

# Conservative Treatment for Patella-Femoral Pain

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# Patella-Femoral Pain

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- Treating patients with anterior knee pain can be frustrating for both the orthopaedic surgeon and the physical therapist



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# Patella- Femoral Treatment

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- 70-90% of patients with anterior knee pain have recurrent or chronic pain
- 40% of patients have an unfavorable recovery at 12 months of the initial diagnosis

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# Patella- Femoral Treatment

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- Because of the complex multifactorial etiology of anterior knee pain with local, proximal, and distal factors potentially involved, its treatment is particularly difficult and challenging for the provider.

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# Patella-Femoral Classifications

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- Patella compression syndromes
- Patella instability
- Biomechanical dysfunctions
- Direct patellar trauma
- Soft tissue lesions
- Overuse syndromes
- Osteochondritis diseases
- Neurological disorders

# Patella Femoral Rehabilitation

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# Treat the cause

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- The key to treating patients with Patella-Femoral pain is to treat the **CAUSE** and not just the **SYMPTOMS**.



# Patella-Femoral Treatment

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- There is no evidence that a single treatment modality works for all patient with patella-femoral pain.
  - There is limited evidence that some treatment modalities may be beneficial for some subgroups of patient with patella-femoral pain
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## Isokinetic Testing of these muscles will reveal their weakness

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- Hip Abduction
- Hip Adduction
- Hip Flexion
- Knee Extension
- Knee Flexion
- Ankle Plantar Flexion
- Ankle Dorsiflexion

# Patella-Femoral Treatment

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- Patients who experienced more pain, better function, greater lateral core endurance, and less anterior core endurance more likely to have a successful outcome after hip and core strengthening
  - (88% sensitivity and 54% specificity)

# Patella-Femoral Treatment

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- Patients with lower weight, weaker hip internal rotation, stronger hip extension, and greater trunk extension endurance were more likely to have success after knee strengthening
    - (82% sensitivity and 58% specificity)
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# Principles of PF Rehabilitation

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- Reduce swelling
- Reduce pain
- Restore volitional muscle control
- Emphasize the Quadriceps



# Principles of PF Rehabilitation

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- Control the knee through the hip
- Enhance Soft Tissue Flexibility
- Improve Soft Tissue Mobility
- Enhance Proprioception and Neuromuscular control
- Normalize gait

# Patella-Femoral Rehabilitation

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- Exercise therapy is recommended to reduce pain in the short, medium, and long term and improve function in the medium and long term.





# Patella-Femoral Rehabilitation

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- Combining hip, core, and knee exercises to reduce pain and improve function in the short, medium, and long term is suggested instead of just knee exercises alone.
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# Patella-Femoral Rehabilitation

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- Combined interventions are recommended to reduce pain in adults in the short and medium term
    - Foot orthoses
    - patella taping
      - Improve position of the patella
    - manual therapy
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# How do we treat Patella-Femoral Pain

- Some patients may require for you to start with the basics
  - Quad sets
  - Straight leg raise
  - Side lying hip abduction
  - ROM



# How do we treat Patella-Femoral Pain

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- Clamshells
  - Wall squats (with band)
  - Single leg Romanian Deadlift
  - Step downs
  - Lunges
  - 3-way hip with flexion, abduction, and extension (with or without band)
  - Bridging (various ways)
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# How do we treat Patella-Femoral Pain

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- Progress to more dynamic exercise as patient symptoms improve
  - Mini squats on a Bosu (balance) ball
  - Bridging on a physioball
  - Lateral and Monster walks
  - Single leg hopping
  - Perturbations with a band



# Other Considerations

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- Core Stability
- Balance/Proprioception
- Eccentric quadriceps weakness
- Blood Flow Restriction
- Previous level of function

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# Exercise Dosing for Patella- Femoral Pain

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- Various exercises
  - Open chain and Closed Chain
- Duration
  - 3-16 weeks depending on the patient

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# Conclusion

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- There is no one specific way to treat Patella-Femoral Pain
- Exercise Therapy remains the intervention of choice to treat Patella-Femoral pain
- It's Complicated!

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