

## Robert Kollmorgen DO

### General Principles:

This protocol was designed to provide the rehabilitation professional with a guideline of postoperative care. It should be stressed that this is only a protocol and should not be a substitute for clinical decision making regarding a patient's progression. Actual progression should be individualized based upon your patient's physical examination, progress, and presence of any complications. This protocol was developed for both post-operative and non-operative management of patellar dislocations. Specific sections of this protocol will differ based on their surgical status.

### PHASE I: (Immediate)

#### Week 1

##### Orthotics-

1. Knee Immobilizer at all times other than for exercises

##### Weight Bearing-

1. Touch Weight Bearing using 2 crutches

##### Modalities (PRN)-

1. Ice, compression, and elevation as needed
2. Electrical stimulation for pain or muscle re-education
3. Ice for 20 minutes following exercises throughout the protocol
4. Moist heat and/or Pulsed Ultrasound after 48 hours

##### ROM-

#### 1. Post-Op patients:

- a. Gravity-assisted ROM from 0 to 45 flexion only
- b. NO Active knee extension

#### 2. Non-Op patients:

- a. Progress ROM exercises from 0 to 90 flexion only
- b. NO Active knee extension

##### Exercises-

1. Hamstring, Calf, and IT Band stretching
2. Quad sets, Hamstring sets
3. Ankle pumps
4. Straight leg raises
  - a. Standing position ONLY
  - b. NO resistance
  - c. Must be performed in knee immobilizer

### PHASE II: (Intermediate)

#### Week 2 – 4

##### Orthotics-

1. Knee Immobilizer at night and for all weight bearing activities
2. Patellar stabilizing orthotic may be prescribed per physician

## Patellar Dislocation

Adopted 2/98, Revised 6/04, Revised 4/09 2

##### Weight Bearing-

1. Weight Bearing as tolerated using Knee Immobilizer at all times

##### Modalities (PRN)-

1. Continue Phase I modalities as needed

##### ROM-

1. At the start of **Week 4:**

#### Post-Op patients:

- a. May progress ROM exercises to 0 to 90 as tolerated

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b. NO Active knee extension

2. At the start of **Week 3:**

**Non-Op patients:**

a. May progress ROM to full as tolerated

b. NO Active knee extension

Exercises-

1. Progress Phase I exercises as tolerated

2. Proprioception / Weight shifting exercises

a. In knee immobilizer

b. Bilateral, progress to unilateral

3. Progress Straight Leg Raises to supine / lying

a. NO resistance

b. May progress out of knee brace for SLRs as strength allows

4. Neuromuscular Re-education as needed

**PHASE III (Strengthening)**

**Week 5 – 8**

Orthotics-

1. Should be progressing to patellar stabilizing orthotic for all activities

Weight Bearing-

1. Weight Bearing as tolerated using orthotic

Modalities (PRN)-

1. Continue only as needed

ROM-

1. **Post-Op patients:**

a. May progress ROM exercises to full as tolerated

2. **Non-Op patients:**

a. Attain / Maintain full active and passive knee ROM

Exercises-

1. Progress Phase II exercises as tolerated

2. May add resistance to Straight Leg Raises as tolerated

## Patellar Dislocation

Adopted 2/98, Revised 6/04, Revised 4/09 3

3. Stationary Bicycle / Nu-Step

a. Progress resistance and duration as tolerated

4. Shuttle / Leg Press

a. Bilateral, progress to Unilateral

b. Progress resistance

5. When patient's reach 0 to 120 of pain-free Active ROM, progress to:

a. Open Chain exercises, progress resistance as tolerated

1. Short-arc Quads, progress to Long-arc

2. Long-arc Hamstrings

b. Closed Chain exercises, progress as tolerated

1. Terminal Knee Extensions, Mini-Squats, Step Ups, etc

6. Aquatics

a. Refer to aquatic protocol

b. Cycling, straight leg flutter kicks

**PHASE IV (Advanced Strengthening)**

**Week 9 – 12**

Orthotics-

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1. May discontinue brace for daily activities only with physician approval
  2. Continue functional brace for high risk activity and exercise until notified by physician
- ROM-

1. Maintain full active and passive ROM

Exercises-

1. Progress Phase III exercises as tolerated
2. Progress to aggressive full-arc strengthening Isotonic strengthening
3. Isokinetics
  - a. Limit extension to -20 initially
  - b. Start with 240 to 300 degrees per second
  - c. Progress to 180 to 300 degrees per second as tolerated

### **Week 13+**

Exercises-

1. May initiate straight-ahead jogging
2. Initiation of light sports activity
  - a. Plyometrics
  - b. Shuttle Bounding
  - c. See Interval Golf and Running programs
3. Isokinetic Test at 180, 240, and 300 degrees per second for MD review and full release to sport activity. General goal for full release to sport activity is 85% strength compared to uninvolved