

Non-operative treatment - Chondromalacia Patella

Rationale: The number of patellofemoral problems is increasing. No single cure exists for the treatment of this problem. This suggested exercise program is divided into three goal-oriented phases. Paying attention to the precautions and good education is paramount to success.

Phase 1-Acute phase

Goals:

- Education
- Decrease pain, swelling, palpable tenderness
- Improve gait deviations
- Restore normal mechanics

Suggested treatment:

- Modalities to include ice, phonophoresis, moist heat, and electrical stimulation
- Taping
- Stretching for hamstrings, triceps surae, quadriceps, and iliotibial band
- Start with isometric strengthening
- Immobilizer and cane/crutches if acute

Precautions

- Program should not increase symptoms
- Phase 2 begins when resting pain is resolved, swelling decreased, and palpable tenderness is moderate to minimal

Phase 2-Subacute phase

Goals:

- Balance length and strength of lower extremity musculature
- Increase quadriceps strength (VMO control)
- Good patellar mechanics

Suggested treatment

- Exercises include quad sets, straight leg raises, wall squats, mini-squats, closed chain strengthening (eg. Slow motion walking, leg press, step ups, resistive bends in weight-bearing, be innovative with weight-bearing activities)
- Continue stretching tight muscles
- Patellar mobilizations (medial glides and lateral tilts)
- Electrical stimulation to VMO
- Orthotics to balance the foot
- Pain free biking (high seat with low resistance)
- Overall conditioning program (avoid open chain knee extension exercises)

Precautions

- Do not work through pain
- Program should not increase symptoms

Phase 3-Functional phase

Goals

- Pain free functional closed chain activities (steps, jogging, running, and sport specific activities)
- Return to unrestricted pain free activities

Suggested treatment

- Functional activities in closed chain position
- Slow motion walking
- Squats, leg press, biking, stairmaster, jogging, running
- Speed and agility drills progressing to curve cuts and sharp cuts and one-legged hops

Precautions

- Avoid full range open chain knee extension exercises
- No stretching of the adductor muscles
- No pain during or after exercises