

Patellofemoral Pain Syndrome & Chondromalacia Patella



Scan this QR Code to access a detailed video that enhances the information in this handout. It includes step by step guidance and visual demonstrations for each exercise.

What is patellofemoral pain syndrome and chondromalacia patella?

Patellofemoral pain syndrome describes pain and discomfort around or behind the patella. Repetitive stress and friction causes deterioration of the cartilage under the patella. The loss of cartilage is called chondromalacia.

Both of these conditions are caused by a combination of various factors including overuse, muscle imbalances, malalignment of the patella, or injury.

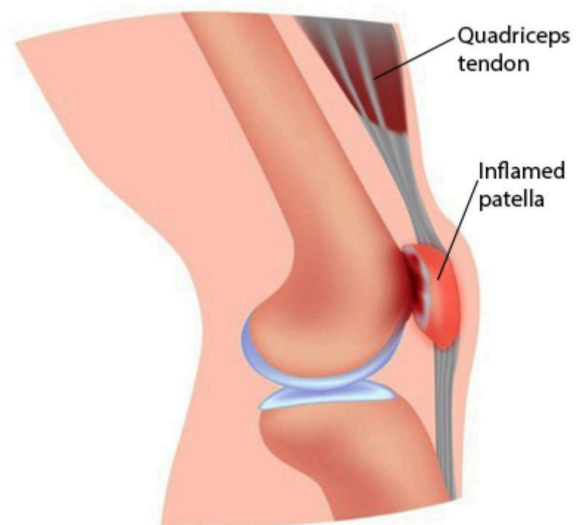
How is it treated?

Reduce training intensity and physical activity. Anti-inflammatory medications such as ibuprofen or naproxen can help alleviate pain. A rehabilitation program emphasizing strength, flexibility, and balance around the knee is crucial to recovery. These exercises often focus on targeting the quadriceps, hamstrings, and hip muscles to better support the patella and improve alignment.

How long is the recovery?

Recovery time depends on the severity. Symptoms often improve within a few weeks of starting treatment. However, full recovery, particularly for chronic or severe cases, can take several months. Try to be patient.

Resuming sports or activities should be gradual and based on pain tolerance. Avoid symptom-triggering activities until well-managed. Begin with low-impact exercises and gradually increase intensity.



Patellofemoral Pain Syndrome & Chondromalacia Patella Rehabilitation Exercises

Consistent rehabilitation can accelerate recovery and prevent recurrence. Do the following rehabilitation program 3 times per week for 4-6 weeks.

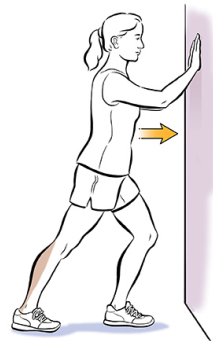
Standing Quadriceps Stretch

- Objective: reduce tension along the IT band
- Stand on the unaffected leg. Bend the knee of your injured leg bringing your heel towards the glutes. Grasp the ankle with your hand. You should feel a stretch along your thigh muscle.
- Hold this for 30 seconds, repeat on the other side.



Standing Calf Stretch

- Objective: alleviate tension in the calves to improve mobility
- Face a wall and step your unaffected foot forward, keeping your back leg straight. Lean forward towards the wall until you feel a stretch in the calf of your back leg.
- Hold this for 30 seconds, repeat on the other side.



Standing IT Band Stretch

- Objective: improve flexibility along the outer thigh and hip
- Stand on the affected leg and cross your other leg in front of it. Gently allow the hip of the affected leg to drop outwards away from your body. Lean your upper body slightly towards the opposite side to increase the stretch. You should feel a stretch along the hip and side of the affected leg.
- Hold this for 30 seconds, repeat on the other side.



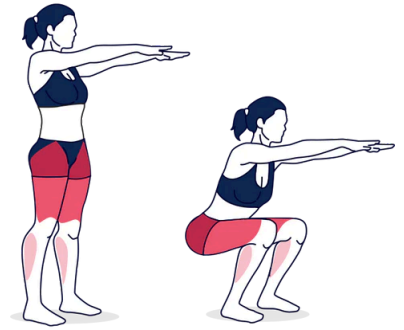
Sitting Hamstring Stretch

- Objective: improve flexibility of the hamstrings
- Straighten out the affected leg and bend your other leg inwards. Hinge forward at the hips and reach towards the toes. Try to keep the leg as straight as possible.
- Hold this for 30 seconds, repeat on the other side.



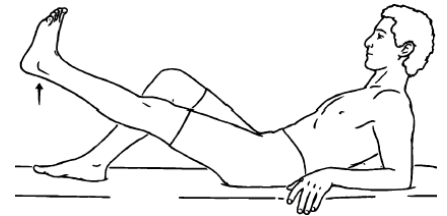
Body Weight Squat

- Objective: strengthen the quadriceps, hamstrings, glutes, and calf muscles
- Stand with your feet shoulder width apart. Slowly bend your knees, keeping your back straight and your core engaged. Lower until your thighs are parallel to the floor. Consider starting at a half squat and slowly progress to a full squat as you recover. Use weights to increase difficulty.
- Perform 2 sets of 15 repetitions.



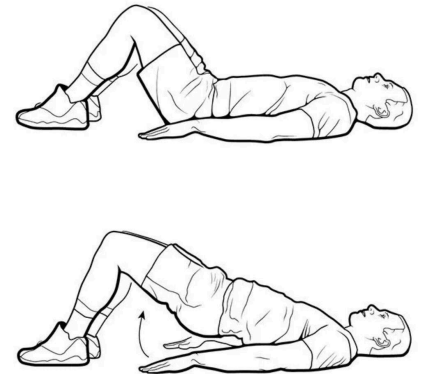
Straight Leg Raise

- Objective: strengthen the quadriceps, hip flexors, and abdominal muscles
- Lie down and bend both your knees with your feet flat. Straighten out the affected leg and lift it upwards to an angle of about 45 degrees from the ground. Hold the leg at the top of the movement briefly and then gently lower the leg back down.
- Perform 2 sets of 15 repetitions.



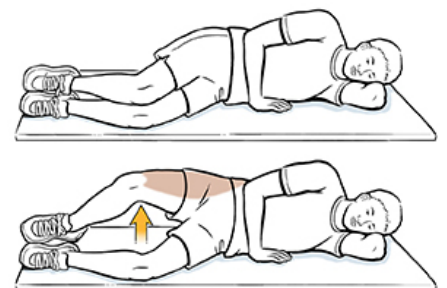
Glute Hip Bridge

- Objective: strengthen gluteus maximus, hamstrings, pelvis, and torso
- Lie down with your knees bent and feet flat. Keep your arms flat at your sides. Lift your hips, aiming to form a straight line from your shoulders to your knees. Squeeze your glutes and hold briefly at the top before gently lowering back down. To increase the challenge, wrap a resistance band around your waist.
- Perform 2 sets of 15 repetitions.



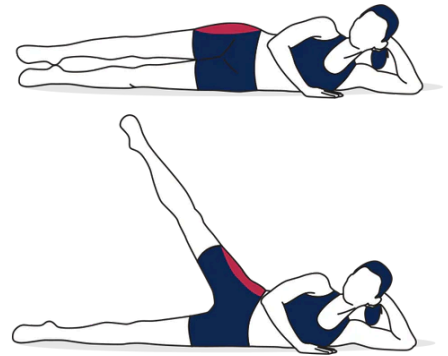
Side Lying Clamshell

- Objective: strengthen hip and pelvic muscles
- Lie on your side with both your hips and knees bent. Keep your feet together. Then, raise the top knee as high as possible without moving your hips or pelvis. Pause at the top, where you feel maximum engagement in your glutes, and then lower back down. Use resistance bands around your thighs, just above the knees to increase difficulty.
- Perform 2 sets of 15 repetitions.



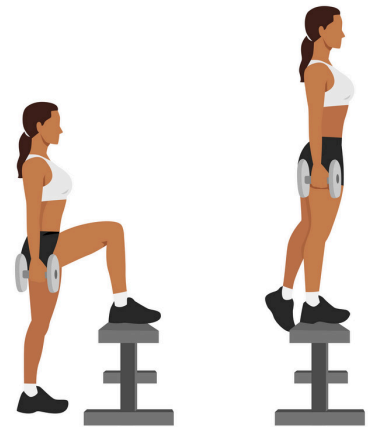
Side Lying Leg Raise

- Objective: strengthen hip abductors to enhance stability and balance
- Lie on your side with your legs straight. Raise the upper leg while maintaining a straight line with your body. Aim to lift it to about 45 degrees, hold it briefly at the top, and then gently lower it back down.
- Perform 2 sets of 15 repetitions.



Step Ups

- Objective: strengthen lower extremity muscles, improves balance and stability, addresses imbalances between legs
- Stand in front of a sturdy platform. Step up onto the platform with your injured foot first, followed by the other leg. Then step back down, leading with the injured foot. To further challenge yourself, increase the step height or perform the exercise while holding weights.
- Perform 2 sets of 15 repetitions.



Single Leg Balance Exercise

- Objective: improve stability, coordination, and lower body strength
- Stand on the affected leg on a stable surface. Put your hands on your hips and slowly shift your weight onto one foot. Carefully lift your other foot and raise the leg so that your thigh is as close as parallel to the ground. You can make this exercise more challenging by holding weights.
- Hold this position for 1 minute and then repeat on the other side.

