

# **Knee Arthroscopy Rehabilitation Protocol**

**Mark Ayzenberg, MD, FAAOS**

## **PHASE I (Week 0-2)**

### **Goals:**

- Alleviate acute pain and swelling
- Restore ROM
- Increase hip, hamstring, quadriceps strength
- Promote normal ambulation
- Maintain cardiovascular conditioning

### **Plan:**

- Ice, compression, elevation
- ROM exercises
- Patellar mobilization
- Scar tissue mobilization
- Kinesiotaping as necessary
- Exercises:
  - Hamstring and gastric stretching
  - Aquatic therapy (if available)
  - Cycling as tolerated
  - Prone and/or standing knee flexion
  - 4-quad (hip flexion, abduction, adduction, extension)
  - Proprioception
  - Ankle exercises (theraband)
  - LE stretching (ham/ gastroc)
- Modalities as needed (EMS for muscle re-ed; edema control)

## **PHASE II (Weeks 2-4)**

### **Goals:**

- Decrease swelling
- Increase ROM
- Increase strength hip/knee
- Improve general conditioning
- Independent ambulation w/o assist

### **Plan:**

- Continue phase I exercises

- N-K for hamstrings only
- ROM
- Stairmaster, treadmill, cycle
- Universal equipment PRE's – leg press
- Proprioceptive and balance training BAPS and trampoline
- Closed chain activity
- Calf raises

### **PHASE III (Weeks 4-6)**

#### **Goals:**

- Full, painless ROM
- Increase quadriceps and hamstring strength, power, endurance
- Continue general conditioning

#### **Plan:**

- Full symmetric ROM
- Normal gait
- Continue Phase II exercises
- Increase closed chain activities (step up, side, down)
- Increase proprioception activity (sport cord)
- Light jogging on trampoline
- Progress as tolerated

Some suggested therapeutic exercises for closer to the end of rehab protocol *if age and sport-appropriate* once patient judged ready and safe by physical therapist:

- Low amplitude low velocity agility drills: forward and backward skipping, side shuffle, skater's quick stepping, carioca, cross overs, backward jog, forward jog
- Closed chain strengthening for quadriceps and glutes - progressing from double leg strengthening to single leg strengthening: lunge progressions and single leg squat progressions
- Single leg balance exercises and progressions, progressing from stationary to deceleration in to holding posture and position
- At approximately 12-14 weeks initiate low amplitude landing mechanics: med ball squat catches, shallow jump landings, chop and drop stops, etc
- Hip strengthening - especially oriented at neuromuscular control in prevention of hip adduction at landing and stance
- Core strength and stabilization - especially orientated at preventing frontal plane trunk lean during landing and single leg stances
- Unanticipated movement control drills, including cutting and pivoting
- Agility ladder drills
- Stretching for patient specific muscle imbalances