumps, quad sets in full extension, straight leg raises with brace locked in extension, heel slides, hamstring sets
- **With hamstring autograft** no active hamstring exercises until week two; no open chain resisted hamstring curls until four weeks post-op
- Active hip exercises: Side-lying adduction/abduction, prone extension
- Stretch hamstrings and calves

Weeks 3 to 6
- Active assistive range of motion (AAROM) with flexion goal of 130 degrees by end of week six
- Start stationary bike (low resistance, seat high)
- Ok to stop using brace at night while sleeping
- Resisted leg curls in prone position protecting knee from hyperextension
- Resisted gastroc/soleus exercises progressing to bilateral toe raises as tolerated then single leg toe raises
- Add resistance to hip exercises
- At post-op day 21 add
  - Partial squats at 0 to 30 degrees of knee flexion, perform bilateral and progress to unilateral as tolerated
  - Progressive quad resistance

Weeks 7 to 12
- Range of motion (ROM): Increase flexion to full and ensure full extension is achieved
- Increase resistance exercises
  - Progress to weighted straight leg raises
• Progress exercise on leg press/hack squat as tolerated with emphasis on high reps, low resistance in range of 0 to 90 degrees
• Increase ROM for bilateral partial squats from 30 to 45 degrees of knee flexion
• Emphasize high repetition and low resistance weights
• Balance activities
• Isometric and isotonic training for hamstrings

Months 3 to 6
• Stationary bike, unilateral pedaling to emphasize hamstrings
• Agility workouts (figure-eights, shuttle runs)
• Exercises on weight machines
  • High reps to work on muscle endurance
  • Leg press/hack squat 0 to 90 degrees
  • Hip exercises
  • Progressively increase walking to tolerance on treadmill
• Begin jogging weeks 13 and 14
  • Up and down straightaway, no curves, stop at end and turn around
  • Take day off between each workout to see how knee responds
  • If pain or swelling develops, back off
  • Ice after jogging
• At weeks 15 and 16
  • Begin running around track, gentle curves
  • Progress speed, intensity and duration

6 Months
• Ok for light tennis, golf
• Begin sport specific training
• Return to sport
  • Hamstring autograft: 6 to 8 months
  • Achilles tendon allograft: 8 to 12 months
  • Progression must be gradual and sport specific