



GOLDEN STATE ORTHOPEDICS & SPINE

Patellofemoral Dislocation Rehabilitation Protocol

This evidence based and soft tissue healing dependent protocol is designed to help patients return to activity as quickly and safely as possible.

Phase I: 0-2 Weeks	Acute Phase
Goals	<ul style="list-style-type: none"> • Minimize knee joint effusion • Gently increase range of motion per tolerance • Encourage quadricep function • Gradual progression of therapeutic exercise for strengthening, stretching, and balance • Normalization of gait pattern
ROM	<ul style="list-style-type: none"> • Week 0-1: 0 degrees of extension • Week 1-2: Gradually increase based on tolerance. Full range of motion by 4-6 weeks.
Weightbearing/Brace	<ul style="list-style-type: none"> • Weightbearing as tolerated with knee immobilizer. Switch to lateral patellar stabilizer when there is good quadriceps control
Modalities	<ul style="list-style-type: none"> • Cryotherapy 15 minutes, 3 times per day • IFC for pain and effusion as needed • NMES for quadriceps if needed
Treatment Recommendations (Based on Tolerance)	<ul style="list-style-type: none"> • Active warm-up through range of motion (high bike seat) • Gentle stretching to increase range of motion. Emphasis on full return of knee extension as soon as possible with gradual improvement for knee flexion range of motion based on patient tolerance. <ul style="list-style-type: none"> ○ Low load long duration stretching for extension with heat if needed ○ Patellar mobilization only if needed, avoiding lateral patellar glides ○ AROM/AAROM/PROM • Flexibility exercises for hamstring, gastroc/soleus, ITB, iliopsoas if indicated • Gentle strengthening exercises, pain free. Respect patellofemoral joint reaction forces. Initiate functional closed kinetic chain exercises with strengthening from terminal extension to mid range flexion • Isolate gentle sub-max open kinetic chain exercise from mid range flexion to 0 degrees and light isotonic open kinetic chain exercises 90 degrees to 45 degrees. <ul style="list-style-type: none"> ○ Adductor squeezes, SLR, closed kinetic chain knee extension, multiangle isometrics at 20 degree increments ○ Gentle short arc 0 degrees to 30 degrees for quadriceps ○ Light isotonic open kinetic chain exercises 90 degrees to 45 degrees ○ Closed kinetic chain exercises of weight shifting, partial wall squats ○ Hip 4-way ○ Gastroc/Soleus strengthening • Balance/proprioception exercises, double leg progressing to single leg • Core stability and upper body exercises • HEP



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<p>(Based on Tolerance)</p>	<ul style="list-style-type: none"> • Strengthening and endurance exercises: advance as tolerated with emphasis on functional strengthening • Avoid dynamic valgus during strengthening and functional activities, focusing on hip abductor and external rotator strengthening <ul style="list-style-type: none"> ○ Total leg strengthening ○ Hip strengthening ○ Heel raises ○ Hamstring full range of motion isotonic ○ Quadricep isotonic in range of motion with chondrosis ○ Isokinetic quadriceps and hamstring in range of motion without chondrosis ○ Closed kinetic chain exercises: leg press, multidirectional lunges, squats, step-ups, side steps with theraband ○ Gastroc/Soleus strengthening exercises ○ Stairmaster • Dynamic balance exercises • Impact activities if patient has 75% strength on closed kinetic chain testing <ul style="list-style-type: none"> ○ Running program ○ Agility drills ○ Plyometrics • Sport specific activities • Cardiovascular conditioning • Core strengthening
<p>Testing at 4-6 Weeks</p>	<ul style="list-style-type: none"> • Linear closed kinetic chain testing • Functional testing when appropriate • BioSway
<p>Return to Sport/Work Guidelines</p>	<ul style="list-style-type: none"> • Based on physician approval, minimal pain at rest or with activity, no knee joint effusion, full range of motion, isokinetic strength and functional testing at 90% compared to uninvolved or normative data, adequate performance on sport specific drills • Anticipated return to full activity between 8-24 weeks

Gundersen Lutheran Sports Medicine. *GundersenLutheran*, 10/2007. Web. 3 May, 2013.