

Non-Op Patella Dislocation

Physical Therapy & Strength and Conditioning

Phase I – Maximum Protection (Weeks 0 to 6):

0 to 4 weeks:

- Brace locked in full extension for 6 weeks
- Partial weight bearing for 2 weeks
- Ice and modalities to reduce pain and inflammation
- **Range of motion – none**
- Begin submaximal quadriceps setting
- Begin straight leg raising progression as tolerated
- Lower extremity stretching – hamstrings and calf

Weeks 2 to 4:

- Weight bearing as tolerated; progressing off of crutches
- Continue with inflammation control
- Soft tissue mobilization quad, ITB, calf, hamstrings, gluts
- **Range of motion – none**
- Implement open and closed chain multi-plane hip strengthening
Core strengthening and lower extremity stretching program

Weeks 4 to 6:

- Full weight bearing
- Patellar stabilizer brace under brace

Range of motion and brace setting:

- 0° to 30° week 4 (both passive and active)
- 60° week 5
- 90° week 6
- Full following week 6

Phase II – Progressive Range of Motion and Early Strengthening (Weeks 6 to 12):

Weeks 6 to 8:

- Gradually progress to full range of motion
- Normalize gait
- Foam roller and soft tissue mobilization
- Begin bilateral closed chain progression with stability brace – strong emphasis on alignment
- Implement gradual step-up progression
- Hip stabilization program
- Begin stationary bike
- Initiate deep and shallow water pool program

Weeks 8 to 12:

- Wean out of stabilization brace as tolerated for strengthening
- Progress bilateral and unilateral closed chain program
- Add basic gym program (leg press and hamstring curls)
- Increase intensity on stationary bike
- Add treadmill walking program and elliptical as tolerated

Phase III – Progressive Strengthening (Weeks 12 to 16):

- Advance closed kinetic chain and gym strengthening
- Begin impact and plyometric progressions
- Increase intensity on bike, treadmill, and elliptical trainer

Phase IV – Advance Strengthening and Return to sports (Weeks 16 to 20):

- Liner running progression progressing to multidirectional as tolerated
- Bilateral progressing to unilateral plyometric progression
- Sports test for full clearance

- Flexion – continue with end range heel slides
- Bilateral squat progression – focus on proper alignment
- Multi-plane open and closed kinetic chain hip strengthening
- Step-up progression – focus on proper alignment
- Hamstring activation with bridge on floor, ball or box
- Progress to unilateral heel raise off the floor then off a step
- Proprioception drills

Cardiovascular exercise

- Stationary biking
- Treadmill/outdoor walking with focus on proper gait mechanics

Recommended loading

- ROM: 2-3x/day
- Strength: 1x/day open chain; 3x/week closed chain
- Cardiovascular: 20 minutes/day with low intensity

Weeks 4 to 6

Goals

- Reduce inflammation
- Full ROM
- Normal gait

Exercise progression

- Controlled movement series - warm-up
- Leg press, hamstrings curls
- Single leg RDL's

Cardiovascular exercise

- Increase intensity/duration
- Stationary biking
- Treadmill/outdoor walking with focus on proper gait mechanics
- Arc trainer or elliptical

Recommended loading

- ROM: 2x/day
- Strength: 3x/week on closed chain loading
- Cardiovascular: 20-30 minutes/day with low to moderate intensity

Phase III – Advanced Strengthening and Endurance Training (Weeks 6 to 8)

Goals

- Control inflammation with increasing loads
- Full knee flexion and extension with terminal stretch
- Progressive strengthening
- Increase muscular endurance

Movement Prep

- Foam roller
- Controlled movement series

Exercise progression

- Weighted squat progression
- Single leg squat/lunge progression (dips, retro, walk and split), focus on eccentric control and alignment.
- Monster walks

Core Program

- Front plank – full, may advance to alternating leg lift
- Bridge – marching or single leg
- Side plank – full
- Dead bug progression
- Quadruped alternating arm-leg

Cardiovascular exercise

- Stationary biking
- Treadmill/outdoor walking with focus on proper gait mechanics

- Arc trainer or elliptical

Running progression

- Basic ladder series
- Skipping
- Walk/jog interval – 6-8 weeks

Jumping progression (*gradual progression)

- Low amplitude bilateral single response jumps

Sports Specific activity progression

- Outdoor biking – week 6
- Shallow water pool running – week 6
- Swimming free style – week 6
- Higher intensity interval work with CV program – week 6-8
- Non-reactive and non-contact on field/court progression

Recommended loading

- ROM: 1-2x/day
- Strength: 3x/week on closed chain loading
- Cardiovascular: 20-45 minutes 5x/week with moderate intensity and intervals.

Phase IV – Advance Strengthening and Running progression (Weeks 8 to 16)

Goals

- Control inflammation with increasing loads
- Progressive strengthening
- Increase muscular strength, power and endurance

Movement Prep

- Foam roller
- Controlled movement series

Exercise progression

- Increasing loads from phase III

Core Program

- Increasing loads from phase III

Non-impact cardiovascular exercise

- Stationary biking
- Arc trainer or elliptical
- Swimming

Running progression

- Advanced ladder series
- Linear acceleration/deceleration
- Sprinting
- Change of direction and lateral agility

Jumping progression (*gradual progression)

- Low amplitude bilateral single response jumps
- Bilateral multiple response jumps
- Unilateral single response jumps

Sports Specific activity progression

- Interval golf program – 8 weeks
- Progress intensity with field/court progression working toward full RTS

Sports test and follow-up with physician

- Follow-up examination with the physician
- Sports test for return to competition at 12 weeks

Recommended loading

- ROM: global stretching
- Strength: 2-3x/week with increasing resistance
- Cardiovascular: 20-45 minutes 5x/week. Alternate impact and non-impact days using sound recovery principles.