

## **KNEE ARTHROSCOPY - REHABILITATION PROTOCOL**

### **Phase I: Maximum Protection Phase - Postoperative Weeks 1 to 4**

#### **Goals:**

- Reduce inflammation/effusion
- Allow early healing
- Full passive knee extension
- Gradually increase knee flexion
- Restore quadriceps voluntary activation

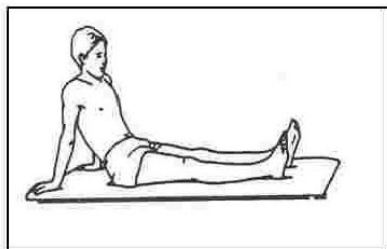
#### **Activity:**

- The **novocaine** that is put in your knee at the time of surgery lasts **6 to 8 hours**. Begin taking the pain medication when you start feeling sensation return. The knee will be painful for several days after the arthroscopy.
- You can bear full weight and walk on the leg unless otherwise instructed by the doctor. In some instances, crutches can be used for a period of time if walking is uncomfortable. You may discontinue using crutches as soon as you feel comfortable doing so.
- Remove the outer bandage when you get home and apply cold (ice) directly to the knee. Change the bandages whenever needed.
- Gently move the knee (flexion and extension) as much as you can to prevent stiffness.
- Apply cold to reduce pain and swelling. Use ice on the knee 20 minutes on and 20 minutes off for the first day when awake. Then apply ice as often as needed for 15 to 20 minutes at a time for the next several days. Place a towel or cloth between the skin and the ice to prevent skin injury.
- Wrap an elastic bandage (ace) around the knee at other times to control swelling.
- You may shower and get your incision wet after two days. Do not soak the incision in a bathtub or hot tub for at least two weeks after surgery. If there is any drainage from the wound, do not get the wound wet.
- Take an aspirin each morning.
- Wear an elastic stocking (TED) below the knee, and do at least 10 ankle motion exercises each hour to control swelling and to help prevent blood clots in the veins.
- You should have an appointment to see physical therapy by 5 days postoperative. You will return to the office in 10 to 14 days.

## Stage I Exercises: Week 1 (prior to starting PT)

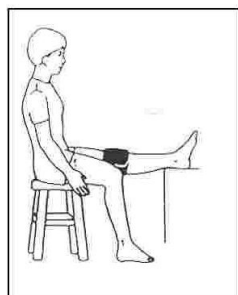
Perform the following exercises 7 days per week, 3 to 4 times per day.

Quadriceps setting	1 to 2 sets	15 to 20 reps
Heel prop	5 minutes	
Heel slides with towel assist	5 to 15 minutes	
Sitting heel slides	1 to 2 sets	15 to 20 reps
Patellar mobilization	1 set	15 to 20 reps
Ankle pumps	10 per hour	



### Quadriceps setting

Lie or sit with your knee fully straight. Tighten and hold the front thigh muscle making the knee flat and straight (this should make your knee flatten against the bed or floor). Hold 5 seconds for each contraction.



### Heel prop

Lie on your back with a rolled up towel under your heel, or sit in a chair with the heel on a stool. Let the knee relax into extension (straight). If the knee will not straighten fully, you can place a small weight (2-5 lbs) on the thigh just above the knee cap. Try to hold for 5 minutes. Try to practice quadriceps setting in this position.



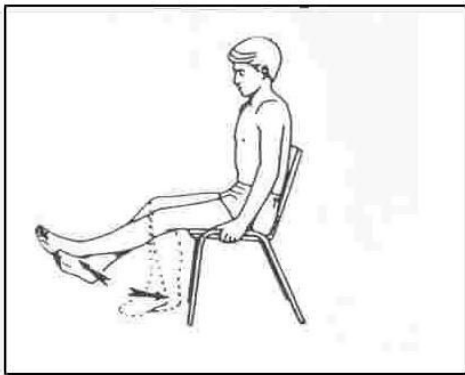
### Patellar mobilization

With the knee fully extended, grasp the edges of your knee cap between your thumb and index finger. Move the knee cap side to side and up and down.



### Heels slides with towel assist

While sitting or lying on your back, actively slide your heel backward to bend the knee. Hold this bent position for five seconds then slowly relieve the stretch and straighten the knee. While the knee is straight, you may repeat the quadriceps setting exercise. You can assist by using a towel to pull your heel back.



### Sitting heel slides

While sitting in a chair or over the edge of the bed, support the operated leg with the uninjured leg. Lower the operated leg, with the unoperated leg controlling, allowing the knee to bend. Do not go past 60° of bend at the knee. Hold for 5 seconds and slowly relieve the stretch by lifting the foot upward with the uninjured leg to the straight position.

## Stage 2: Weeks 2 through 4

This stage will begin once you begin working with your therapist. In addition to demonstrating these exercises, your therapist will give you a home exercise program. It will be important to perform these exercises daily in order to ensure maximum results after your surgery.

### Exercises:

- Gradually increase PROM as tolerated
  - Week 2: 0-125 degrees
  - Week 3: 0-135 degrees
  - Week 4: 0-145 degrees
- Stretch hamstrings, calf, hip flexors
- Strengthening exercises (electrical stimulation to quads):
  - Quad sets
  - SLR flexion
  - Hip Abduction/Adduction
  - Knee extension 90-40 degrees
- Mini Squats 0-50/60 degrees SLR (all 4 planes)
- Knee extension 90-0 degrees
- CKC mini-squats 0-45 degrees
- CKC wall squats 0-60 degrees
- Initiate CKC exercises
- Lateral and front step overs
- Lateral lunges
- Step downs (lateral)
- Step downs (front)
- Bicycle
- Pool exercises (once incision is closed and dry)
- Avoid active resisted knee flexion

## **Phase II: Intermediate Phase - Postoperative Weeks 4 to 6**

### **Goals:**

- Full PROM
- Minimal to no swelling/inflammation
- Restore quadriceps strength
- Gradually increase functional activities

### **Activity:**

- You can bear weight and walk on the leg as much as you are able. Try to avoid limping and walk with a heel - toe pattern. Avoid walking for long distances for 4 to 6 weeks after surgery.
- Continue to ice the knee to reduce pain and swelling. Ice the knee three times a day for 15 to 20 minutes. Always place a towel or cloth between the skin and the ice to prevent skin injury.

### **Exercises:**

- Continue ROM and stretching to maintain 0-135 degrees
- Progress strengthening exercises
  - Leg press 70-0 degrees
  - Knee extension 90-40 degrees
  - Hip Abduction/Adduction
  - Wall squats 0-70 degrees
  - Vertical squats 0-60 degrees
  - Lateral step-ups
  - Front and lateral lunges
  - Hamstring curls
- Balance/proprioception training
- Biodex stability
- Squats rocker board
- Cup walking (step overs)
- Standing on foam single leg
- Bicycle (if ROM permits)
- Pool program (may begin running in pool)
- Elliptical
- At week 6 may begin treadmill walk/run program

## **Phase IV: Return to Activity - Postoperative Weeks 6 and beyond**

### **Goals:**

- Improve strength and endurance
- Prepare for unrestricted activities

### **Criteria to progress to Phase IV**

- Full non-painful ROM
- No pain or tenderness
- Satisfactory clinical exam
- Satisfactory isokinetic test

### **Exercises**

- Continue and progress all strengthening exercises and stretching drills
- Deep squatting permitted at 4 months (nothing past 90°)
- Initiate straight line running: 4 months
- Initiate pivoting and cutting: 5 months
- Initiate agility training: 5 months
- Gradually return to sports: 6 months